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**PART 550
GENERAL REQUIREMENTS FOR ALL WELLS AND FACILITIES**

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550.1 General requirements

- a) **Purpose.** The purpose of Parts 550 - 560 of this Title is to implement the Oil, Gas, and Solution Mining Law by establishing regulations for the management of the following regulated activities:
1. oil and gas exploration and development;
 2. underground storage of natural gas and liquified petroleum gases;
 3. solution mining of salt; and
 4. geothermal, stratigraphic and brine disposal wells that are greater than 500 feet in depth.
- b) **Applicability.** Parts 550 - 560 of this Title apply to any owner, operator or person undertaking any activity covered in section 550.1(a) including, but not limited to, the following:
1. own any well, facility, pit, tank or other associated equipment necessary to perform a regulated activity;
 2. prepare a site for a well or facility including installation of the access road, rig, pits, tanks or other associated equipment required for a regulated activity;
 3. drill, case, cement, complete, frac, stimulate, recomplete, workover, deepen, plug back, or convert a well or facility;
 4. produce or operate a well or facility;
 5. plug and abandon a well or close a facility;
 6. salvage surface or subsurface equipment of a well or facility; or

7. refine, process, collect, purchase or transport oil, gas or other products produced in this state.
- c) **Goals and objectives.** The goals and objectives of Parts 550 - 560 of this Title are:
1. to prevent waste of the state's non-renewable mineral resources;
 2. to protect the correlative rights of all owners and the rights of all persons, ~~including landowners and the general public;~~
 3. to protect the public from the hazards to public health, safety and welfare that may result from regulated activities; [REDACTED]
 4. to protect the environment and prevent pollution of lands, soil, air, surface waters, groundwater, plant and animal life and other natural resources on and off the site of the regulated activity; [REDACTED]
 5. ~~to control the handling and disposal of waste byproducts generated by regulated activities so they do not pose a threat to the environment or the public;~~
 6. ~~to ensure that all affected lands are properly reclaimed when the land is no longer needed for a regulated activity; and~~
 7. ~~to ensure that the owners and/or operators of wells and facilities provide and maintain adequate financial security to guarantee well plugging and reclamation.~~
- d) **Waivers and variances.** Unless otherwise specifically allowed, all waivers, exceptions and variances must meet the goals and objectives of section 550.1(c).
- e) [REDACTED] **permit [REDACTED] structure.** ECL Article 23 authorizes the department to ~~administer the oil, gas and solution mining regulatory program and issue permits for regulated activities.~~
4. ~~General requirements.~~ To obtain a permit, the owner and/or operator must be in compliance with Parts 550-560 of this Title and any applicable permits, approvals and orders. The owner and/or operator of a well or facility and contractors ~~and service companies~~ must be registered with the department by filing an organizational report, as

required in section 551.2. All permits must list the name of the registered owner and/or operator. The owner and/or operator of a well or facility is responsible for compliance with Parts 550 - 560 of this Title. The owner and/or operator must maintain adequate supervision and control over all contractors, service companies and others hired to perform services or periodic duties on a well or facility site.

2. ~~Individual well permits. To carry out its responsibilities under Parts 550—560 of this Title, the department issues permits for individual wells.~~
 - (i) ~~The permit to drill and operate required under Part 554 is issued for an individual well and remains in effect until the well is plugged and abandoned. The permit authorizes commencement of drilling for a period of 12 consecutive months from the date of issue. The permit may contain site specific conditions related to the siting, drilling, completion and operation of the well. A permit to drill and operate is also required for well deepening, plugging back and conversion activities. If the original permit to drill and operate is still in effect, well deepening and plugging back can be covered under an amendment to the permit.~~
 - (ii) ~~A permit to plug and abandon is issued for an individual well under Part 560 and is valid for a period of six (6) consecutive months. The permit may include conditions requiring plugging and reclamation procedures tailored to site specific circumstances.~~
3. ~~Facility permits and approvals. The department also issues permits or approvals covering entire facilities made up of one or more wells. Part 558 covers permits for underground gas storage facilities, and Part 559 covers approvals for solution mining projects. Facility permits and approvals may include detailed conditions governing the general operation of the facility that the owner and/or operator must comply with in addition to the conditions on individual well permits.~~
 - f) **State, federal and local requirements.** No provision of Parts 550 - 560 of this Title relieves any

person from the obligation to comply in all respects with the provisions of any applicable state, federal or local requirements.

- g) **Supersedure of local requirements.** The provisions of Parts 550 - 560 of this Title supersede all local laws or ordinances relating to the regulation of activities described in sections 550.1(a) and (b), except they do not supersede:
 - 1. local government jurisdiction over local roads; and
 - 2. local government rights under the real property tax law.
- h) **Severability.** If any provision of Parts 550 - 560 of this Title or its application to any person or circumstance is held invalid, the remainder of Parts 550 - 560 of this Title, and the application of those provisions to persons or circumstances other than those to which it is held invalid, remains unaffected.

Section 550.2 Definitions

Unless the context otherwise requires, the words defined in ~~this~~ section 550.2 have the following meanings when used in Parts 550 - 560 of this Title or any applicable permits, approvals or orders:

- a) Abandon [REDACTED].
[REDACTED].
[REDACTED].
- b) Abnormal pressure means a pressure different than hydrostatic pressure.
- c) Affected land means all areas of land used, physically disturbed or contaminated by activities regulated under Parts 550 - 560 of this Title.
- d) Agricultural area means any land, whether fallow or active, used for the production of agricultural products including crops, field crops, fruits, vegetables, horticultural specialties, livestock and livestock products, including sale of products grown or raised directly on such land, but not including land used for the processing of any agricultural product.
- e) API well identification number means a unique number assigned by the department to a well

according to American Petroleum Institute guidelines.

- f) Barrel abbreviated BBL means 42 U.S. gallons, measured at standard temperature and pressure.
- g) Blowout means an uncontrolled or sudden escape of oil, gas or other formation fluid during wellbore operations.
- h) Blowout preventer means a pressure control device attached to the wellhead by a flanged connection. The blowout preventer can be closed to seal off the wellbore to control the flow and/or escape of wellbore fluids when formation pressure is encountered.
- i) Brine means any water containing 250 or more milligrams per liter chlorides or 1,000 or more milligrams per liter of total dissolved solids.
- j) Bubblepoint [REDACTED]
- k) Casing
 - 1. Conductor casing means a short string of casing set at the top of the wellbore and extending to shallow depth that prevents soils and unconsolidated sediments from sloughing into the wellbore.
 - 2. Surface casing means casing extending from the surface through the deepest fresh water zone.
 - 3. Intermediate casing means casing set below the surface casing and above the production casing where added support or control of the wellbore is needed.
 - 4. Production casing means casing extending from the surface to or through the producing formation, providing a conduit between the surface and the producing formation.
- l) Cavern means a cavity or subsurface space from which minerals have been removed.
- m) Completed well means a well with [REDACTED] all procedures ~~and processes~~ finished that are required for the well to perform its permitted function. For a stratigraphic test well, completion occurs when the well reaches total depth.
- n) Correlative rights means the right of each owner of minerals in a common source of supply to a fair opportunity to recover oil and gas in a quantity proportionate to their share of the reservoir

acreage. ~~Correlative rights also includes the right to be protected against damage to the producing formation and waste of the oil and gas resources.~~

- o) Cubic foot of gas means the volume of gas contained in one [REDACTED] cubic foot of space measured at standard temperature and pressure.
- p) Department means the Department of Environmental Conservation.
- q) Day means a calendar day of 24 consecutive hours, unless otherwise specifically stated.
- r) Directional drilling means a well drilling program that intentionally deviates from a vertical line passing through the center of the surface location of the wellbore.
- s) ECL means the Environmental Conservation Law which is Chapter 43-B of the Consolidated Laws of New York State.
- t) Facility means an underground storage [REDACTED] solution mining ~~or enhanced recovery~~ project composed of one or more wells and the associated surface and subsurface area and equipment [REDACTED]
- u) Field means the general area underlain by one or more pools.
- v) Fluid means any liquid or gaseous substance including, but not limited to, natural gas, air, water or brine.
- w) Fresh water means any water containing less than 250 milligrams per liter of chlorides and less than 1,000 milligrams per liter of total dissolved solids.
- x) Gas means all natural gas, manufactured, mixed and by-product gas, and all other hydrocarbons not defined as oil.
 - 1. Cushion gas means gas in an underground gas storage reservoir required to help produce the "working gas". Cushion gas includes injected gas plus native gas.
 - 2. Native gas means gas originally in place in an underground formation.
 - 3. Working gas means gas previously injected and then recovered from a storage reservoir for delivery.
- y) Gas-oil ratio abbreviated GOR means the ratio of the volume of gas produced in standard cubic

feet to each barrel of oil produced concurrently during any stated period of time.

