Secretary of State
Certificate and Order for Filing

PERMANENT ADMINISTRATIVE RULES

certify that the attached copies* are true, full and correct copies of the PERMANENT Rule(s) adopted on August 9, 2002 by the
Date prior to or same as filing date.

Water Resources Commission
Agency and Division

690
Administrative Rules Chapter Number

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to become effective September 6, 2002 Rulemaking Notice was published in the June, 2002 Oregon Bulletin.**
Date upon filing or later
Month and Year

RULEMAKING ACTION

List each rule number separately, 000-000-0000.

ADOPT:
Secure approval of rule numbers with the Administrative Rules Unit prior to filing.

AMEND:

690-205-0050 and 690-205-0070
690-240-0082 and 690-240-0090

REPEAL: N/A

number: Secure approval of rule numbers with the Administrative Rules Unit prior to filing.

Amend and Renumber: Secure approval of rule numbers with the Administrative Rules Unit prior to filing.

ORS 537.780, 536.027, 536.090
Stat. Auth.: ORS

Other Authority

ORS 537.505 through 537.795, 537.780(1)
Stats. Implemented: ORS

RULE SUMMARY

The rules clarify the start card filing procedures under OAR 690-240-0090 and 690-205-0070. The rules make the start card fee for landowners constructing their own wells under a landowner permit consistent with existing statute. In addition, the rules place limits on the duration of a landowner well construction permit and clarify the Department's authority to deny a landowner well construction permit under OAR 690-240-0082 and 690-205-0050.

Authorized Signer

9/6/02
Date

*Copies include a photocopy of this certificate with paper copy of each rule listed in the Rulemaking Action.

The *Oregon Bulletin* is published on the 1st of each month and updates the rule text found in the Oregon Administrative Rules Compilation. Notice forms must be submitted to the Administrative Rules Unit, Oregon State Archives, 800 Summer Street NE, Salem, Oregon 97310 by 5:00 p.m. on the 15th day of the preceding month unless this deadline falls on a Saturday, Sunday or legal holiday when Notice forms are accepted until 5:00 p.m. on the preceding workday.

OREGON WATER RESOURCES DEPARTMENT
ADMINISTRATIVE RULES
CHAPTER 690
DIVISION 240
WELL CONSTRUCTION STANDARDS

Construction, Maintenance, Alteration. Conversion, And Abandonment of Monitoring Wells, Geotechnical Holes, And Other Holes in Oregon

690-240-0005
Introduction

(1) Monitoring wells and geotechnical holes drilled to allow ground water and geologic determinations are constructed in a variety of environments and under a variety of conditions. Improper construction, maintenance, operation, and abandonment can allow deterioration of ground water quality and supply. Although enforcement actions may be exercised against other parties, the landowner of the property where the monitoring well or geotechnical hole is constructed is ultimately responsible for the condition, use, maintenance, conversion, and abandonment of the monitoring well, or geotechnical hole.

(2) Holes other than monitoring wells, water supply wells, or geotechnical holes which are drilled, excavated, or otherwise constructed in the earth's surface can also provide an avenue for deterioration of ground water quality. Improper construction, maintenance, use, and abandonment of other holes can pose a significant risk to ground water. Table 240-1 lists common subsurface borings and indicates which administrative rule governs the construction, conversion, maintenance, alteration, and abandonment of the boring.

(3) Ground water problems are difficult, expensive, and time consuming to correct. The Water Resources Commission (Commission) has been authorized to develop standards for wells drilled for the purpose of monitoring ground water in order to protect the state's ground waters. The Commission has also been authorized to develop standards for other holes through which ground water may become contaminated. The rules set forth herein are adopted to provide that protection. Their purpose is to prevent and eliminate ground water contamination, waste, and loss of artesian pressure.

(4) The Commission may develop additional rules as needed prescribing standards for the construction, operation, maintenance, and abandonment of other specific types of wells and holes to protect ground water.

(5) Except for the Commission's power to adopt rules, the Commission may delegate to the Water Resources Director the exercise or discharge in the Commission's name of any power, duty or function of whatever character, vested in or imposed by law upon the Commission. The official act of the Director acting in the Commission's name and by the Commission's authority shall be considered to be an official act of the Commission. The Commission delegates to the Director full authority to act in the Commission's name where that delegation is reflected in these rules.

Note: These rules were filed with the Office of the Secretary of State and took effect on September 6, 2002. The rules are subject to non-substantive modifications such as renumbering and correction of typographical errors pursuant to ORS 183.360(2)(a) when published by the Secretary of State.

(6) Under the provisions of ORS 537.780, the Commission is authorized to adopt such procedural rules and regulations as deemed necessary to carry out its function in compliance with the Ground Water Act of 1955. In fulfillment of these responsibilities and to ensure the preservation of the public welfare, safety, and health, the Commission has established these rules and regulations as the minimum standards for the construction, alteration, abandonment, conversion, and maintenance of monitoring wells in Oregon.

(7) Monitoring wells are wells as defined in ORS 537.515(9). A license and licensing fee, bond, examination, well report, and start card are required for construction, conversion, alteration, or abandonment of a monitoring well. In addition, a start card fee is required for new construction and conversion.

(8) To protect the ground water resource, the Commission has the authority to regulate geotechnical holes under ORS 537.780(1)(c)(A). Construction of geotechnical holes requires either a water supply or monitoring well constructor's license or Oregon registration as a geologist or civil engineer. If any one of the criteria in OAR 690-240-0035(2)(a)-(d) is met, a geotechnical hole report must be submitted.

(9) To protect the ground water resource, the Commission has the authority, under ORS 537.780(1)(c)(A), to regulate any hole through which ground water may be contaminated. Construction of holes other than water supply wells and monitoring wells does not require a license and licensing fee, bond, examination, well report, start card, and start card fee.

(10) Holes constructed under ORS Chapters 517, 520, and 522, and rules promulgated from those statutes, are the responsibility of the Oregon Department of Geology and Mineral Industries and are not subject to these rules. These include, but are not limited to, holes constructed for the purposes of exploring for, or producing, petroleum, minerals, or geothermal resources.

(11) The rules and regulations set forth herein shall become effective upon adoption by the Water Resources Commission.

(12) Under no circumstances shall a monitoring well, piezometer, geotechnical hole, or other hole be constructed in a manner that allows commingling or leakage of ground water by gravity flow or artesian pressure from one aquifer to another. (See definition of aquifer.)

(13) The rules and regulations set forth herein provide the minimum standards for the construction, conversion, alteration, maintenance, and abandonment of monitoring wells, geotechnical holes, and other holes. After the effective date of adoption of these rules and regulations, no monitoring well, geotechnical hole, or other hole shall be constructed, altered, converted, or abandoned contrary to the provisions of these rules and regulations without prior approval from the Water Resources Department. Violation of these standards may result in enforcement under OAR Chapter 690, Division 240, including suspension or revocation of a constructor's license, imposition of civil penalties on the landowner or constructor, action on a bond, or other sanctions authorized by law.

[ED. NOTE: Tables referenced in this rule are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0006
Special Standards

(1) Site conditions may require specific design, construction, and abandonment procedures to adapt to the existing local geologic and ground water conditions to fully utilize every natural protection to the state's ground water. Specific site conditions may require different design, construction, setback, or abandonment standards than required by the Monitor Well or Geotechnical Hole construction rules. Alternative technologies or methods not addressed in these rules may also exist which could be effectively utilized in the construction or abandonment of a monitoring well or geotechnical hole. Prior to the completion of the well, a bonded constructor must request and receive approval from the Department to use methods or materials that do not meet the monitoring well or geotechnical hole construction standards. The Department may approve such requests either orally or in writing. If oral approval is granted, the written request must be submitted to the Department within three working days of the date of the oral approval. Failure to submit a written request as described above may void the prior oral approval. The proposed methods or materials shall provide at least the same level of resource protection as that which is provided by these rules.

(2) The written request for special standards shall include:

(a) Name, license number and signature of the bonded well constructor;

(b) Location of the well by county, township, range, section, tax-lot (if assigned) and either the 1/4, 1/4 section or Latitude and Longitude as established by a global positioning system;

(c) Name and address of landowner;

(d) Address of the project/well site;

(e) Type of work;

(f) The reasons(s) that conformance to the rules and regulations for monitoring wells or geotechnical holes cannot be met;

(g) A diagram and written description showing the proposed monitoring well or geotechnical hole's design, construction, or abandonment;

(h)The well identification number, if assigned; and

(i) The start card number.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; Renumbered from 690-240-0140 by WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0007
Special Area Standards

If at any time, the Commission finds that different or supplemental standards are required for the safe development of ground water from any aquifer or area, special area standards for the construction and maintenance of monitoring wells, geotechnical holes, or other holes within such areas may be adopted as rules by the Commission. In the absence of such special area standards,

these rules constitute the sole administrative standards of the Water Resources Department governing construction, conversion, maintenance, alteration, and abandonment of monitoring wells, geotechnical holes and other holes.

Stat. Auth.: ORS 537.780
Stats. Implemented:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0010
Definitions

The following definitions apply to terms as used in monitoring well, geotechnical hole and other hole rules, OAR 690-240-0005 to 690-240-0180. No other definitions of these same words apply:

(1) "Abandonment, Permanent" means to remove all or any portion of a monitoring well from service by filling it in such a manner that vertical movement of water within the well bore and within the annular space surrounding the well casing is effectively and permanently prevented. This term is synonymous with "decommission".

(2) "Abandonment, Temporary" means to remove a drilling machine from a well site after completing or altering a well provided the well is not immediately put into service, or to remove a well from service with the intent of using it in the future.

(3) "Altering a Well" means the deepening, installation of seals, adding , removing or replacing casing, and any other material change in the design or construction of a well.

(4) "Annular Space" means the space between the drillhole wall and the outer well casing.

(5) "Aquifer" means a geologic formation, group of formations, or part of a formation that contains saturated and permeable material capable of transmitting water in sufficient quantity to supply wells or springs and that contains water that is similar throughout in characteristics such as potentiometric head, chemistry, and temperature. (Figure 240-1)

(6) "Area of Known or Reasonably Suspected Contamination" means a site that is currently under investigation by the Oregon Department of Environmental Quality, U.S. Environmental Protection Agency, or other state or federal agency for the presence of contaminants, or a site where a prudent person would suspect contamination after conducting an appropriate inquiry consistent with good commercial or customary practice as to the nature of the property.

(7) "Artesian Aquifer" means a confined aquifer in which ground water is under sufficient head to rise above the level at which it was first encountered whether or not the water flows at land surface. If the water level stands above land surface the well is a flowing artesian well. (Figure 240-1)

(8) "Artesian Monitoring Well" means a monitoring well in which ground water is under sufficient pressure to rise above the level at which it was first encountered, whether or not the water flows at land surface. If the water level stands above land surface the well is a flowing artesian monitoring well.

(9) "Casing" means the outer tubing, pipe, or conduit, welded or thread coupled, and installed in the borehole during or after drilling to support the sides of the well and prevent

caving. Casing can be used, in conjunction with proper seal placement, to shut off water, gas, or contaminated fluids from entering the hole, and to prevent waste of ground water.

(10) "Casing Seal" means the water tight seal established in the well bore between the well casing and the drillhole wall, above the filter pack seal, to prevent the inflow and movement of surface water or shallow ground water in the well annulus, or to prevent the outflow or movement of water under artesian or hydrostatic pressures.

(11) "Civil Engineer" means an individual registered by the State of Oregon to practice civil engineering.

(12) "Clay" means a fine-grained, inorganic material having plastic properties and with a predominant grain size of less than 0.002 mm.

(13) "Commission" means the Oregon Water Resources Commission.

(14) "Committee" means the Oregon Ground Water Advisory Committee created by ORS 536.090.

(15) "Confining Formation" means the "impermeable" stratum immediately overlying an artesian (confined) aquifer. (Figure 240-1)

(16) "Consolidated Formation" means materials that have become firm through natural rock-forming processes. It includes, but is not limited to, materials such as basalt, sandstone, shale, hard claystone, and granite.

(17) "Contamination" means any chemical, ion, radionuclide, synthetic organic compound, microorganism, waste or other substance that does not occur naturally in ground water or that occurs naturally but at a lower concentration.

(18) "Converting" a well means changing the use of an existing well or hole not previously used to either withdraw or monitor water such that the well or hole can be used to either withdraw or monitor water.

(19) "Department" means the Oregon Water Resources Department.

(20) "Director" means the Director of the Department or the Director's authorized representatives.

(21) "Excavation" means a free-standing cavity with greater width than depth constructed in the earth's surface which has a primary purpose other than seeking water or water quality monitoring.

(22) "Figure", when used herein, refers to an illustration and is made a part of the primary article and section by reference.

(23) "Filter Pack" means the granular material placed in the annular space between the well screen and the borehole.

(24) "Filter Pack Seal" means the fine grained sand or dry bentonite which is placed in the annulus above the filter pack and prevents grout infiltration into the filter pack.

(25) "Geologic Formation" means an igneous, sedimentary or metamorphic material that is relatively homogeneous and is sufficiently recognized as to be distinguished from the adjacent material. The term is synonymous with "formation".

(26) "Geologist" means an individual registered by the State of Oregon to practice geology.

(27) "Geotechnical hole" means a hole constructed to collect or evaluate subsurface data or information, monitor movement of landslide features, or to stabilize or dewater landslide

features. Geotechnical holes are not monitoring wells as defined below. Various classes and examples of geotechnical holes are listed in OAR 690-240-0035(6) -- (9).

(28) "Grout" means approved cement, concrete or bentonite sealing material used to fill an annular space of a well or to abandon a well.

(29) "Grout Pipe" means a pipe which is used to place grout at the bottom of the sealing interval of a well.

(30) "Hazardous Waste" means a substance as defined by ORS 466.005.

(31) "Health Hazard" means a condition where there are sufficient concentrations of biological, chemical, or physical, including radiological, contaminants in the water that are likely to cause human illness, disorders, or disability. These include, but are not limited to naturally occurring substances, pathogenic viruses, bacteria, parasites, toxic chemicals, and radioactive isotopes. Sufficient concentrations of a contaminant include but are not limited to contaminant levels set by the Oregon Department of Environmental Quality and Oregon Health Division.

(32) "Health Threat" means a condition where there is an impending health hazard. The threat may be posed by, but not limited to: a conduit for contamination, or a well affecting migration of a contaminant plume, or the use of contaminated water. A well in which the construction is not verified by a monitoring well report or geophysical techniques may be considered a conduit for contamination in certain circumstances. Those circumstances include, but are not limited to: an unused and neglected well or a well for which no surface seal was required. A well in which the casing seal, filter pack seal, or watertight cap has failed, or was inadequately installed may be considered a conduit for contamination.

(33) "Horizontal Well" means a well that intentionally deviates more than 20 degrees from true vertical at any point.

(34) "Hydrologic Cycle" is the general pattern of water movement by evaporation from sea to atmosphere, by precipitation onto land, and by return to sea under influence of gravity.

(35) "Impermeable Sealing Material" means cement or bentonite which is used to fill the open annulus.

(36) "Leakage" means movement of surface and/ or subsurface water around the well casing or seal.

(37) "Monitoring Well" means a well designed and constructed to determine the physical (including water level), chemical, biological, or radiological properties of ground water.

(38) "Monitoring Well Constructor" means any person who has a current, effective monitoring well constructor license issued in accordance with ORS 537.747(3).

(39) "Monitoring Well Drilling Machine" means any driving, jetting, percussion, rotary, boring, auguring, or other equipment used in the construction, alteration, or abandonment of monitoring wells.

(40) "Order" means any action satisfying the definition given in ORS Chapter 183 or any other action so designated in ORS 537.505 to 537.795.

(41) "Other Hole" means a hole other than a water supply well, monitoring well, or geotechnical hole, however constructed, in naturally occurring or artificially emplaced earth materials through which ground water can become contaminated. Holes constructed under ORS Chapters 517, 520, and 522 are not subject to these rules. Examples of other holes are listed in OAR 690-240-0030.

(42) "Perched Ground Water" means ground water held above the regional or main water table by a less permeable underlying earth or rock material. (Figure 240-1)

(43) "Permeability" means the ability of material to transmit fluid, usually described in units of gallons per day per square foot of cross-section area. It is related to the effectiveness with which pore spaces transmit fluids.

(44) "Person" includes individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, the state and any agencies thereof, and the Federal Government and any agencies thereof.

(45) "Petcock Valve" is a valve used to contain pressure which when opened will drain the line or pipe.

(46) "Piezometer" means a type of monitoring well designed to obtain ground water levels. Piezometers are prohibited in areas of known or reasonably suspected contamination. This term is synonymous with observation well.

(47) "Porosity" means the ratio of the volume of voids in the geologic formation being drilled to the overall volume of the material without regard to size, shape, interconnection, or arrangement of openings.

(48) "Potable Water" means water which is sufficiently free from biological, chemical, physical, or radiological impurities so that users thereof will not be exposed to or threatened with exposure to disease or harmful physiological effects.

(49) "Potentiometric Surface" means the level to which water will rise in tightly cased wells. (Figure 240-1)

(50) "Pressure Grouting" means a process by which grout is confined within the drillhole or casing by the use of retaining plugs or packers and by which sufficient pressure is applied to drive the grout slurry into the annular space or zone to be grouted.

(51) "Professional" means any person licensed or registered by the State of Oregon to construct monitoring wells, water supply wells, or practice geology or civil engineering.

(52) "Public-at-Large" means a person not actively engaged in the well industry.

(53) "Refusal to Renew" means a provision in an order, or as allowed by ORS 537.747, that prohibits renewal of a well constructor's license, for a specified term not to exceed one year from the expiration date of the current license.

(54) "Remediation Well" means a well used for extracting contaminated ground water from an aquifer. This term is synonymous with "extraction well" and "recovery well".

(55) "Respondent" means the person against whom an enforcement action is taken.

(56) "Responsible Party" means the person or agency that is in charge of construction or maintenance, or the landowner of record and is either in violation as specified in a notice of violation or who may benefit from that violation.

(57) "Rough Drilling Log" means a record kept on the well site of the information needed to complete the well report for the well being constructed.

(58) "Revoke" means termination of a well constructor's license.

(59) "Sand" means a material having a prevalent grain size ranging from 2 millimeters to 0.06 millimeters.

(60) "Silt" means an unconsolidated sediment composed predominantly of particles between 0.06 mm and 0.002 mm in diameter.

(61) "Static Water Level" means the stabilized level or elevation of water surface in a well not being pumped.

(62) "Stratum" means a bed or layer of a formation that consists throughout of approximately the same type of consolidated or unconsolidated material.