z) Geothermal well [REDACTED]
[REDACTED]

aa) Injection well means any well in any pool, reservoir, subsurface geologic unit or cavern used for the purpose of introducing fluids or solids suspended in a fluid.

ab) Lease means one or more parcels of land that constitute a single tract or leasehold estate established for the purpose of development or operation of a well or facility subject to Parts 550 - 560 of this Title. It includes tracts or leasehold estates created by any means, including an oil and gas lease, fee or mineral ownership.

ac) Limited-use well means a low productivity natural gas well transferred to the fee owner for their exclusive use on the premises.

ad) MCF is the abbreviation for ~~one thousand~~ [REDACTED] cubic feet of gas. A [REDACTED] cubic foot of gas is the volume of gas contained in one [REDACTED] cubic foot of space measured at standard temperature and pressure.

ae) Monitoring well [REDACTED]
[REDACTED]

af) Multiple completion means a mechanical arrangement that permits the segregated injection and/or production into or from two or more pools or zones through a single wellbore.

ag) Municipality means a county, city, town, village or public school district within New York State.
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

[REDACTED] [REDACTED]

ah) North American Datum means a geodetic reference system of latitude and longitude lines used in mapping. The North American Datum (NAD) is periodically updated by the National Geodetic

Survey.

a) NYCRR is the abbreviation for the Official Compilation of Codes, Rules and Regulations of the State of New York.

a) Observation well [REDACTED]

ak) Offset refers to adjacent or contiguous lands, leases, wells, mineral rights or [REDACTED] owners [REDACTED] of the same. It also refers to residents on adjacent or contiguous lease [REDACTED] or lands.

al) Oil means crude petroleum oil and all other hydrocarbons, regardless of gravity, that are produced at the wellhead in liquid form by ordinary production methods.

am) Oil production pit means any pit or pond that is designed to hold or temporarily retain produced [REDACTED] waste [REDACTED] fluids from an oil well or wells.

an) Operator means any person in charge of development of a lease, in control of the operation of a well and/or that represents themselves to the department as an operator.

ao) Owner of a well or facility means the person who [REDACTED] has the right to drill any well subject to Parts 550 - 560 of this Title, or to produce, develop or appropriate production from such well or facility for that person and/or others. The owner includes, but is not limited to, persons who have those rights by virtue of fee ownership, lease, contract, partnership agreement or otherwise.

ap) Per [REDACTED]

aq) Plugging and abandonment means the permanent abandonment of a wellbore including the placing of all bridges, plugs and fluids within the wellbore and reclamation of the affected land ~~disturbed during drilling and well operations to a condition that prevents erosion and~~ sedimentation [REDACTED]

ar) Pollution includes, but is not limited to, the discharge, leak, spill, or release of product, waste

byproducts or other substances associated with the regulated activity that results in the ~~existence of a substance in the environment in violation of groundwater or surface water standards in Parts 700—705; or~~2. presence of substances or conditions in the environment that the department deems have a detrimental effect or significantly increase the risk of a detrimental effect on human life, property, land, soil, air, groundwater, surface water, plant or animal life, or other natural resources.

as) Pool means a single and separate underground accumulation of oil and/or gas, having its own unique pressure system and separated by geologic barriers from any other accumulation of oil and/or gas that may be present within the same geologic structure or stratigraphic interval.

at) Product means any commodity ~~produced~~ from a well subject to Parts 550 - 560 of this Title.

Product includes, but is not limited to:

1. oil and gas, in crude, refined or processed form;
2. brine, salt or other minerals in liquid or solid form produced by solution mining; and
3. water, brine or any other fluid extracted from a well for the purpose of recovering heat.

~~_____~~

~~_____~~

au) PSI is the abbreviation for pounds per square inch.

av) Reservoir means any underground reservoir, natural or artificial cavern or trap, whether or not previously occupied by or containing oil or gas.

aw) Salt means sodium chloride, evaporite or other water soluble minerals, either in solution or as a solid or crystalline material in a pure state or as a mixture.

~~-)~~ SEQR means the State Environmental Quality Review Act, Article 8 of the Environmental Conservation Law and Parts 617 and 618 of this Title. ~~_____~~

~~_____~~

ax) Shut-in well means a completed well not in use for the purpose for which it was drilled or converted.

- ay) Sinkhole means a localized area of catastrophic failure of the natural land surface from removal of underlying materials, fluid pressure reduction or other actions that decrease subsurface support.
- az) Solution mining means the dissolving of an underground salt by water to produce a brine for transport to another underground or surface location for sale, processing or storage.
- ba) Subsidence means sinking of the natural land surface from removal of underlying materials, fluid pressure reduction or other actions that decrease subsurface support.
- bb) Temporary abandonment means the interruption of routine activities required to complete a well that has never been previously completed.
- bc) Unit means two or more leases that have been combined or integrated in such a manner that the combined or integrated leases may be regarded as a common lease.
- bd) Waste means the surface or subsurface loss or destruction of product from a well [REDACTED] without beneficial use. Waste includes, but is not limited to the following:
1. the locating, spacing, drilling, equipping, operating, or producing of any oil or gas well in a manner that causes, or tends to cause, reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations or the unnecessary or excessive surface loss or destruction of oil or gas;
 2. the drilling of more wells than are reasonably required to efficiently recover the maximum amount of oil and gas from a pool;
 3. the inefficient, excessive or improper use of, or the unnecessary dissipation of reservoir energy;
 4. inefficient storage [REDACTED] of oil, or gas [REDACTED] including the production of oil [REDACTED] in excess of storage facilities, the production of gas in excess of transportation facilities or [REDACTED] loss of oil or gas [REDACTED] due to leakage, evaporation, seepage or fire; and
 5. the flaring or venting of gas produced from an oil [REDACTED] well after the department has found-

~~that the use of the gas, on terms that are just and reasonable is, or will within a reasonable time, be economically feasible [REDACTED].~~

- be) Waste byproduct means trash, refuse, garbage or any other substance except product which is generated by or occurs as a result of any activity regulated under Parts 550 - 560 of this Title.
- bf) Well log means any written record progressively describing the strata and any oil, gas or water encountered in drilling the well together with such additional information as volumes, pressures, rate of fill up, water depths, casing strata, casing record, etc., as recorded in the normal procedure of drilling. The term includes, if taken or performed, any electrical, mechanical or other surveys and the details of all cores and tests.
- bg) Well site includes the well location, access roads, pit and tank locations, equipment storage and staging areas, vehicle turnarounds, and any other areas impacted by activities involving a well.
- bh) Workover means any downhole operation in an existing well that is designed to sustain, restore or increase efficiency, make the well safer, correct an environmental hazard or correct another problem with the well.

Section 550.3 Well and lease identification

- a) **Identification requirements.** Every well must be clearly identified. During the drilling phase the permit to drill and operate must be posted as required under section 554.5(a). During all other phases, including shut-in and temporary abandonment, a permanent sign must be posted on the wellhead or pumping unit, if possible, or otherwise on a permanently constructed post not more than 20 feet from the well. Additional permanent signs must be placed where the principal access road enters the lease or unit. Installation of a permanent sign is not required if the well is plugged immediately after drilling.
- b) **Sign requirements.** Each sign must show the name and number of the well, the well's API number, the name of the owner and/or operator and the telephone number or numbers by which the owner and/or operator can be reached 24 hours a day, the name of the lease or unit, and the

town in which the lease or unit is located. The signs must be constructed of durable, weatherproof materials and the lettering must be clear and legible.

Section 550.4 Site construction [REDACTED] maintenance and reclamation

a) **General site construction and maintenance requirements.** The well site or facility site must be constructed and maintained as described in the [REDACTED] permit application and must comply with the well site setback requirements in sections 553.1 and 553.2 and any conditions placed on the permit. The owner and/or operator must inspect the well site or facility site to ensure it is maintained to comply with Parts 550 - 560 and all applicable permits, approvals and orders.