(63) "Suspension" means the temporary removal of the privilege to construct wells under an existing license for a period of time not to exceed one year.

(64) "Unconsolidated Formation" means naturally occurring, loosely cemented, or poorly indurated materials including clay, sand, silt, and gravel.

(65) "Upper Oversize Drillhole" means that part of the well bore extending from land surface to the bottom of the surface seal interval.

(66) "Violation" means an infraction of any statute, rule, standard, order, license, compliance schedule, or any part thereof and includes both acts and omissions.

(67) "Water Supply Well" means a well, other than a monitoring well, that is used to beneficially withdraw or beneficially inject ground water. Water supply wells include, but are not limited to, community, dewatering, domestic, irrigation, industrial, municipal, and aquifer storage and recovery wells.

(68) "Water Supply Well Constructor" means any person who has a current, effective water supply well constructor license issued in accordance with ORS 537.747(3).

(69) "Water Table" means the upper surface of an unconfined water body, the surface of which is at atmospheric pressure and fluctuates seasonally. The water table is defined by the levels at which water stands in wells that penetrate the water body. (See Figure 240-1)

(70) "Well" means any artificial opening or artificially altered natural opening, however made, by which ground water is sought or through which ground water flows under natural pressure, or is artificially withdrawn or injected. This definition shall not include a natural spring, or wells drilled for the purpose of exploration or production of oil or gas. Prospecting or exploration for geothermal resources as defined in ORS 522.005 or production of geothermal resources derived from a depth greater than 2,000 feet as defined in ORS 522.055 is regulated by the Department of Geology and Mineral Industries.

[ED. NOTE: Figures referenced in this rule are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0011

Organic Materials

Organic materials which foster or promote undesired organic growth or have the potential to degrade water quality shall not be employed in the construction of a well. This includes, but is not limited to, brans, hulls, grains, starches, and proteins.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0012
Public Safety

No monitoring well, geotechnical hole, or other hole shall be constructed, maintained, or abandoned in such a manner as to constitute a health threat, or health hazard or a menace to public safety.

Stat. Auth.: ORS 737.780
Stats. Implemented:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0013
Wells Cannot Be Used for Disposal of Contaminants

No monitoring well, geotechnical hole, or other hole shall be used as a disposal pit for sewage, industrial waste, or other materials that could contaminate the ground water supply.

Stat. Auth.: ORS 537.780
Stats. Implemented.:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0014
Water Used Must be Potable

All water used in the construction, alteration, repair or abandonment of monitoring wells and geotechnical holes shall be potable.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0015
Delegation of Responsibility for Monitoring Wells, Geotechnical Holes and Other Holes

(1) The Director may, by memorandum of understanding, delegate to another state agency direct control and management of monitoring wells, geotechnical holes and other holes when the other state agency implements these standards, as a minimum, for the construction, operation, maintenance, and abandonment of monitoring wells, geotechnical holes and other holes.

(2) Such delegation shall be revoked at such time as the agency intentionally or repeatedly fails to enforce the standards.

(3) The Water Resources Department shall provide notice to all Oregon licensed monitoring and water supply well constructors and professional geologists and civil engineers registered in Oregon whenever authority is delegated to or revoked from another state agency.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0016
Unattended Wells

All wells, when unattended during construction, shall be covered to protect public health and safety.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0020
Delegation Conditions

In order for the Director to delegate responsibility for monitoring wells, geotechnical holes and other holes to another agency, construction, operation or use, maintenance, and abandonment standards developed by that agency pursuant to OAR 690-240-0015 shall include, but not be limited to, provisions to address the following factors:

(1) Reporting well or hole location.

(2) Reporting intended use of the well or hole.

(3) Reporting well or hole design or construction.

(4) Assigning responsibility for compliance.

(5) Protecting ground water through minimum standards for the construction, operation or use, maintenance, and abandonment of the monitoring well, geotechnical hole or other hole that provide ground water protection equivalent to that provided by OAR 690-240-0005 to 690-240-0139.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0024
Well Identification Label

(1) Within 30 days of completion of well construction, conversion, or alteration, the constructor shall permanently affix a well identification label to the wellhead as described in Appendix 240-1. The identification number shall be recorded on the well report. The well identification label shall be attached in such a manner as to be easily readable upon inspection. Identification labels shall be furnished by the Department.

(2) If a well identification label is already affixed to an existing well that is being altered, converted, or abandoned, the constructor shall record the identification number on the well

report.

(3) When a well that has a well identification label (tag) on it is permanently abandoned, the well identification tag shall be destroyed. The well identification tag shall not be reused.

[ED. NOTE: Appendix referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0026
Well Identification Label Maintenance

The well identification label shall not be removed from the wellhead and shall be maintained by the land owner in an accessible location and in a readable condition. See Appendix 240-1 for well identification label placement instructions.

[ED. NOTE: Appendix referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0030
Other Holes: General Performance and Responsibility Requirements

(1)(a) Other holes are constructed for a variety of purposes which may or may not encounter ground water. Other holes are constructed using a wide variety of equipment and are not typically designed to access water in order to collect subsurface information. Other holes include but are not limited to: temporary (abandoned within 72 hours) wetland delineation holes, gravel pits, pits for removal of underground storage tanks (UST), pilings, tunnels, post holes, excavation and construction holes, elevator shafts, and trenches.

(b) Although enforcement actions may be exercised against other parties, the landowner of the property where the other hole is constructed is ultimately responsible for the condition and use of the other hole.

(2)(a) In order to protect ground water, all other holes shall be constructed, operated or used, maintained, and abandoned in such a manner as to prevent contamination or waste of ground water;

(b) In order to protect ground water, all other holes, when abandoned, shall be abandoned in such a manner that water cannot move vertically in them with any greater facility than in the undisturbed condition prior to construction of the other hole;

(c) Conversion of other holes to a water supply well, monitoring well, or geotechnical hole shall be considered by the Water Resources Department on a case-by-case basis;

(d) If the other hole is an excavation for removal of an underground storage tank, water samples may be taken without adhering to the licensing, start card/fee, monitoring well report

and monitor well conversion requirements.

Stat. Auth.: ORS 537.780
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0035
Geotechnical Holes: General Performance and Responsibility Requirements

(1) Excavations that are dug to evaluate subsurface data are geotechnical holes. Geotechnical holes may be either cased or uncased and are constructed to evaluate subsurface data or information (geologic, hydrogeologic, chemical, or other physical characteristics). Geotechnical holes are not "wells" because their construction and/or duration of use are different than wells and therefore are not subject to the same requirements as wells. Geotechnical holes are broken into the following classifications:

(a) Temporary (abandoned within 72 hours) geotechnical holes;

(b) Cased permanent geotechnical holes;

(c) Uncased permanent geotechnical holes; or

(d) Slope stability geotechnical holes.

(2) A geotechnical hole report, signed by the responsible professional, must be submitted to the department if any of the criteria listed in subsections (a) through (d) below is met. The geotechnical hole is:

(a) Greater than 18 feet deep; or

(b) Within 50 feet of a water supply or monitoring well; or

(c) Used to make a determination of water quality; or

(d) Constructed in an area of known or reasonably suspected contamination.

(3) Geotechnical holes greater than ten feet in depth and less than eighteen feet in depth that do not meet any of the criteria spelled out in OAR 690-240-0035(2) shall have a professional person as described in OAR 690-240-0035(4)(c) responsible for the construction and abandonment of the geotechnical hole but do not require a 'Geotechnical Hole Report' to be filed.

(4)(a) Although enforcement actions may be exercised against other parties, the landowner of the property where the geotechnical hole is constructed is ultimately responsible for the condition, use, maintenance, and abandonment of the geotechnical hole;

(b) Conversion of a geotechnical hole to a water supply or monitoring well shall be considered by the Water Resources Department on a case by case basis;

(c) When a geotechnical hole report is required, or if it is between 10' and 18', any person (professional) who is responsible for the construction, alteration or abandonment of a geotechnical hole shall have one of the following certifications:

(A) A current Oregon Monitoring Well Constructor License;

(B) A current Oregon Water Supply Well Constructor License;

(C) Be registered by the State of Oregon as a Professional Geologist; or,

(D) Be registered by the State of Oregon as a Professional Civil Engineer.

(d) The professional shall show proof of license or registration and a current photo

identification to Department employees upon request.

(e) In order to protect the ground water resource, all geotechnical holes shall be constructed, operated, used, maintained, and abandoned in such a manner as to prevent contamination or waste of ground water, or loss of artesian pressure.

(f) If the geotechnical hole is completed above ground, it shall have a minimum casing height of one foot above finished grade and a lockable cap with lock shall be attached to the top of the casing. If a geotechnical hole, except a slope stability hole, is completed flush with the land surface, a lockable watertight cap with lock, shall be attached to the top of the casing. A vault or monument designed to be watertight, level with the ground surface, shall be installed to prevent the inflow of surface water. The cover must be designed to withstand the maximum expected loadings.

(5)(a) A 'Geotechnical Hole Report' shall be prepared for each geotechnical hole, including unsuccessful geotechnical holes, constructed, altered, converted, or abandoned if the hole meets any of the requirements of OAR 690-240-0035(2) above.

(b) The 'Geotechnical Hole Report shall be filed with the Department within 30 days of the completion of the geotechnical hole;

(c) The report shall be prepared in triplicate on forms furnished or previously approved in writing by the Water Resources Department. The original shall be furnished to the Director, the first copy shall be retained by the professional, and the second copy shall be given to the landowner or customer who contracted for the construction of the geotechnical hole;

(d) In the event any drilling equipment or other tools are left in a geotechnical hole the professional shall enter this fact on the Geotechnical Hole Report;

(e) A copy of any special authorizations or special standards issued by the Director shall be attached to the Geotechnical Hole Report. See OAR 690-240-0006 for information concerning special standards;

(f) The report of geotechnical hole construction shall include, as a minimum, the following:

(A) Landowner name and address;

(B) Started/Completed date;

(C) Location of hole by county, township, range, section, tax lot number (if available), street address and either the 1/4, 1/4 section or latitude and longitude as established by a global positioning system (GPS).

(D) Use of geotechnical hole;

(E) Type of geotechnical hole;

(F) Depth

(G) Map showing location of geotechnical hole on site must be attached and shall include an approximate scale and a north arrow;

(H) General hydrologic and geologic information as indicated on the Geotechnical Hole Report; and

(I) Such additional information as required by the Department.

(6) Temporary geotechnical holes:

(a) Temporary geotechnical holes include but are not limited to: drive points, soil and rock borings, temporary sample holes, permeability test holes, and soil vapor holes;

(b) Temporary geotechnical holes shall be abandoned within 72 hours of initial construction;

(c) Any temporary casing that has been installed shall be removed as part of the abandonment.

(7) Cased permanent geotechnical holes:

(a) Cased permanent geotechnical holes include but are not limited to: gas migration holes, cathodic protection holes, and vapor extraction holes;

(b) If permanent casing is installed in a geotechnical hole, it shall meet the casing requirements in OAR 690-240-0115, OAR 690-210-0210, or OAR 690-210-0190 and the sealing requirements in OAR 690-240-0130.

(8) Uncased permanent geotechnical holes:

(a) Uncased permanent geotechnical holes include but are not limited to: pneumatic and electrical piezometers;

(b) Temporary casing can be used during the construction of the uncased permanent geotechnical hole but must be removed prior to completion. Surface casing (5 feet maximum) may be installed for placement of logging or recording equipment.

(9) Slope stability holes. All holes constructed for studying, monitoring movement of landslide features, or dewatering landslides or other mass-wasting features shall be considered slope stability holes. Such holes shall be constructed, operated, used, maintained, and abandoned in such a manner as to prevent contamination or waste of ground water. Slope stability holes in areas of known or reasonably suspected contamination shall be constructed to meet monitoring well standards. Slope stability holes that are used to obtain ground water levels shall be constructed to meet piezometer standards under OAR 690-240-0137.

(10) Geotechnical Holes abandonment:

(a) Geotechnical holes shall be abandoned so that they do not:

(A) Connect water bearing zones or aquifers;

(B) Allow water to move vertically with any greater facility than in the undisturbed condition prior to construction of the geotechnical hole; or

(C) Allow surface water to enter the hole.

(b) Temporary geotechnical holes constructed to collect a water quality sample shall be abandoned in accordance with OAR 690-240-0135.

Stat. Auth.: ORS 537.780

Stats. Implemented:

Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0055

License Required to Construct Monitoring Wells

(1) Unless otherwise provided in these rules, any person who constructs, alters or abandons monitoring wells for another person shall have a Monitoring Well Constructor License or work under the supervision of a licensed Monitoring Well Constructor.

(2) If a person advertises services and/or enters into contracts for the construction, alteration or abandonment of monitoring wells for another person, that person shall furnish a

$4,000 Monitoring Well Constructor Bond or Irrevocable Letter of Credit to the Water Resources Commission and must be a licensed monitoring well constructor. This bond or letter of credit is separate from the bond or letter of credit required for construction of water supply wells.

(3) A property owner who constructs, alters, or abandons a monitoring well on their own property shall have a Landowner Well Permit as described in OAR 690-240-0082 for each monitoring well on which work is done.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0060
Monitoring Well Constructor License Examination

(1) The Water Resources Department administers the written examination required under ORS 537.747. Separate examinations are administered for each license type. The Department schedules the examination on the second Monday during the months of January, April, July and October. Only one examination may be taken during each testing period. Examinees must pay a $20 exam fee. Special accommodations may be given to those individuals who cannot attend the regularly scheduled examination dates. Requests shall be considered on a case-by-case basis. The examination tests the applicant's knowledge of:

(a) Oregon laws and administrative rules on the use of ground water, monitoring well constructor licensing requirements, the construction of monitoring wells and/or geotechnical holes, and the preparing and filing of Start Cards and Monitoring Well Reports;

(b) Hydrogeology, the occurrence and movement of ground water and contaminants, and the design, construction and development of monitoring wells; and

(c) Types, uses, and maintenance of drilling tools and equipment, drilling problems and corrective procedures, repair of faulty monitoring wells, sealing of monitoring wells, and safety rules and practices.

(2) An applicant who fails to pass the examination may retake the examination after three months and the payment of another examination fee.

(3) Passing examination scores are valid for three years from the date of the examination.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0065
Monitoring Well Constructor License, Experience Requirements and Trainee Card

(1) License. To qualify for a Monitoring Well Constructor License, a person shall:

(a) Be at least 18 years old;

(b) Pass a written examination;

(c) Have a minimum of one year experience (52 weeks), during the previous 36 month period, in monitoring well construction, alteration, or abandonment. This experience shall include the operation of well drilling machinery for monitoring well construction, alteration, conversion, or abandonment on a minimum of fifteen monitoring wells or a demonstration of equivalent experience in the operation of well drilling machinery. The following are acceptable as evidence of experience:

(A) Monitoring well reports or rough well logs with applicant's name entered for each of the 15 wells. The name, address and telephone number of the person responsible for the construction of each monitoring well shall be included on each report or log;

(B) Income tax returns showing source of drilling income for a period of time, or worker's compensation account information or the equivalent may be established to satisfy the one year of active construction requirement;

(C) Any other evidence the Director may deem suitable;

(D) A license held in another state shall not substitute for required evidence of experience.

(d) Pay a license fee.

(2) Trainee. If an applicant passes the written monitoring well constructor examination, but cannot meet the experience requirement the Commission may issue a trainee card. To qualify for a monitoring well constructor trainee card, a person must:

(a) Be at least 18 years old;

(b) Pass a written examination; and

(c) Be supervised by a person who holds a Monitoring Well Constructor License.

(3) A trainee card is valid for three (3) years from the date the exam was passed.

(4) Supervision as it relates to any person who holds a Monitoring Well Constructor Trainee Card:

(a) A trainee may operate a cable tool monitoring well drilling machine without a licensed monitoring well constructor physically present at the well site only if:

(A) The licensed constructor can reach the well site within two hours if so requested by an authorized representative of the Department; and

(B) The licensed constructor has signed the rough drilling log within eight working hours prior to the representative's visit.

(b) A licensed constructor must physically be on the site at all times when a cable tool drilling machine is:

(A) Drilling within a flowing artesian well;

(B) Setting or advancing casing;

(C) Setting liner;

(D) Perforating casing;

(E) Setting well screens;

(F) Placing packers;

(G) Drilling into, through, or below ground water suspected or known to be contaminated; and

(H) Placing casing seals.

(c) A trainee may operate a non-cable tool monitoring well drilling machine without a

licensed monitoring well constructor physically present at the well site only during removal of the drill stem from the monitoring well.

(d) Activities under subsection (3)(c) of this rule shall proceed only if:

(A) The licensed constructor can reach the site within one hour if so requested by an authorized representative of the Department; and

(B) The licensed constructor has signed the rough drilling log within eight working hours prior to the representative's visit.

(e) An authorized representative of the Department in whose jurisdiction the monitoring well is being constructed has the authority to:

(A) Grant an extension to the time limits stated above when a request, showing good cause, is received from the bonded constructor in advance for each particular well; and

(B) Place additional restrictions on the trainee, including requiring the constructor to be on the site at all times while the drilling machine is operating, when the Department representative determines that either the drilling environment or the knowledge and/or experience of the trainee warrant closer supervision.

(f) For a trainee to operate a monitoring well drilling machine without a licensed monitoring well constructor present, the trainee's card must be endorsed with the name of the bonded monitoring well constructor responsible for the construction of the monitoring well.

(5) Other supervision requirements for persons not licensed or permitted to construct monitoring wells, or who do not hold a monitoring well trainee card:

(a) Persons who are in the act of constructing, altering, converting or abandoning monitoring wells must be supervised by a licensed Monitoring Well Constructor who is physically present at the well site at all times during construction, alteration, conversion, or abandonment activity.

(b) The supervising Monitoring Well Constructor is responsible for all applicable statutes and rules in construction, alteration, conversion, or abandonment of the monitoring well.

(6) Persons who satisfy all requirements of ORS 537.747(3) shall be issued a Monitoring Well Constructor's License. The responsibilities for securing and issuing a Monitoring Well Constructor License or trainee card are listed in subsections (a) and (b) of this section.

(a) The monitoring well constructor license applicant is responsible for:

(A) Completing an application or renewal form for a new or renewed license or trainee card;

(B) Submitting the application or renewal form to the Water Resources Department along with the required fees;

(C) Carrying the license or trainee card whenever constructing, altering, converting, or abandoning any monitoring well; and

(D) Providing the Water Resources Department, within 30 days, notification of any change of mailing address.