1. Material removed during construction. Topsoil and subsoil must be stored separately and used to reclaim the site as required under the provisions of section 550.6. Brushy debris, logs or other material removed during the construction process must either be [REDACTED] moved to an acceptable disposal area or stored for use in site reclamation.
2. Drainage, erosion and sedimentation. The [REDACTED] site [REDACTED] must be constructed and maintained to ensure proper drainage, avoid uncontrolled runoff and minimize disturbance to the natural drainage on and adjacent to the site. Access roads must be [REDACTED] crowned or graded to shed water and constructed to accommodate expected traffic. If necessary, the owner and/or operator must install drainage, erosion and sedimentation control devices, such as ditches, culverts, drainage bars, hay bales, and other devices recognized as effective in reducing the potential for erosion, siltation, flooding and pollution of the well site and adjacent lands or waters. These devices must be maintained at all times.
3. Agricultural areas. It is department policy to encourage well owners and/or operators to minimize land disturbances and interference with agricultural activities.

4. **Equipment.** All equipment used in regulated activities, including storage tanks and excavated pits, must be designed, constructed, installed, operated and maintained to comply with the provisions of Parts 550 - 560 of this Title and any applicable permits, approvals and orders.

Section (b) has been re-organized. All new text underlined, but only partial cross-out shown to reduce confusion.

- b) **Pit and tank construction and maintenance.** To prevent hazards to the public health, safety or welfare, the environment or property, the department may specify tank or pit siting, construction or usage requirements in addition to the minimum requirements in sections 550.4(b)(1) through (6). ~~The department may also require a tank dike and specify dike dimensions, dike construction and require a dike liner.~~ In setting pit and tank requirements, the department must consider the chemistry of the stored contents, environmental sensitivity of the area, the frequency of past containment problems and other site-specific circumstances.

1. Capacity. Tanks must be constructed and maintained with sufficient capacity to contain all stored fluids. Pits must be constructed and maintained with sufficient capacity to contain natural precipitation in addition to the stored fluids.

2. ~~General requirements.~~ **General requirements.** The owner and/or operator must maintain storage pits and tanks in leakproof condition. The owner and/or operator must inspect storage pits and tanks to ensure that they meet structural requirements and the stored contents do not contact the ground, soil, vegetation, surface waters or groundwater zones. The owner and/or operator must promptly repair or replace damaged tanks, pit walls, pit liners or liners that have slipped from their proper location.

3. Pits.

- (i) All drilling pits and other ~~waste fluid pits~~ ~~_____~~ must be lined with a synthetic liner impervious to ~~_____~~ waste ~~_____~~ fluids. The bottom of all pits must be above groundwater level. Pits must be surrounded by a

continuous embankment of sufficient height to prevent surface drainage into the pit.

- (ii) No new oil production pits are allowed. Within three (3) years from the effective date of this Part, the owner and/or operator of an existing production pit must remove all fluids from the pit and reclaim it to the department's satisfaction. All pit wastes must be disposed of by a method approved by the department.

4. Oil tanks. Oil must be stored in tanks protected by ~~an~~ a dike which creates a containment area with a capacity of at least 150 percent of the volume of the largest tank, or 150 percent of the capacity of all the tanks if they are gravity manifolded together.

5. [REDACTED]
[REDACTED] All
[REDACTED] tank dikes must be sufficiently impervious to completely contain spilled materials or wastes until they can be removed. All tank dikes must be maintained and damaged dike liners must be repaired promptly. The area between the tank and the dike wall must be kept free of water, oil, and any obstructions that might prevent the dike from performing its function. A drain with a valve must be installed in the dike to remove precipitation. The valve must be kept closed except when in use.

6. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- (iv) ~~In the event of tank leakage or overflow, the department may require the installation of fluid level controls to automatically shut down wells producing into a tank or tank battery. The department may order all wells producing into the tank or tank battery shut in pending installation of the equipment.~~


Section 550.5 Waste byproduct generation, handling and disposal

a) **General requirements and policy.** All waste byproducts which are generated during any activity regulated under Parts 550 - 560 of this Title must be handled, stored, ~~treated~~ and disposed of in a manner that prevents pollution and protects the public health, safety and welfare, the environment and property. ~~Depending upon the source and properties of a waste byproduct, it may be covered by more than one paragraph in this subdivision.~~

1. ~~Drilling wastes. Waste byproducts produced during the drilling phase include, but are not limited to:~~

- ~~(i) drill cuttings;~~
- ~~(ii) drilling fluids, including water based or oil based fluids;~~
- ~~(iii) drilling fluid additives, including but not limited to: surfactants, lost circulation material and weighting material;~~
- ~~(iv) rigwash; and~~
- ~~(v) excess cement.~~

2. ~~Produced waste fluids. Produced waste fluids and similar fluids generated during any other well activity, such as well drilling, servicing or plugging, include, but are not limited to:~~

- ~~(i) brine, defined as any water containing 250 mg/l or more of chloride or 1,000 or more mg/l of total dissolved solids; and~~
- ~~(ii) waste fluids contaminated with substances, including but not limited to the following:~~
 - ~~(a) substances introduced into the well or production stream including, but not limited to: biocides, inhibitors, and other well treatment chemicals; and~~
 - ~~(b) naturally occurring subsurface substances including, but not limited to:~~

heavy metals, oil, benzene, xylene, toluene, ethylbenzene or other organics associated with hydrocarbon recovery.

3. Associated wastes. Associated wastes are waste byproducts other than those covered in sections 550.5(a)(1) and (2) that are produced by regulated activities. Associated wastes include, but are not limited to:
- (i) used completion, treatment and stimulation fluids including frac fluids, acid and produced sand;
 - (ii) waste fluids from drillstem testing, blowout preventer testing and other test procedures;
 - (iii) waste packer fluids and waste fluids from well swabbing or well blowback;
 - (iv) paraffin treatment wastes and other waste solvents and cleansers;
 - (v) production and fluid treating equipment wastes including, but not limited to:
 - (a) injection fluid pretreatment wastes; and
 - (b) gas processing wastes including, but not limited to: glycol based compounds, used scavenging materials and used filters and backwash;
 - (vi) accumulated solids and other residual [REDACTED] materials removed from tanks, piping, lines, production separators and other equipment as part of a maintenance procedure, before replacing equipment or during well plugging [REDACTED]. Accumulated solids and other residual materials include, [REDACTED] but are not limited to: tank bottoms, emulsions, and paraffin buildup [REDACTED] [REDACTED];
 - (vii) trash, rubbish and other miscellaneous wastes including, but not limited to: open or empty sacks, bags and containers of supplies, surplus materials and old liners;
 - (viii) equipment maintenance wastes including, but not limited to: used equipment oils,

~~used hydraulic fluids, and painting wastes;~~

- ~~(ix) scrap metal including, but not limited to: used or damaged pipe, broken drill bits and remnants of welding operations; and~~
- ~~(x) soils or other materials contaminated by brine, oil or other substances.~~

b) **Waste byproduct storage.** All waste byproducts must be [REDACTED] stored in a manner that prevents pollution and protects the environment, the public health, safety and welfare, and property.

1. **Drilling pit storage.** Unless otherwise specifically authorized [REDACTED] by the department, drilling pit storage is limited to the following waste byproducts generated by drilling or ~~initial~~ completion procedures:

- (i) drill cuttings, excess cement, water-based drilling fluids and rigwash; and
- (ii) drill stem test fluids, blowout preventer test fluids, well swabbing fluids or mud-based drilling fluids provided the wastes do not contain any substance that the department determines may be harmful to the environment.

2. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

3. **Segregated waste storage.** The department may require segregation of some [REDACTED] waste byproducts into a separate tank or lined pit [REDACTED] Waste byproducts that may be segregated include, but are not limited to:

- (i) oil-based drilling fluids;
- (ii) acidizing waste fluids that have not been neutralized; and
- (iii) [REDACTED] waste [REDACTED] fluids containing a solvent; [REDACTED]
- (iv) [REDACTED]

4. Time limits. Waste byproducts cannot be stored permanently on-site.

(i) [REDACTED] Well site storage of drilling [REDACTED] [REDACTED] is limited to 45 days after cessation of [REDACTED] operations, as specified under the partial site reclamation requirements in section 550.4(e). All associated wastes must be removed from the site within 45 days of generation unless otherwise approved by the department. Any remaining waste must be removed from the well site during final reclamation, as required in section 550.4(e). [REDACTED]

(a) [REDACTED]
[REDACTED]

(b) [REDACTED]

(c) [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

(d) [REDACTED]

(e) [REDACTED]

(1) [REDACTED]

(2) [REDACTED]
[REDACTED]

(ii) [REDACTED]
[REDACTED]
[REDACTED]

(iii) Expedited disposal. The department may require [REDACTED] disposal prior to the 45-day deadline for contaminated soils or other waste byproducts that represent a threat to groundwater, the environment or the public [REDACTED] safety [REDACTED]

[REDACTED]

c) **Waste byproduct disposal.** All waste byproducts must be disposed of in accordance with all applicable federal, state and local [REDACTED] regulations. It is department policy to encourage [REDACTED] waste [REDACTED] reduction, reuse and recycling, whenever practical, to reduce the need for waste disposal.