(b) The Water Resources Department is responsible for:

(A) Designing and providing Monitoring Well Constructor licenses and trainee cards;

(B) Designing and providing application forms and renewal forms for licenses and application forms for trainee cards;

(C) Processing applications and renewals for licenses and applications for trainee cards;

and

(D) Returning incomplete application and renewal forms to applicants for completion.

(E) Sending new and renewed licenses to applicants who have completed the application or renewal form and submitted the required fee. This does not preclude refusal to renew as outlined in OAR 690-240-0070(4).

(7) Bonded monitoring well constructor. For a person to possess a bonded Monitoring Well Constructor's License, the person shall provide to the Department a properly executed monitoring well constructor's bond or irrevocable letter of credit. The Water Resources Department shall indicate on the constructor's license a bonded classification.

(8) Representatives of the Water Resources Department may ask anyone constructing, altering, or abandoning a monitoring well to present their license or trainee card as proof of eligibility to construct, alter, convert, or abandon monitoring wells in the State of Oregon. Licensed individuals shall display their license or trainee card and photo identification when they are requested to do so by Water Resources Department personnel or other agency personnel to whom monitoring well regulation has been delegated.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0070

Terms of Monitoring Well Constructor License and License Fees

(1) The Department issues all monitoring well constructor licenses. License fees are established by ORS 537.747. A penalty applies to late renewals.

(2) Fees for new licenses and renewal licenses are the same. The fee for a two year license is $150. All licenses expire on June 30 of the second year.

(3) A $100 penalty applies when a licensee renews a license after the expiration date. There is no charge for a Trainee Card.

(4) Monitoring well constructors who have not made arrangements with the Water Resources Department to pay civil penalties which are assessed against them shall not be issued a license renewal or a new license until after arrangements for payment have been agreed to by the Department. Monitoring well constructors who have made arrangements for payment of civil penalties and have failed to meet the terms of the agreement, except in certain cases of bankruptcy, may not have their license renewed or a new license issued until all outstanding civil penalties owed to the Department have been paid.

Stat. Auth.: ORS 537 & ORS 742

Stats. Implemented: ORS 537 & ORS 742

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0075

Contracting for Services

Only Oregon licensed and bonded monitoring well constructors may advertise services or enter into a contract, either written or oral, to construct, alter, convert, or abandon a monitoring well. Any written bid for a project which includes the construction, alteration, conversion, or abandonment of a monitoring well must provide:

(1) A bid or estimate for the work associated with monitoring well construction signed by a monitoring well constructor, who is licensed and bonded in the State of Oregon.

(2) A statement by the licensed and bonded monitoring well constructor that the work will be completed in accordance with Oregon Ground Water Law (ORS Chapter 537) and the Rules for the Construction, Maintenance, Alteration, Conversion, and Abandonment of Monitoring Wells, Geotechnical Holes, and Other Holes in Oregon (OAR Chapter 690, Division 240).

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0082

Landowner Well Construction Permit, Fee and Bond

(1) The Water Resources Commission requires a permit, permit fee, and bond or irrevocable letter of credit, for each monitoring well constructed, altered, converted, or abandoned by a landowner, unless the landowner is a licensed and bonded monitoring well constructor.

(2) To receive a Landowner Well permit, a person must submit the following to the Director:

(a) A completed application form provided by the Commission, containing, as a minimum:

(A) The property owner's name, address and telephone number;

(B) The surety company's name, address and telephone number;

(C) The proposed location of the well by township, range, section, tax-lot number if assigned, and street address;

(D)The proposed use of the monitoring well;[*and*]

(E) The type of proposed work; **and**[.]

(F) Well design plan on form approved by the Department.

(b) A properly executed landowner's monitoring well bond or irrevocable letter of credit for $2000 to the State of Oregon; and

(c) A $25 permit fee.

(3) Only the owner of record, a member of the immediate family of the owner of record, or a full time employee of the owner of record, (whose main duties are other than the construction of wells), may operate a well drilling machine under a landowner's permit.

(4) A landowner permit issued pursuant to these rules shall expire six months from

the date of issuance.

(a) A monitor well report shall be submitted within 30 days of expiration of the landowner permit or within 30 days of completion of the well, whichever occurs first.

(5) If the landowner permit expires, a landowner may reapply for a new landowner permit by complying with the requirements described in sections (1), (2) and (3) of this rule.

(6) The Department may deny a landowner permit if it is determined that the construction, alteration, abandonment, or conversion of the proposed well is a health threat, a health hazard, a source of contamination, or a source of waste of the ground water resource.

Stat. Auth: ORS 183, 536, 537 & 540

Hist.: WRD 3-1983, f. & ef. 4-28-83; Amended & Renumbered from 690-010-0026 by WRD 13-1986, f. 10-7-86, ef. 11-1-86; WRD 7-1988, f. & cert. ef. 6-29-88; WRD 9-2001, f. & cert. ef. 11-15-01; 8-2002,f. & cert.ef.9-6-02

690-240-0085

Monitoring Well Drilling Machines

(1) All monitoring well drilling machines being operated, other than under a landowner's permit, shall be plainly marked either with the bonded monitoring well constructor's license number, the name of the bonded monitoring well constructor, or the name of the well drilling business. The markings shall be permanently affixed on each side of the vehicle. Good quality paint or commercial decal numbers shall be used in placing the identification information on the drilling machine. In no case shall the constructor's license number, name, or business name, be inscribed with crayon, chalk, marking keel, pencil, or other temporary markings.

(2) In all cases, the license number, name, or business name, of the bonded monitoring well constructor shall be removed from the drilling machine immediately upon change of ownership or change of control of the drilling machine.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0090

Monitoring Well Construction Notice Required (Start Card)

(1) Each bonded monitoring well constructor licensed to operate in the State of Oregon and each landowner holding a landowner's permit shall provide notice as required in ORS 537.762 before commencing the construction, alteration, or abandonment of any monitoring well or conversion of any other hole, geotechnical hole, or water supply well to a monitoring well. The start card shall contain the following information:

(a) Name and mailing address of the landowner;

(b) Street address of the well;

(c) The approximate location of the monitoring well; and

(d) The proposed depth, diameter, and purpose or use if the well is new, altered, or converted.

(2) All start cards for new monitoring wells or conversion of other holes, geotechnical holes, or water supply wells by a licensed and bonded monitoring well constructor shall be submitted with a $75 start card fee. A start card fee is not required to abandon a monitoring well.[*Landowners are exempt from this $75 start card fee. However,*] OAR 690-240-0082 shall apply to landowners who construct, alter, convert, or abandon a monitoring well.

(3) Forms for making these reports and submitting fees shall be furnished by the Water Resources Department.

(4) Each start card shall be mailed, *for*] **hand**-delivered during regular business hours **or transmitted by Department-approved electronic submittal** to the Water Resources Department in Salem no later than the day construction, conversion, alteration, or abandonment is commenced.

(a) Start cards submitted electronically shall be submitted before commencing construction, alteration, conversion or abandonment of any monitoring well.

(5) In addition to the start card required under section (4) of this rule, the constructor shall provide a legible copy of the start card to the Oregon Water Resources Department (OWRD) region office within which the monitoring well is being constructed, altered, converted or abandoned **before commencing the construction, alteration, or abandonment of any monitoring well** [*no later than the day work begins*], using one of the following options:

(a) By regular mail no later than three (3) calendar days (72 hours) prior to commencement of work; or

(b) By hand delivery, during regular office hours, **before commencing the construction, alteration, conversion or abandonment of any monitoring well** [*no later than the day work is commenced*]; or

(c) By facsimile transmission (FAX) **before commencing the construction, alteration, conversion or abandonment of any monitoring well** [*no later than the day work is commenced*]. If this method is used, a legible copy of the start card shall also be mailed or delivered to the appropriate OWRD region office no later than the day work is commenced.

(d) Start cards submitted electronically under Section (4)(a) of this rule have satisfied the notification requirement to the OWRD region office.

(6) If a start card has been filed under Section (4) and (5) of this rule and additional wells are required on the same or contiguous tax lot and for the same landowner, then start cards for the additional wells shall be filed no later than the day work begins.

[*(5)*] **(7)**The Director or region office may provide an alternate means of notification. If an alternative means of notification is used, the start card shall be mailed or delivered to the region office within one week of beginning work on the monitoring well. A monitoring well constructor whose license has been restricted by order shall provide notice as stipulated in the order.

[*(6)*] **(8)**Once received by the Department, the start card shall be confidential for a period of one year after it is received or until the monitoring well report required by OAR 690-240-0095 is received, whichever is shorter.

[*(7)*] **(9)**The start card may be used in an administrative enforcement action at any time, including the period of confidentiality. Once the start card is used for enforcement reasons, it is no longer confidential.

NOTE: Region office fax and telephone numbers are listed in Table 240-2. Water Resources Department Regional boundaries are shown in Figure 240-2.
Stat. 536.090 & 537.505 - 537.795

Stats. Implemented: ORS 536.090 & 537.505 - 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 9-2001, f. & cert. ef. 11-15-01;8-2002,f.& cert.ef.9-6-02

690-240-0095
Monitoring Well Report Required (Monitoring Well Log)

(1) A monitoring well report shall be prepared for each monitoring well constructed, altered, converted, or abandoned including unsuccessful monitoring wells. The log shall be certified as correct by signature of the monitoring well constructor constructing the monitoring well. The completed log shall also be certified by the bonded monitoring well constructor responsible for construction of the monitoring well. A monitoring well report must be submitted by each bonded constructor (if drilling responsibility is shifted to a different bonded constructor), showing the work performed by each bonded constructor.