1. Prohibitions. Disposal of waste byproducts into the well annulus is prohibited.
2. General requirements. The following general requirements apply to all waste byproducts:
 - (i) prior to disposal, free oil must be removed from the waste. [REDACTED]
[REDACTED]
 - (ii) the department may require testing of a waste byproduct to determine the proper method of disposal. If testing is required, the owner and/or operator must maintain a record of the analysis for a minimum of five (5) years unless a longer period is required by applicable federal, state or local requirements; [REDACTED]
 - (iii) the department may specify disposal requirements based on the characteristics of a waste byproduct and/or on-site constraints that limit disposal suitability, such as proximity to water supplies. ~~Waste byproduct discharges must be able to maintain the Water Quality Standards for surface and/or groundwater as specified in 6NYCRR Part 703.~~
3. Offsite disposal. Unless allowed under this section [REDACTED] or otherwise authorized by the department, all waste byproducts generated by regulated activities must be transported offsite for proper disposal in compliance with all applicable federal, state and local requirements. [REDACTED]

[REDACTED]

[REDACTED]

4. On-site disposal. On-site disposal is allowed for certain waste byproducts generated by regulated activities. When waste byproducts are disposed of on-site, the owner and/or

operator must submit a copy of the plat within 30 days showing the waste disposal site, the type of waste [REDACTED] and burial depth, if applicable.

(i) Drill cuttings and [REDACTED] may be buried at the pit location at a minimum depth of 40 inches. ~~Drill cuttings from air drilled wells may be buried onsite provided concentrated salt cuttings are segregated and disposed of separately.~~ Cuttings from wells drilled with water-based fluids can be buried onsite [REDACTED] if the fluid is removed. [REDACTED]

(ii) Fresh top hole water and drill cuttings brought to the surface while drilling through formations containing fresh groundwater may be discharged to the ground surface. ~~Onsite disposal of freshwater is allowed~~ after any solids have settled out. Top hole water must be spread in a manner that does not cause an erosion or sedimentation problem or a discharge to surface waters.

(iii) When a [REDACTED] shallow air-drilled well is not expected to encounter any brine, the owner and/or operator may request department approval to drill a well without digging a drilling pit. The water must be spread in a manner that does not cause an erosion or sedimentation problem or a discharge to surface waters. [REDACTED]

(iv) The pit liner may be buried with the pit contents provided the liner is ~~slashed~~ [REDACTED] to allow drainage. ~~Landowner permission is required.~~

(v) ~~Excess cement may be buried onsite at a minimum depth of 40 inches.~~ [REDACTED]

(v) The owner and/or operator may submit a written request for department approval of on-site waste disposal [REDACTED] not otherwise allowed under

section 550.5(c)(4). The department will determine the proper disposal or remediation methods based on analyses submitted by the owner and/or operator, as specified by the department.

5. ~~Oilfield produced waste brine disposal. The owner and/or operator may submit an application to the department for a State Pollutant Discharge Elimination System (SPDES) permit if it can be demonstrated that discharge of oil well produced waste brine can meet the required standards:~~

- ~~(i) total dissolved solids for Class A, A-S, AA, AA-S, B and C surface waters, and Class GA groundwaters must not exceed 500 mg/l;~~
- ~~(ii) oil and grease for all surface waters and Class GA groundwaters must not exceed 15 mg/l; and~~
- ~~(iii) chlorides in Class A, A-S, AA and AA-S surface waters, and Class GA groundwaters must not exceed 250 mg/l.~~

[REDACTED]

Section 550.6

[REDACTED]

a) **General requirements.** The owner and/or operator must reclaim all affected land as required in [REDACTED] this subdivision. The department's reclamation requirements are divided into partial and final site reclamation. [REDACTED]

[REDACTED]

b) **Partial reclamation** [REDACTED]

[REDACTED]

1. Partial reclamation deadlines. The owner and/or operator must complete partial reclamation within 45 days of:

- (i) drilling, deepening or plugging back the well to the total depth authorized in the permit to drill and operate;

- (ii) [REDACTED]
- (iii) [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- (iv) [REDACTED] termination of drilling, deepening, [REDACTED] plugging back, conversion or workover activities; or
- (v) site preparation activities for:
 - (a) a well that was not spudded; or
 - (b) workover, deepening, plugging back or conversion activities that were not performed.

2. Partial reclamation requirements. Partial site reclamation includes, but is not limited to the following:

- (i) all aboveground supplies, materials and equipment that are not needed for the continuation of the permitted activity must be removed from the well site;
- (ii) ~~within the 45 day deadline all waste byproducts generated by regulated activities must be disposed of as required in section 550.5. The department may require disposal prior to the 45 day deadline for contaminated soils or other waste byproducts that represent a threat to groundwater, the environment or [REDACTED] public [REDACTED] safety [REDACTED]~~
[REDACTED]
- (ii) all excavations and any land that is not needed to continue the permitted activity must be rough graded to a condition similar to the adjacent terrain. Rough grading means the process of filling in excavations with earth and grading the surface to conform to surrounding contours. The department may determine that matching the contours of the adjacent terrain is not practicable, as in returning a

hillside cut-and-fill to the original slope;

- (iii) stockpiled topsoil and subsoil must be redistributed; and
- (iv) the surface of the backfilled pit area and any other portions of the well site that are no longer needed to continue the permitted activity must be revegetated to stabilize the soil surface and control erosion and sedimentation. ~~The revegetation must establish a permanent vegetative cover which is capable of self regeneration and plant succession.~~

c) **Final reclamation deadlines.** The owner and/or operator must complete final reclamation within 90 days of:

- 1. setting the uppermost plug during plugging and abandonment operations; or
- 2. site preparation activities for:
 - (i) a well that was not spudded; or
 - (ii) workover, deepening, plugging back or conversion activities that were not performed.

d) **Final reclamation requirements.** Final reclamation includes, but is not limited to, the following:

- 1. all aboveground drilling, production, operation or storage facilities and supplies and equipment associated with the regulated activity must be removed from the site;
- 2. ~~within the 90 day deadline, all waste byproducts generated by regulated activities must be disposed of as required in section 550.5. The department may require disposal prior to the 90 day deadline for contaminated soils or other waste byproducts that represent a threat to groundwater, the environment or public safety;~~ [REDACTED]
[REDACTED]
- 2. all gathering lines, [REDACTED] must be [REDACTED] removed from the site; ;
 - (i) [REDACTED]
 - (ii) [REDACTED]

- (iii) [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- (iv) [REDACTED]
- [REDACTED]

3. in agricultural areas, the casing must be cut off below plow depth (approximately four (4) feet); and

4. rough grading, soil redistribution and revegetation for the entire site must be completed as described under sections 550.6(b)(2) [REDACTED] through [REDACTED]

e) **Reclamation extensions and waivers.** The owner and/or operator must request department approval to extend any reclamation deadline or waive a reclamation requirement by submitting a request prior to the applicable deadline adequately justifying the need for the requested action.

1. All deadline extension requests must include the date reclamation will be completed, a diagram of the affected area, as it currently exists, with the location and a description of all soil erosion and sedimentation control devices noted on the diagram and any other information the department deems necessary to evaluate the request.

2. All waiver requests must be accompanied by a written statement of agreement signed by the landowner. If the department waives the requirement to revegetate all or a portion of the well site, the unvegetated surface must be stabilized against erosion.

Section 550.7 Prevention of pollution and hazards

a) **Pollution.** The owner and/or operator must [REDACTED] prevent or remediate pollution caused by activities regulated under Parts 550 - 560 of this Title. ~~Owners-~~

~~and/or operators must at all times take all reasonable measures to prevent pollution and to remediate any pollution that occurs.~~ Remediation measures are subject to department approval.