(2) The log shall be prepared in triplicate on forms furnished or previously approved in writing by the Water Resources Department. The original shall be furnished to the Director, the first copy shall be retained by the monitoring well constructor, and the second copy shall be given to the customer who contracted for the construction of the monitoring well.

(3) The bonded monitoring well constructor shall file the monitoring well log with the Director within 30 day after the completion of the construction, alteration, conversion, or abandonment of the monitoring well.

(4) The trainee or monitoring well constructor operating the monitoring well drilling machine shall maintain a rough log of all geologic strata encountered and all materials used in the construction of the monitoring well. This log shall be available for inspection by the Watermaster or other authorized agent of the Water Resources Department or other delegated agency representative at any time before the monitoring well report is received by the Department. The rough drilling log shall be in handwritten or electronic form, or a voice recording.

(5) In the event a constructor leaves any drilling equipment or other tools in a monitoring well this fact shall be entered on the monitoring well report.

(6) A copy of any special authorizations or special standards issued by the Director shall be attached to the monitoring well report.

(7) The report of monitoring well construction required in section (1) of this rule shall be recorded on a form provided or previously approved in writing by the Department. The form shall include, as a minimum, the following:

(a) Name and Address of Landowner;

(b) Started/Completed date;

(c) Location of the well by county, township, range, section, tax lot number if assigned, street address, and either the 1/4, 1/4 section, or Latitude and Longitude as established by a global positioning system (GPS).

(d) Start card number;

(e) Well identification label number (well tag number);

(f) Use of well;

(g) Type of work;

(h) Type and amount of sealant used and measured weight of the grout slurry as required in OAR 690-240-0130(1)(g);

(i) Temperature of water;

(j) Map showing location of monitoring well on site, must be attached and shall include an approximate scale and a north arrow;

(k) Such additional information as required by the Department.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0100

Monitoring Well Construction: General

(1) Monitoring well components, including well screens, casings and annular sealant should be selected based on known site characteristics to ensure the well will last for the duration of the monitoring program.

(2) No monitoring well shall be used for domestic, public water supply, industrial, commercial, or agricultural purposes unless it meets the minimum construction standards for water supply wells, OAR 690-200 to 690-230.

(3) No completed monitoring well shall interconnect aquifers, including low yielding aquifers.

(4) The start card number shall be permanently attached, stamped or engraved on the outer well casing or permanent protective well cover, not on a removable cap.

(5) No monitoring well shall be constructed as a multiple completion well without prior special standard approval as specified in OAR 690-240-0006.

(6) Horizontal wells shall only be constructed with prior special standard approval only as specified in OAR 690-240-0006.

(7) The borehole diameter shall be at least four inches larger than the nominal casing diameter except as noted in OAR 690-240-0137 concerning piezometers. If the monitoring well is constructed using a hollow stem auger drilling machine, the inside diameter of the auger must be at least four inches larger than the nominal diameter of the casing to be installed, except as noted in OAR 690-240-0137 concerning piezometers.

(8) Materials which foster or promote undesirable organic growth or have the potential to

degrade water quality shall not be employed in the construction of the monitoring well.

(9) After completion, the landowner is responsible for maintaining the well in an approved condition. If the well is damaged, the well protection system and casing shall be restored as prescribed by these rules. If the well is damaged beyond repair, the well shall be properly abandoned in accordance with OAR 690-240-0135.

(10) A well identification label shall be attached to every new well and to every altered or repaired well that does not already have a label. The label must be easily visible on the outside of the casing on an above grade completion and inside the vault of a flush grade monument. (See Appendix 1) In cases where a geotechnical hole or other hole is converted into a monitor well, a well identification label must be attached to the completed well in the same fashion as required for a new or altered well.

(11) Any deviation from these rules requires special standard approval as specified under OAR 690-240-0006.

[ED. NOTE: Appendix referenced are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0110

Well Protection

(1) Every monitoring well shall be capped and protected using one of the following methods:

(a) If the well is cased with metal and completed above the ground surface, a lockable cap with lock shall be attached to the top of the casing;

(b) If the well is completed above the ground surface, and is not cased with metal, a metal protective casing shall be installed around the well. The protective casing shall extend at least six inches above the top of the well casing and at least two feet into the ground. A cap shall be attached to the top of the well casing and a lockable lid with lock shall be attached to the top of the protective casing; and

(c) If the well is completed below ground surface, a lockable, watertight cap with lock shall be attached to the top of the casing. A vault or monument, designed to be watertight, level with the ground surface, shall be installed to prevent the inflow of surface water. The cover must be designed to withstand the maximum expected loadings.

(2) All wells completed above ground shall have a minimum casing height of one foot above finished grade and shall be protected from damage by three metal posts at least three inches in diameter, set in and filled with concrete. The protective posts shall be installed in a triangular array around the casing and at least two feet from it. Each post shall extend at least three feet above and three feet below the ground surface.

(3) If the well is to be protected by other surface protection methods, the bonded constructor shall obtain special standards from the Department as specified in OAR 690-240-0006.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0115
Casing

(1) The constructor shall consider the following factors when selecting monitoring well casing:

(a) The casing installed shall not be readily reactive with the subsurface environment according to best available knowledge;

(b) The casing installed shall not adversely affect or interfere with the chemical, physical, radiological, or biological constituents of interest according to best available knowledge;

(c) The collapse strength of all casing used in monitoring well construction must be great enough to withstand the pressure exerted by the annular seal during seal placement, including heat of hydration.

(2) All monitoring well casing shall conform to at least 304 or 316 stainless steel, polytetrafluoroethylene PTFE, Schedule 40 PVC casing, or other casing materials rated and approved by ASTM for monitoring well construction.

(3) All casing installed shall be in new or like new condition, being free of pits or breaks, and shall be cleaned of foreign materials and contaminants prior to installation, unless removed from the manufacturer's packaging on site.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0118
Additional Standards for Artesian Monitoring Wells

(1) Monitoring wells penetrating into an artesian aquifer shall have an upper oversize drillhole at least four inches greater in diameter than the nominal diameter of the permanent well casing except as noted in OAR 690-240-0137 concerning piezometers. Watertight unperforated casing shall extend and be sealed, according to OAR 690-240-0130, at least five feet into the confining formation immediately overlying the artesian water-bearing zone.

(2) If an artesian monitoring well flows at land surface, the well shall be equipped with a control valve and a watertight mechanical cap, threaded or welded, so that all flow of water from the well can be completely stopped.

(3) All flowing artesian monitoring wells shall be equipped with a pressure gauge placed on a dead-end line. A petcock valve shall be placed between the gauge and well casing.

(4) All flowing artesian monitoring wells shall be tested for artesian shut-in pressure in pounds per square inch and rate of flow in cubic feet per second, or gallons per minute, under free discharge conditions. This data shall be reported on the well report.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0120
Cleaning

(1) All drill cuttings and fluids from drilling, cleaning and development shall be properly managed during construction, alteration or abandonment to protect ground water from contamination.

(2) The landowner or the landowner's agent is responsible for management of drill cuttings and fluids left on site after well construction, alteration or abandonment is completed.

(3) To prevent cross-contamination between wells, the drill rig and all drilling equipment shall be cleaned before and after well construction by one of the following methods:

(a) Detergent washing and rinsing with potable water;

(b) High pressure hot water cleaning;

(c) Steam cleaning; or

(d) Other methods as approved by the Water Resources Department.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0126
Monitoring Well Screen, Filter Pack, and Filter Pack Seal

(1) The screen and filter pack, when properly designed and installed, allows a water quality sample to be collected that is representative of water in the formation.

(2) The well screen shall:

(a) Be commercially fabricated and constructed of material that is not knowingly readily reactive with the subsurface environment;

(b) Have a collapse strength great enough to withstand the pressures exerted during construction and development of the monitoring well;

(c) Be in new or like new condition, being free of pits or breaks;

(d) Be cleaned using methods outlined in OAR 690-240-0120(3); and

(e) Be centered in the borehole.

(3) The use of lead packers with the screen sections is prohibited.

(4) A bottom cap or end plug shall be attached to each well casing.

(5) The filter pack shall:

(a) Consist of clean, chemically inert, well rounded material;

(b) Not extend more than three feet above the top or one foot below the bottom of the well screen; and

(c) Be placed in such a manner as to ensure placement opposite the well screen without bridging or size segregation.

(6) The filter pack seal shall consist of:

(a) A two foot thick layer of fine grained sand above the filter pack if a grout or grout slurry is used; and/or

(b) A minimum of a three foot thick layer of dry bentonite. If a grout slurry is to be used as the annular seal, the bentonite shall be adequately hydrated prior to placement of the annular seal to prevent grout infiltration into the filter pack.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0130
Well Seals

(1) Proper seal placement is essential to minimize the potential for movement of water and contaminants from the surface, or other waterbearing zones, into the monitoring well. Appropriate sealing materials may vary depending on the site characteristics and the substances being monitored. Well seals shall consist of a physically and chemically stable hydrated grout slurry composed of:

(a) Neat cement; or

(b) Sodium bentonite; or

(c) A cement-bentonite grout mixture containing no more than five percent bentonite by dry weight; or

(d) Sodium bentonite granules, pellets or chips placed in an unhydrated state, and subsequently hydrated downhole.

(2) Grout slurries shall be mixed in the proper proportions and placed in the bore hole in such a manner as to prevent excessive shrinkage, water loss, chemical breakdown, bridging or invasion into the filter pack. The following procedures shall be utilized if a grout slurry is to be the sealing material:

(a) Neat cement used for grouting shall be American Petroleum Institute Class A or B, or ASTM C-150 Type I or II neat cement with no additives, mixed in the proportion of 5.2 gallons of water per standard 94 pound sack and having a mud weight of approximately 15.6 pounds per gallon;

(b) Bentonite used as a slurry for grouting shall be a high solids granular sodium bentonite mixed according to the manufacturer's directions, having a minimum mud weight of at least 9.5 pounds per gallon, and containing at least 20 percent solids. Mixing methods should be used which prevent the slurry from being excessively lumpy;

(c) When a mixture of cement and bentonite is used as a slurry for grouting, the cement shall be American Petroleum Institute Class A or B, or ASTM C-150 Type I or II neat cement. The slurry shall be no more than five percent, by dry weight of cement, sodium bentonite gel powder (3.75 pounds of bentonite per sack of cement). For each pound of bentonite added, up to an additional 0.7 gallons of water shall be added to the original neat cement mix. The water and

bentonite shall be mixed first, and then the cement added to the bentonite slurry. The cement-bentonite mixture shall have a mud weight of approximately 14.1 pounds per gallon;

(d) Prior to placing grout in the annular space, the grout slurry weight shall be measured by ASTM Test Method D-4380-84. Grout slurry shall not be placed in the annular space until the grout slurry weight is within ten percent of the weight specified in subsection (2)(a), (b) or (c) of this rule;

(e) Grout slurries shall be placed from the bottom of the annular space upward in such a manner as to completely fill the sealing interval. Grout slurries shall begin at the top of the filter pack seal overlying the filter pack and extend to the bottom of the surface seal. If the grout slurry is intended to serve as the surface seal, it shall extend to land surface;

(f) Grout slurries shall be placed through a side discharge grout pipe by gravity flow or by pumping to ensure positive placement without bridging or wash-out of previously placed annular materials. The discharge end of the grout pipe shall remain submerged in the grout throughout the sealing operation;

(g) Prior to discontinuing placement of grout in the annular space, grout slurry returns from the annular space shall be measured by ASTM Test Method D-4380-84. Placement of grout slurry in the annular space shall continue until the returns are within ten percent of the weight specified in subsection (2)(a), (b) or (c) of this rule.

(3) Bentonite used in an unhydrated form shall be sodium bentonite granules, pellets or chips. Unhydrated bentonite shall be specifically designed for sealing wells and be within industry tolerances for dry western sodium bentonite. Bentonite shall be free of polymers that promote bacterial growth. The following procedures shall be adhered to if dry bentonite is used for sealing:

(a) Dry, poured bentonite seals shall only be used if the depth to the bottom of the seal is less than fifty feet and the standing water column in the bore hole or annular space is less than twenty-five feet deep at the time of seal placement. Only sodium bentonite chips manufactured to be greater than 1/4 inch or tablets shall be used below the water level in the sealing interval;

(b) Pour rate shall be three minutes or slower per 50 pound sack in the water-filled portion of the annulus;

(c) A sounding or tamping tool shall be used in the bore hole or annular space during pouring to measure fill rate and to break up possible bridges or cake formation;

(d) Care shall be taken to minimize the introduction of bentonite dust into the sealing interval;

(e) In a dry sealing interval, bentonite shall be hydrated with potable water in two foot lifts to ensure activation.

(4) The estimated and actual volume of sealing material used shall be calculated and reported to the Department.

[Publications referenced in this rule are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented:

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0131

Monitoring Well Development

(1) The monitoring well development shall not affect the integrity of the casing or seal. Monitoring well development shall not occur prior to 24 hours after annular seal placement if cement grout or a bentonite grout slurry is used, or 12 hours after annular seal placement if dry bentonite is used. The well may be developed prior to placement of the annular sealing material.

(2) The monitoring well development should:

(a) Remove any water or drilling fluid introduced into the well during drilling;

(b) Stabilize the filter pack and formation materials opposite the well screen;

(c) Minimize the amount of fine-grained sediment entering the well; and

(d) Maximize well efficiency.

(3) As long as the well is not altered, the monitoring well development may be performed by other than a licensed and bonded monitoring well constructor.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0132

Completion of Monitoring Wells

(1) A monitoring well constructor or permitted landowner constructing their own well shall not remove the drilling machine from a monitoring well site, unless it is immediately replaced by another monitoring well drilling machine in operating condition, prior to completion or abandonment of the monitoring well in compliance with OAR 690-240-0005 through 690-240-0140.

(2) Installation of the protective metal posts does not require a monitoring well constructor's license, providing the surface seal is not disturbed.

(3) Installation of the protective posts described in OAR 690-240-0110 shall be completed within one week of placement of the seal.

(4) If installation of the protective measures as described in OAR 690-240-0110 are not completed within 24 hours of seal placement, the monitoring well shall be marked using one of the following methods:

(a) Placement of three stakes around the well connected with fluorescent survey tape;

(b) Placement of construction barricades around the well; or

(c) Use of other protective measures as approved by the Water Resources Department.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0135

Abandonment of Monitoring Wells

Proper abandonment of monitoring wells will prevent both vertical movement of water

within the well bore and infiltration of surface water into the well:

(1) In areas where ground water contamination has been identified, except as described in number (4) below, abandonment shall require the borehole to be completely redrilled to a minimum of the original diameter. All casing, screen, annular sealing material, drill cuttings, debris, and filter pack material shall be removed prior to sealing.

(2) In areas where ground water contamination has not been identified, if it can be verified that the monitoring well was constructed in accordance with these rules, it shall be abandoned by filling the well from the bottom up with an approved sealant as described in OAR 690-240-0130. The casing shall then be removed below grade, as compatible with local site conditions and land practices. The following are acceptable methods of original well construction verification:

(a) A well report in accordance with OAR 690-240-0095;

(b) Well construction information submitted to the Oregon Department of Environmental Quality;

(c) Information obtained through down-hole geophysical logging; or

(d) Other information as approved by the Water Resources Department.

(3) In areas where ground water contamination is not present, and if the monitoring well construction cannot be verified by means listed in section (2) of this rule, the well shall be abandoned according to section (1) of this rule.

(4) In contaminated areas where remediation has occurred, an approved special standard is required to abandon a well unless it is abandoned according to section (1) of this rule. Abandonment procedures will be considered on a case by case basis. The Department will consult with the state or federal agency that supervised the remediation in determining the appropriate abandonment method. In cases where there was no agency oversight, the Department will consider any information supplied by the licensed and bonded monitor well driller in determining the appropriate abandonment procedure.

(5) Grout slurries shall be placed from the bottom up by a grout pipe to avoid segregation or dilution of the sealant. The discharge end of the grout pipe shall be submerged in the grout to avoid breaking the seal while filling the annular space. Grout slurries used to abandon monitoring wells shall conform to the requirements of OAR 690-240-0130.

(6) The abandonment procedure shall be recorded on a form provided by or previously approved in writing by the Department. The form shall include, as a minimum, all the requirements as listed in OAR 690-240-0095, plus:

(a) Method of abandonment;

(b) If assigned, the well identification number, original start card number, and owner's well number of the abandoned well.

(7) When abandoning artesian monitoring wells, in addition to sections (1) -- (6) of this rule, the flow shall be confined or restricted by cement grout applied under pressure, or by the use of a suitable well packer, or a wooden plug placed at the bottom of the confining formation immediately above the artesian water bearing zone. An approved sealant shall be used to fill the well to land surface as specified in OAR 690-240-0130.

(8) Monitoring wells that were constructed under special standards will require the abandonment method to be approved by the Department.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0137
Piezometers

It is prohibited to construct a piezometer in an area of known or reasonably suspected contamination.

NOTE: The Water Resources Department and the Department of Environmental Quality have information sources to use in determining if contaminants are present. Customary drilling practice as conducted by licensed professional must be included as part of the appropriate inquiry to determine if contaminants are present or reasonably suspected.

Piezometers shall be constructed to meet current monitoring well rules except for the following:

(a) Borehole size with depth requirements:

(A) For piezometers with a sealing depth less than 50 feet deep, the borehole diameter shall be at least two and one half inches (2.5") larger than the nominal casing diameter. If the piezometer is constructed using a hollow stem auger drilling machine, the inside diameter of the auger must be at least 2.5 inches larger than the nominal diameter of the casing to be installed;

(B) For piezometers with a sealing depth greater than 50 feet deep, the borehole diameter shall be at least three inches larger than the nominal casing diameter. If the piezometer is constructed using a hollow stem auger drilling machine, the inside diameter of the auger must be at least 3 inches larger than the nominal diameter of the casing to be installed.

(b) Surface Completion:

(A) If the piezometer is completed above ground, it shall have a minimum casing height of one foot above finished grade and a lockable cap with lock shall be attached to the top of the casing. If vulnerable to damage, the piezometer shall be protected as described in OAR 690-240-0110;

(B) If the piezometer is completed below ground surface, a lockable, watertight cap, with lock, shall be attached to the top of the casing. A vault or monument designed to be watertight, level with the ground surface, shall be installed to prevent the inflow of surface water. The cover must be designed to withstand the maximum expected loadings.