- b) **Fire safety hazards.** The area surrounding the well, pits, tanks and other associated equipment and supplies must be kept clear of rubbish, debris and other flammable material. Waste oil must be stored and handled in a manner that will prevent a fire hazard.
- c) **Public safety hazards.** All owners and/or operators must prevent, control, remove or correct any public safety hazard [REDACTED] associated with activities regulated by Parts 550 - 560 of this Title. ~~The department may issue a notice of violation for any public safety violation. Violations must be corrected by the date specified in the citation.~~ The department may require fencing, flagging or caging of all or a portion of a well site or facility site to protect public safety.

The text in (d) was moved from Part 557 and incorporated here with minor changes as shown

- d) **Hydrogen sulfide and sulfur dioxide.** The provisions of [REDACTED] ~~this Part~~ apply to all well sites and facility sites subject to Parts 550 - 560 of this Title when regulated activities are proposed for or being conducted in areas of unknown hydrogen sulfide (H₂S) conditions or [REDACTED] [REDACTED] reasonably expected to contain gas with a concentration of 400 [REDACTED] parts per million (ppm) or greater H₂S. [REDACTED] ~~This Part~~ also applies to the site of any regulated activity at which hydrogen sulfide is detected on any part of the site with a concentration of 20 ppm or greater in air. The department may impose additional or alternate requirements based on site-specific circumstances.

1. Hydrogen sulfide detection. Owners and/or operators must install safety devices and maintain them in good operating condition or must establish safety procedures designed to detect the escape of hydrogen sulfide. The owner and/or operator must immediately notify the department when H₂S is detected at or above 20 ppm.
2. Sulfur dioxide detection. At any well or facility site where sulfur dioxide (SO₂) may be released as a result of the temporary flaring of hydrogen sulfide, the owner and/or

operator must make portable SO₂ detection equipment available for checking the SO₂ level in the flare impact area. ~~The acceptable concentration of SO₂ permitted by Federal OSHA Standard 29 CFR 1910.1000, Table Z-1 is 5 ppm."~~ The owner and/or operator must immediately notify the department when SO₂ is detected at or above [REDACTED] (5) ppm.

3. Equipment and materials. All equipment and materials that have the potential to be exposed to H₂S [REDACTED] must be designed, installed and maintained to resist stress cracking, corrosion, embrittlement and any other damage caused by hydrogen sulfide.
 4. Training and safety equipment. An owner and/or operator proposing activities for a well subject to [REDACTED] ~~Parts 550—560 of this Title in zones known or reasonably expected to contain hydrogen sulfide~~ must ensure that all persons working at the well or facility site are properly trained and equipped and that monitoring equipment is installed. The department may require the owner and/or operator to submit a training and safety equipment certification during any phase of a regulated activity.
 5. Operations and public protection plans. The department may require the owner and/or operator to submit the following during any phase of a regulated activity:

 - (i) an operational plan covering all activities planned for the site; and
 - (ii) a public protection plan including a detailed plan of action for alerting officials and protecting the public in the event of a potentially hazardous release of H₂S or SO₂.
 6. Waivers. An exception to the requirements in [REDACTED] ~~this Part~~ may be allowed upon the department's review and approval of the owner's and/or operator's justification for a waiver.
- e) **Fluid migration.** The owner and/or operator must at all times take all reasonable measures to prevent migration of oil, gas, brine or other fluids from one pool, reservoir or stratum to another.
 - f) **Securing the well.** The owner and/or operator must ensure that the well is properly secured

whenever the well site is unattended. The owner and/or operator must ensure that the well is not left open and venting to the atmosphere. The owner and/or operator must take all reasonable measures to ensure mechanical control of the well and related equipment and prevent the surface or subsurface flow of fluids from the wellbore.

g) **Non-routine incidents.** The owner and/or operator must take immediate action to abate the actual or potential danger from a non-routine incident involving any well or facility site subject to Parts 550 - 560 of this Title.

1. Types of incidents. The following incidents are always considered non-routine incidents:

- (i) a fire;
- (ii) an explosion;
- (iii) a blowout;
- (iv) the unauthorized escape of five (5) or more gallons of oil or more than ten (10) MCF of gas;
- (v) a [REDACTED] waste [REDACTED] fluid or chemical spill or leak of more than one [REDACTED] barrel;
- (vi) sudden sinkhole formation, subsidence-related damage or threats to cavern stability;
- (vii) lost radioactive logging tool; and
- (viii) any other incident that constitutes a threat to public health, safety or welfare, the environment or property.

2. Immediate notification. The owner and/or operator must immediately notify the department when any non-routine incident occurs. (†) The department may require the owner and/or operator to record any data that the department believes may be of subsequent use for adequate evaluation of a non-routine incident.

- ~~(ii) The unauthorized escape of oil, waste fluids or chemicals must also be reported to the DEC Hotline at 1-800-457-7362. Reportable quantities of hazardous substances may differ from the non-routine incident thresholds listed in section~~

~~550.6(f)(1).~~

3. Written report. [REDACTED]

[REDACTED] Within [REDACTED] five (5) days, the owner and/or operator must submit a written report to the department describing the non-routine incident. The written report must include:

- (i) the location, date and time of occurrence, and date and time reported to the department;
- (ii) the specific nature and cause of the incident, including a volume estimate of any spilled or escaped fluids;
- (iii) the corrective actions taken to remedy the situation including the emergency agencies contacted;
- (iv) a description of any resulting damages, the measures taken to correct the damages, and the expected time frame for completion; and
- (v) a description of the measures taken to reduce, eliminate or prevent a recurrence of the non-routine incident.

h) **Pollution and hazards.** When a hazard, a non-routine incident or pollution occurs at a well or facility site subject to Parts 550 - 560 of this Title, the department may:

- 1. require installation of additional equipment, revision of operating procedures or other measures to prevent future problems;
- 2. require repair, closure, removal or replacement of equipment;
- 3. order a well plugged and abandoned or shut in;
- 4. order a facility to cease or suspend regulated activities; or
- 5. revoke the permit to drill and operate.

[REDACTED]



Section 550.8 **Access and inspection**

- a) **Applicability.** The requirements of this section [REDACTED] apply to any well, facility, or other equipment or property used in or affected by any activity regulated under Parts 550 - 560 of this Title. The requirements of this section [REDACTED] also apply to affected on-site and offsite lands impacted by a regulated activity.
- b) **Access to property and records.** The department, including its employees, agents and representatives, has the right at all reasonable times to go upon or into and inspect any property, well site, or facility of any type subject to Parts 550 - 560 of this Title or any tank farm, pump station, pipeline, processing plant or refinery that accepts any product from a well subject to Parts 550 - 560 of this Title, notwithstanding signs or other notices claiming to limit access to the property. The department's right to access includes the right to inspect all records kept in conjunction with the regulated activities.

Section 550.9 **Hearings, enforcement and orders**

- a) **Public hearings.** Except as otherwise allowed in this section [REDACTED], the department cannot issue regulations or orders without a public hearing in accordance with ECL Article 70 and the appropriate provisions of Uniform Enforcement Hearings, Part 622 of this Title, Regulations Relating to Permit Hearing Procedures, Part 624 of this Title, and the State Administrative Procedure Act, Article 2, Rule Making, and Article 3, Hearing.
1. In requiring a hearing, the department may act upon its own motion or upon the

application of any interested person. [REDACTED]

2. Hearings must be scheduled promptly.
3. Unless there is a significant indication of changed conditions, the department cannot hold a hearing on any matter that has already been the subject of a prior hearing.

- b) **Offenses and penalties.** Violations and other offenses proven in connection with Article 23, Titles 1 to 13 and 19 and 21 of the ECL, Parts 550 - 560 of this Title, or any applicable permits, ~~permit conditions~~, approvals or orders of the department are punishable by fine and/or imprisonment as well as being subject to civil and criminal penalties provided by law in ECL Article 71, Title 13.
- c) **Testing and analyses.** The department may require the owner and/or operator of any well subject to Parts 550 - 560 of this Title to perform tests or analyses if existing information is insufficient to determine compliance with Parts 550 - 560 of this Title or any applicable permits, approvals or orders or the information is needed to determine the proper course of action to remediate or prevent a threat to the public health, safety or welfare, the environment or property. The department may specify the type and methodology of any test or analysis to ensure that the results are suited to the purpose intended. The department may require the owner and/or operator to:
1. perform initial or periodic testing to measure pressure or establish the producing capacity, injection capacity, operating characteristics or mechanical integrity of the well;
 2. test the operation of any equipment used in a regulated activity to demonstrate that the equipment is functioning properly; and
 3. analyze a substance associated with a regulated activity and/or the surrounding environment that may have been impacted by a regulated activity.
- d) **Suspension and revocation of permits.** The department may suspend or revoke any permit

issued under Parts 550 - 560 of this Title. The provisions of Article 70 of this chapter and section 621.14 of this Title will be used in any hearings and any department-initiated permit suspensions and revocations.

- e) **Suspension of oil and gas taking or transport.** No person who takes, purchases, acquires or transports products from an oil or gas well or facility may take any product [REDACTED] [REDACTED] after receiving written notice from the department of a suspension. The suspension must be based on an owner's and/or operator's violation of one or more provisions of the Parts 550 - 560 of this Title or any applicable permits, [REDACTED] or orders. The suspension remains in force until the taker/transporter receives written notice from the department allowing the reinstatement of transportation.
- f) **Emergency orders.** As authorized under ECL Article 23-0305 and ECL Article 71, Title 3 and the State Administrative Procedure Act, Article 4, Licenses, the department may make an emergency order without notice or hearing where it is demonstrated that immediate action is necessary. An emergency order cannot be effective for more than 15 days.
- g) **Shut-in orders.** The department may immediately issue a shut-in order for a well or facility suspending a regulated activity whenever the activity is being carried on in violation of Parts 550 - 560 of this Title or any applicable permits, approvals or orders.
- h) **Plugging orders.** The department may order an owner and/or operator to plug and abandon any well. [REDACTED] [REDACTED]. Grounds for a plugging order include, but are not limited to, the following:
1. ~~Temporary abandonment and shut in. The well has been temporarily abandoned more than 90 days or shut in more than one year without specific written department permission for an extension.~~
 2. ~~Pollution or hazard. The well or facility poses a threat or hazard to the environment, property or public health, safety or welfare and plugging and abandonment is necessary to remedy the problem.~~

- i) **Department plugging and abandonment.** Whenever the owner and/or operator of any abandoned well or any well that constitutes a danger to the environment, property or the public health, safety or welfare neglects or refuses to comply with Parts 550 - 560 of this Title, or any applicable permits, approvals or orders, the department, or a person authorized by the department, may enter and take temporary possession of any well for purposes of:
1. plugging and abandoning or replugging and abandoning the well;
 2. reclaiming any well site, facility site or affected lands impacted by regulated activities;
and
 3. abating or preventing any adverse effects which constitute a danger to the environment, property or the public health, safety or welfare.
- j) **Cost recovery.** Costs incurred by the department or its representatives under subdivision ~~subdivision~~ [REDACTED] (i) of this section become the legal obligation of the operator unless a contract for the production, development, exploration or other working of the well, to which the lessor or other grantor of the oil and gas rights is a party, places such liability on the owner or on the owner of another interest in the land on which the well is situated. The owner and/or operator must hold harmless New York State or its representatives for any resulting accounts, damages, costs, and judgments.

**PART 551
REGISTRATION AND REPORTING REQUIREMENTS**

Sec.	
551.1	General requirements
551.2	Organizational report
551.3	Well transfer request
551.4	Facility transfer request
551.5	Annual well report
551.6	Annual taker/transporter gas and/ or oil report

Section 551.1 General requirements

- a) **General reports.** To effectively carry out the provisions of Parts 550 - 560 of this Title, the department requires reporting of necessary information. The following general reporting requirements are covered in this Part:

<u>Report</u>	<u>Location</u>
Organizational report	551.2
Well transfer request	551.3
Facility transfer request	551.4
Annual well report	551.5
Annual taker/transporter gas and/or oil report	551.6

- b) **Other reports.** Requirements for other reports an owner, operator or person may have to file in conjunction with specific regulated activities are given throughout Parts 550 - 560 of this Title. The following table is a guide to the most frequently required reports and forms. It is not intended as an all-inclusive list:

<u>Report</u>	<u>Location</u>
Well completion report	555.8
Request for temporary abandonment or shut in	560.3
Well plugging report	560.2
Annual gas storage report	558.5
Annual LPG storage report	558.5
Annual solution mining report	559.3

- c) **Filing and records retention.** Every owner, operator or person required to submit forms or

reports must keep the appropriate records and data to substantiate all information submitted to the department. Unless otherwise specified, these records must be retained for at least five (5) calendar years after the year(s) to which they pertain and must be available to the department upon request. The record-retention period is automatically extended until resolution of any enforcement action regarding the regulated activity or at the request of the Commissioner. All forms, reports, and applications must be:

1. submitted on a form approved by the department. Use of an alternate form must be approved in advance by the department;
 2. signed by a duly authorized person listed on the organizational report required under section 551.2;
 3. filed at the appropriate department office. If the filing location is not listed on any form, report or application, contact the nearest regional office for the correct address; and
 4. legible, accurate and include all requested information, or the department will consider the submittal incomplete.
- d) **Verbal notification.** When verbal notification of the department is required, it must be in person or by telephone conversation. Voice mail and other recorded messages are not allowed.
- e) **Additional information.** Nothing in Parts 550 - 560 of this Title is intended to limit the authority of the department to request or require additional forms, reports, data or other information related to any well, facility or other activity in New York State that is subject to these regulations. In addition to the requirements specified in Parts 550 - 560 of this Title, the department may require any other relevant information necessary to evaluate a permit application, variance application, request for department approval or request for a waiver or exception.

- a) **Registration requirements - general.** Prior to commencement of [REDACTED] the following activities each owner, operator or person must register with the department by submitting a complete and accurate organizational report on a department-approved form:
1. own or operate, produce or control any well and/or facility covered by section 550.1(a) or any associated equipment required to perform a regulated activity;
 2. drill [REDACTED], ~~case, cement,~~ complete, ~~frac, stimulate,~~ recomplete, ~~workover,~~ deepen, plug back, or convert a well or facility covered by section 550.1(a); or
 3. plug and abandon, replug and abandon, or salvage surface or subsurface equipment of a well or facility covered by section 550.1(a).
- b) **Registration requirements - taker and transporter.** Prior to taking custody of oil or gas, each person who owns the point of first change in custody of oil and gas produced in this state, must register with the department by submitting a complete and accurate organizational report on a department-approved form. [REDACTED]
[REDACTED]
[REDACTED]
- c) **Partnerships.** A general partner of a partnership or limited partnership that is required to file an organizational report may register as the owner and/or operator for that entity.
- d) **Designated agent.** Any owner, operator or person required to file an organizational report whose office is not located in New York State must designate an agent in New York State that is authorized to receive all department orders and notices and legal papers from any New York court of law. The agent's complete mailing address and telephone number must be given. Post office box addresses are not acceptable.
- e) **Report update requirements.** Any owner, operator or person required to register under section 551.2(a) must file an updated organizational report within ~~ten (10)~~ [REDACTED] days of any occurrence that changes the information on the most recently filed report. Changes that require updating of an organizational report include, but are not limited to:

1. a change in the organization's ownership;
2. a change in the organization's name;
3. a change in the organization's business structure or type;
4. a change in the organization's address;
5. a change in the organization's phone number;
6. a change in the person(s) authorized to sign submittals to the department;
7. a change in the designated agent or the agent's contact information;
8. a change in the categories of regulated activities the organization is involved in; and
9. the cessation of a regulated activity.

- f) **Bankruptcy or tax foreclosure.** ~~or filing for bankruptcy or receipt of a notice of tax foreclosure on property used in an activity regulated under Parts 550—560 of this Title.~~ Any owner, operator or person required to submit an organizational report must notify the department in writing within ten (10) [REDACTED] days and submit a list of all unplugged wells associated with the bankruptcy, [REDACTED] tax foreclosure or discontinued activity [REDACTED]. [REDACTED] Any filing for the above must include the well type, API well identification number, well name and current status. The owner and/or operator remains legally and totally responsible for any wells involved until the department approves the transfer of all legal responsibilities under Parts 550 - 560 of this Title.