(c) If an artesian piezometer flows at land surface, it shall be equipped with a control valve or a watertight mechanical cap, so that all flow of water from the well can be completely stopped. Flowing artesian piezometers are not required to be equipped with a pressure gauge placed on a dead-end line or a petcock valve;

(d) The special cleaning and drill cutting storage requirements in OAR 690-240-0120 shall not apply to piezometers because they may not be constructed in areas of known or reasonably suspected contamination. However, all equipment and materials used in the construction of a piezometer shall be free of foreign materials and contaminants prior to entry into the well;

(e) Use of commercially fabricated screens are not required for piezometers. The screens installed shall be in new or like new condition, being free of pits or breaks, and shall be free of

foreign materials and contaminants prior to installation;

(f) The filter pack requirements of OAR 690-240-0126(5) shall not apply to piezometers because they are not constructed in areas of known or reasonably suspected contamination;

(g) A minimum three foot annular seal is required. If a grout slurry is used, the filter pack seal requirements of 690-240-0126 (6) apply. If a piezometer is completed with a flush monument, the annular seal shall extend a minimum of three feet below the monument seal.

Stat. Auth.: ORS 537.780
Stats. Implemented:
Hist.: WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0139
Direct Push Monitoring Wells and Piezometers

(1) Monitoring wells and piezometers that are installed using direct push technology shall comply with the applicable standards in these rules for reporting, casing, screening, filter pack, filter pack placement, filter pack seal, development, surface seal, cleaning, protection, marking, and completion.

(2) Monitoring wells and piezometers that are installed using direct push technology shall also comply with the following standards:

(a) Only prepacked screens shall be used; and

(b) The outside diameter of the borehole shall be a minimum of one inch greater than the outside diameter of the well casing; and

(c) Granular bentonite shall not be used in the sealed interval below the static water level; and,

(d) Wells and piezometers shall not be constructed through more than one water bearing formation and shall not be greater than 50 feet in depth unless a special standard is obtained.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0140 [Renumbered to 690-240-0006]

690-240-0145
Evidence of Failure

Evidence of failure to comply with the requirements of OAR 690-240, special standards as described in OAR 690-240-0006, or those standards of a state agency to which the Director has delegated direct responsibility under OAR 690-240-0016 shall include, but not be limited to, the following:

(1) A specific standard to which the Director has agreed is violated.

(2) Evidence that contamination is occurring as a result of a monitoring well, geotechnical hole, or other hole construction.

(3) Evidence that a monitoring well, geotechnical hole, or other hole, due to its construction, is causing or contributing to the loss of artesian pressure within an aquifer.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0150
Investigation of Alleged Violations

(1) The Water Resources Director, upon the Director's own initiative, or upon complaint alleging violation of statutes, standards or rules governing licensing of monitoring well constructors and/or, construction, alteration, conversion, maintenance, or abandonment of monitoring wells, geotechnical holes or other holes may cause an investigation to determine whether a violation has occurred. If the investigation indicates that a violation has occurred, the Director shall notify the persons believed responsible for the violation including but not limited to:

(a) Any monitoring well constructor involved;

(b) The landowner, if the violation involves construction, alteration, conversion, maintenance, operation or abandonment of a well, geotechnical hole, or other hole;

(c) The agency that has been delegated authority over a particular class of wells, geotechnical holes, or other holes and/or

(d) Any registered geologist or civil engineer in construction, alteration, or abandonment of a geotechnical hole.

(2) Enforcement and civil penalty assessment for "other than well constructors" is described in OAR 690-260.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.7952
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 2-1995, f. 5-17-95, cert. ef. 7-1-95; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0155
Enforcement Actions

(1) If, after notice and opportunity for hearing under ORS 183.310 to 183.550 the Director determines that one or more violations have occurred, the Director may impose one or more of the following:

(a) Provide a specified time for remedy;

(b) Assess a civil penalty in accordance with the schedule of civil penalties in OAR 690-240-0180;

(c) Suspend, revoke, or refuse to renew the license(s) when one or more persons responsible for the violation hold a monitoring well constructor's license;

(d) Require that a person whose license has been refused renewal pass the monitoring well constructor examination before a new license is issued or the current license is renewed;

(e) Impose any reasonable conditions on the monitoring well constructor's license to ensure correction of the violation and future compliance with the law. These conditions may include but are not limited to:

(A) Fulfilling any outstanding obligations which are the result of administrative action before the constructor can offer any services or construct, alter, convert, or abandon any monitoring well;

(B) Requiring additional advance notice to be given to the Department of construction, alteration or abandonment of any monitoring well;

(C) Requiring a seal placement notice be given to the Department up to 72 hours in advance of placing the seal; or

(D) Any other conditions the Director deems appropriate.

(f) Order the landowner to repair or meet other conditions on use of the well, or order discontinuance of the use and order proper abandonment pursuant to ORS 537.775;

(g) Make demand on the monitoring well constructor's bond or the landowner's bond. This may occur only if the Director has given the notice required in OAR 690-240-0150 to the persons responsible for the violation within three years after the date the monitoring well report is filed with the Department. If no monitoring well report has been filed, the three year limitation shall not apply until such time as a well report is filed; or

(h) Take any other action authorized by law.

(2) An order may specify a schedule of escalating or cumulative sanctions to be assessed on specified dates until the violation has been satisfactorily corrected.

(3) Any monitoring well constructor whose license is suspended or revoked shall be considered not licensed during the period of suspension or revocation. The appropriate provisions of OAR 690-240 shall apply.

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795

Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0160

Multiple Violations and Consolidation of Proceedings

In cases of multiple or continuing violations, each occurrence of substantially the same activity and each days continuance of a violation after the responsible party has been notified is a separate and distinct violation. Administrative enforcement proceedings for multiple violations may be consolidated into a single proceeding.

Stat. Auth.: ORS 537 & ORS 742

Stats. Implemented: ORS 537 & ORS 742

Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0165

Factors Affecting Selection of Type and Degree of Enforcement

In selecting the appropriate type and degree of enforcement, the Director may consider the following factors:

(1) Whether the constructor's file demonstrates a pattern of prior similar violations;

(2) Whether the respondent has cooperated in attempting correction of any violation in a

timely fashion;

(3) The gravity and magnitude of the violation, including whether there is an immediate or long-term threat to human health or the ground water resource;

(4) Whether the damage to the ground water resource is reversible;

(5) Whether the violation in the instances cited was repeated or continuous;

(6) Whether a cause of the violation was an unavoidable accident;

(7) The opportunity and degree of difficulty to correct the violation;

(8) The cost to the Department, except for travel costs and the initial field investigation, in attempting to gain voluntary compliance of the cited violation. The costs may be considered until the Department receives respondent's answer to the written notice and opportunity for hearing; and

(9) Any other relevant factor.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0170
Change in Enforcement Status

(1) In the interest of achieving compliance, the Director at any time may reevaluate the status of the violation(s) and take appropriate action, including reduction of the enforcement level or remission of all or part of any civil penalties assessed.

(2) The Director may terminate proceedings against a monitoring well constructor if the constructor provides acceptable evidence that:

(a) The landowner does not permit the constructor to be present at any inspection made by the Director; or

(b) That the constructor is capable of complying with recommendations made by the Director, but the landowner does not permit the constructor to comply. In such cases, the landowner is responsible for bringing the well into compliance pursuant to ORS 537.535, and if the landowner was not a party to the original enforcement proceeding the Director may initiate a proceeding to ensure that the landowner does so.

Stat. Auth.: ORS 537 & ORS 742
Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 7-2001, f. & cert. ef. 11-15-01

690-240-0175
Assessment of Civil Penalties

Under OAR 690-240-0155(1) the Director may at any time select the most appropriate enforcement tool, including assessment of civil penalties, to gain compliance. However, the Director shall not impose a civil penalty if compliance has been achieved in another manner prior to final decision in the proceeding.

Stat. Auth.: ORS 537 & ORS 742

Stats. Implemented: ORS 537 & ORS 742
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90

690-240-0180
Schedule of Civil Penalties

(1) The amount of civil penalty shall be determined consistent with the following schedule:

(a) Not less than $25 nor more than $250 for each occurrence defined in these rules as a minor violation;

(b) Not less than $50 nor more than $1,000 for each occurrence defined in these rules as a major violation;

(c) First occurrence, in a calendar year, of a missing or late start card fee shall be $150;

(d) Second occurrence, in a calendar year, of a missing or late start card fee shall be $250; and

(e) Third, and each subsequent, occurrence, in a calendar year, of a missing or late start card fee shall be $250 and may include suspension of the monitoring well constructor's license, and any other action authorized by law.

(2) For purposes of assessing a civil penalty, the start card fee referred to in subsections (1)(c), (d), and (e) of this rule shall not be considered late if it is received in the Salem office of the Water Resources Department within five days of the receipt of the start card, provided the start card was submitted in a timely manner as defined in OAR 690-240-0090.

(3) Table 240-3 lists minor violations related to monitoring well construction and geotechnical holes. All other violations are declared to be major.

[ED. NOTE: Tables referenced in this rule are available from the agency.]

Stat. Auth.: ORS 536.090 & ORS 537.505 - ORS 537.795
Stats. Implemented: ORS 536.090 & ORS 537.505 - ORS 537.795
Hist.: WRD 14-1990, f. & cert. ef. 8-9-90; WRD 8-1993, f. 12-14-93, cert. ef. 1-1-94; WRD 7-2001, f. & cert. ef. 11-15-01