Section 551.3 Well transfer request

- a) **Transfer of legal ownership.** An owner ~~and/or operator~~ proposing to transfer the legal ownership of a well, either by real property transfer or court ordered action, must notify the department of the identity of the new owner ~~and/or operator~~ on a department-approved form.
- b) **Transfer of well responsibility.** An owner and/or operator proposing to transfer the legal responsibilities for a well subject to Parts 550 - 560 of this Title to another person must request approval for the transfer of well responsibility on a department-approved form. As part of the

transfer request, the current owner and/or operator of record must certify that the well is in compliance with Parts 550 - 560 of this Title and all applicable, permits, approvals and orders. Until the department approves the transfer, the current owner and/or operator of record remains legally responsible for all aspects of each well under Parts 550 - 560 of this Title including, but not limited to: maintaining financial security, filing all required reports, operating in a safe and environmentally sound manner, and properly plugging and abandoning each well as required by Part 560. [REDACTED]

[REDACTED] Before the department can grant approval of a transfer request, the proposed new owner and/or operator must:

1. have adequate financial security filed with the department for all wells currently owned and/or operated by the proposed new owner and/or operator and the requested transfer wells; and
 2. obtain the following from the current owner and/or operator:
 - (i) an up-to-date copy of the well's completion report; and
 - (ii) a copy of the permit to drill and operate with any subsequent permit amendments.
- c) **Approval of well transfer request.** Upon department approval of a transfer request, the transferee becomes legally responsible for all aspects of each well transferred including, but not limited to: maintaining financial security, filing all required reports, operating in a safe and environmentally acceptable manner, and properly plugging and abandoning each well as required by Part 560.
- d) **Denial of well transfer.** The department may deny approval of a transfer of one or more wells associated with an owner and/or operator if any well which the transferee or transferor is responsible for is not in compliance with any provisions of Parts 550 - 560 of this Title or any applicable permits, approvals or orders.
- e) **Limited-use wells transfers.** For department-approval of a transfer request for a limited-use

well, the request must be accompanied by a statement signed by the transferee that:

1. the well does not produce any oil;
2. the gas will be used only on the fee owner's property on which the well is located and the gas will not be sold, traded or bartered;
3. the well hookup to any building meets ~~any~~ applicable local building codes; and
4. the well is recorded on the property deed or title.

Section 551.4 Facility transfer request

- a) **Transfer of legal ownership.** An owner ~~and/or operator~~ proposing to transfer the legal ownership of a facility regulated under Parts 558 - 559 of this Title, either by real property transfer or court ordered action, must notify the department of the identity of the new owner ~~and/or operator~~ on a department-approved form.
- b) **Transfer of facility permit.** An owner and/or operator proposing to transfer a facility permit or facility approval issued under Parts 558 - 559 of this Title to ~~a new owner and/or operator~~ [REDACTED] [REDACTED] must submit a written request to the department explaining the reason for the transfer. As part of the transfer request, the owner and/or operator must certify that the facility is in compliance with Parts 550 - 560 of this Title and all applicable permits, approvals and orders. [REDACTED] a facility permit [REDACTED] ~~transfer cannot be approved~~ until all the wells in the facility have been transferred as required under section 551.3.

Section 551.5 Annual well report

- a) **General requirements.** Each owner and/or operator of an unplugged well subject to Parts 550 - 560 of this Title must completely and accurately report the fluids produced or injected and the well status, active or inactive, for the given calendar year on a form supplied by or approved by the department and submit the report to the department no later than March 31 of the succeeding year. Each unplugged well, whether or not there has been any production, injection, or use during

the calendar year, must be separately reported by its name and assigned API well identification number. All production for the calendar year must be reported whether or not it was marketed.

(Missing text moved to no.2 and amended)

1. [REDACTED]

2. For each unmetered [REDACTED], the owner and/or operator must estimate the quantity of produced or injected fluid and [REDACTED] note on the form that it is an estimate [REDACTED]

- b) **Self-certification.** On the annual well report the owner and/or operator must certify that all well sites have been inspected to ensure compliance with Parts 550 - 560 of this Title and all applicable permits, approvals and orders. ~~The owner and/or operator must perform the inspection at least once between May 1st and September 30th of the reporting year. The inspection must include, but is not limited to, a check for:~~

1. ~~leaking wellhead and storage equipment;~~
2. ~~signs of brine or oil spills including:~~
 - (i) ~~pooled or oil;~~
 - (ii) ~~discolored soil; and~~
 - (iii) ~~dead vegetation; and~~
3. ~~damaged dikes, damaged dike liners or obstructions in the dike that prevent it from performing its function.~~

- c) **Use of data.** The production and injection data on the annual well report is only for the confidential use of the department and other state and local governmental agencies until six (6) months after the period to which it applies unless the owner and/or operator furnishing the report agrees to earlier public availability. The department or any other state government agency may use confidential data to compile or publish analyses or summaries, provided that such analyses

or summaries do not involve the publication of records, reports or information relating to a single well, firm or business enterprise during the confidential period.

Section 551.6 Annual taker/transporter gas and/or oil report

- a) **General requirements.** Each first taker/transporter [REDACTED] who takes over responsibility from the producer for gas or oil produced from a well in the state must keep and maintain complete and accurate records and submit an annual report on a department-approved form. The report must include the well owner's and/or operator's name, meter or tank number, and where available, information on the distribution of assets. The report must cover the previous calendar year and be submitted no later than March 31 of the succeeding year, unless the department requires otherwise.
- b) **Use of data.** Any report obtained under this section [REDACTED] is only for the confidential use of the department and other state agencies until six (6) months after the period to which the information applies, unless the person that furnished the information agrees to earlier public availability. The department or any other state government agency may use confidential data to compile or publish analyses or summaries, provided that such analyses or summaries do not involve the publication of records, reports or information relating to a single well, firm or business enterprise during the confidential period.

**PART 552
FINANCIAL SECURITY**

Sec.	
552.1	General requirements
552.2	Financial security amount

Section 552.1 General requirements

- a) **Applicability.** The financial security requirements in this Part apply to all wells subject to Parts 550 - 560 of this Title except:
1. wells drilled prior to October 1, 1963; and
 2. wells drilled prior to June 5, 1973 for which the department issued an acknowledgment of a notice of intention to drill. If the department issued a drilling permit, financial security is required.
- b) **Liability.** Unless excepted under section 552.1(a), an owner and/or operator of a well subject to Parts 550 - 560 of this Title must provide financial security payable to the department to guarantee performance of the well plugging and abandonment obligations under Part 560 of this Title. These obligations continue and financial security must be maintained until:
1. the department has approved the transfer to a new owner and/or operator as required under section 551.3; or
 2. the well has been plugged and abandoned, including reclamation of the affected land, to the satisfaction of the department, and the department has reviewed and approved the plugging report.
- c) **Who must file.** The principal's name on the financial security must be the same as the owner and/or operator registered on the organizational report required under section 551.2.
- d) **Acceptable forms of financial security.** All financial security submitted is subject to department approval. The owner and/or operator may satisfy financial security requirements by providing one of the following types of financial security to the department in the amount required by section 552.2:

1. cash in the form of a certified check made payable to the New York State Department of Environmental Conservation, Division of Mineral Resources;
2. a bond from a surety authorized to do business in New York State. The bond must be submitted on a department-approved bond form. The bond must have the original signatures of both:
 - (i) the owner and/or operator, as principal; and
 - (ii) the surety or the surety's attorney-in-fact with a certified copy of Power of Attorney attached to the bond;
3. an irrevocable letter of credit, certificate of deposit or escrow account issued in a format acceptable to the department by a financial institution authorized to do business in New York State. The department must supply the owner and/or operator with a draft of an acceptable document to be used by the financial institution. On the well owner's and/or operator's behalf, the financial institution must send the department a letter with the original signature of an appropriate officer stating the following conditions on the account:
 - (i) that the financial institution holds an escrow account, irrevocable letter of credit or a certificate of deposit for a specified amount in lieu of a well plugging and surface restoration bond for the well owner and/or operator;
 - (ii) that the department may withdraw any or all of the principal without the owner's and/or operator's consent when the department provides the financial institution with a notarized letter stating that the owner and/or operator has failed to plug a well and/or reclaim affected land in accordance with department requirements;
 - (iii) that the financial institution will notify the department at least 90 days prior to taking any action that would cancel or allow the withdrawal of any monies from the account other than accrued interest;
 - (iv) that the department may withdraw any or all of the principal without the owner's and/or operator's consent and hold it as a cash collateral guarantee when the

well owner and/or operator fails to replace the existing security with other acceptable security within ten (10) days after the department informs the owner and/or operator that the financial institution has given notice that the account will be terminated; and

(v) that any interest accruing to the account remains the property of the owner and/or operator; or

4. another form of financial security acceptable to the department.

Section 552.2 Financial security amount

a) **Wells less than 2500 feet.** For wells less than 2,500 feet in total measured depth, financial security must be submitted in the following amount:

1. for one (1) to 25 wells, \$2,500 per well, not exceeding \$25,000;
2. for 26 to 50 wells, \$25,000 plus \$2,500 per well in excess of 25 wells, not exceeding \$40,000;
3. for 51 to 100 wells, \$40,000 plus \$2,500 per well in excess of 50 wells, not exceeding \$70,000; or
4. for over 100 wells, \$70,000 plus \$2,500 per well in excess of 100 wells, not exceeding \$100,000.

b) **Wells between 2500 and 6000 feet.** For wells between 2,500 feet and 6,000 feet in total measured depth, financial security must be submitted in the following amount:

1. for one (1) to 25 wells, \$5,000 per well, not exceeding \$40,000;
2. for 26 to 50 wells, \$40,000 plus \$5,000 per well in excess of 25 wells, not exceeding \$60,000;
3. for 51 to 100 wells, \$60,000 plus \$5,000 per well in excess of 50 wells, not exceeding \$100,000; or
4. for over 100 wells, \$100,000 plus \$5,000 per well in excess of 100 wells, not exceeding

\$150,000.

- c) **Combined well depths under 6000 feet.** If an owner and/or operator has wells covered under both sections 552.2(a) and (b), the owner and/or operator may ~~calculate the required financial security~~ by either:
1. computing [REDACTED] financial security [REDACTED] for wells in each subdivision [REDACTED]; or
 2. computing [REDACTED] financial security assuming [REDACTED] all wells are in [REDACTED] section 552.2(b) [REDACTED]
- d) **Wells over 6000 feet and other wells.** For wells covered under ~~this subdivision~~ [REDACTED], financial security must be submitted on an individual well basis. The amount of financial security must be based upon the anticipated contract cost of plugging and abandoning the well. Prior to issuance of a permit to drill and operate, [REDACTED] a plugging plan and cost analysis ~~must be submitted~~ to the department which covers all phases of the plugging process including, but not limited to: well site preparation, contractor costs, plugging time and site reclamation. Wells covered by this ~~subdivision~~ [REDACTED] include:
1. wells over 6,000 feet in total measured depth; and
 2. wells drilled into the lands under Lake Erie or other waterbodies, including wells directionally-drilled from shore.
- e) **Directionally-drilled wells.** Financial security for directionally-drilled oil, gas and storage wells is based on total measured depth from the surface, rather than true vertical depth. ~~Each sidetrack is considered a separate well.~~ Financial security for each [REDACTED] sidetracked well is calculated measured from the surface of the original hole to total measured (logged or drilled) depth of the sidetrack. Each sidetrack is considered a separate well [REDACTED]. Financial security for solution mining wells which use horizontal drilling as a completion technique will be based on total measured length of casing rather than total measured depth.

- f) **Financial security reduction.** If a well is completed to a lesser depth than originally planned or plugged back to a lesser depth, the owner and/or operator may request a reduction in the amount of financial security.

**PART 553
WELL SPACING**

Sec.	
553.1	General setbacks and requirements
553.2	Oil and gas well setbacks and variances
553.3	Gas well variances for state and local agencies
553.4	Spacing unit orders
553.5	Voluntary integration and unitization
553.6	Compulsory integration and unitization

Section 553.1 General setbacks and requirements

- a) **General setbacks for all wells.** For any well subject to Parts 550 - 560 of this Title, the [REDACTED] well site, ~~excluding the access road,~~ must not be located closer than:
- 1.75 feet from the traveled part of any [REDACTED] road [REDACTED]. [REDACTED]. This setback does not apply to roadside oil stock tanks;
 2. 150 feet from:
 - (i) any public building or area which may be used as a place of resort, assembly, education, entertainment, lodging, trade, manufacture, repair, storage, traffic or occupancy by the public; [REDACTED]
 - (ii) any municipal water well or reservoir; ~~and~~
 3. ~~150~~ [REDACTED] (iii) any stream, river or other body of water; ~~and~~
 4. 150 feet from the following without prior written consent of the landowner:
 - (i) any private dwelling; [REDACTED]
 - (ii) any private water well; and
 5. ~~150~~ [REDACTED] any spring used for a domestic water supply without prior written consent of the landowner.
- b) **General setback variances.** The department may grant variances to setback requirements in section 553.1(a) upon written application including a statement adequately justifying the basis and need for the variance.
- c) **Maps and plats.** Every map or plat required under this Part must include a notation indicating

which North American Datum it is based on.

Section 553.2 Oil and gas well setbacks and variances

- a) **General requirements.** A well drilled, deepened, plugged back, or converted for the production of oil or gas must be located at a distance equal to or greater than:
1. 660 feet from the lease or unit boundary; and
 2. 1320 feet from any other well completed in the same pool.
- b) **State border wells.** Absent an agreement with another state, a well in the vicinity of the New York State border must comply with the 660 foot setback in section 553.2(a). A well on a lease or unit with the New York-Pennsylvania border as one of its boundaries must be setback [REDACTED] a minimum of 330 feet from the border.
- c) **Oil well setback exemption.** Absent an established spacing unit, oil wells drilled, deepened, or plugged back in fields discovered before January 1, 1981 that are developed in formations lying stratigraphically above the Tully Limestone or its stratigraphic equivalent, are exempt from the provisions of section 553.2(a).
- d) **Directionally-drilled wells.** For directionally-drilled wells, the setback distances in section 553.2(a) must be measured from the vertical projection to the surface of all points along the wellbore that intersect the target formation(s).
- e) **Application for variance.** The department may grant a variance to the well location and spacing provisions in sections 553.2(a) or (b) if the department determines that granting the variance will further the public interest by preventing waste, providing a greater ultimate recovery of the resource or protecting correlative rights. In addition to those items required under Part 554 for an application for a permit to drill and operate, an application for a variance must contain four (4) copies of the following:
1. a plat certified by a New York State licensed land surveyor or licensed professional engineer drawn at a scale of one inch equals four hundred feet (1" = 400') or another

department-approved scale. The plat must show:

- (i) the name of the 7½ minute topographic map for the area which includes the proposed well location;
 - (ii) the proposed well location with 660-foot radius and 1320-foot radius circles around it;
 - (iii) the lease or unit boundaries and their distance from the proposed well location;
 - ~~(iv) the location of significant landmarks and topographic features within 200 feet;~~
 - (iv) the distribution of ownership for each parcel based on the surface acres owned as a percentage of the total surface acres within the 660-foot radius circle;
 - (v) the complete name and mailing address of all owners and/or operators whose interests would be affected within the 1320-foot radius circle; and
 - (vi) the location, API well identification number, and complete name and mailing address of the owner and/or operator of each well located within the 1320-foot radius circle;
2. all [REDACTED] geologic and reservoir information on the nature and character of the target formation and its producing characteristics;
 3. an estimate of the maximum drainage area for the proposed well including all substantiating information and test results in the vicinity of the proposed well;
 4. an affidavit confirming the owner's and/or operator's right to extract oil and/or gas resources from beneath the lands in the lease or unit;
 5. a statement explaining why the variance should be granted; and
 6. a proposed hearing site and the name and address of a newspaper with a general circulation area covering the vicinity of the well.
- f) **Processing of variance application.** Once the department receives a complete variance application, it must promptly schedule a public hearing unless the department determines to waive the hearing. To be considered for a hearing waiver, the following conditions must be

satisfied:

1. the owner and/ or operator has the right to develop at least 85 percent of the mineral rights calculated on the basis of the surface acreage contained within a 660-foot radius circle with the proposed well at the center;
 2. the variance application contains all the material required in section 553.2(e) along with an affidavit stating that the owner and/or operator has sent each mineral rights owner of record within the 660-foot radius circle the following by certified mail, return receipt requested, at the same time the variance application was submitted to the department:
 - (i) a copy of the variance application, the plat required under section 553.2(e)(1), and an explanation that the complete variance package is available for review at both the regional and central offices;
 - (ii) an explanation of the owner's and/or operator's reasons for requesting the variance from the department; and
 - (iii) notification that within 30 days of [REDACTED] receipt of the materials, the addressee has the right to file a written objection with the department to the granting of the variance.
- g) **Variance issuance.** The department will issue the variance if:
1. the hearing is held and an order is developed granting the variance; or
 2. the hearing is waived and:
 - (i) the department has concluded that all the information in the application is in order;
 - (ii) the department does not receive any substantive written objection in dispute of fact within the 30-day time period required in section 553.2(f)(2)(iii); and
 - (iii) the department has no technical objection to the variance.

Section 553.3 Gas well variances for state and local agencies

- a) **Eligibility.** Without considering correlative rights, the department may grant a variance to the following entities for the purpose of natural gas development if it determines, after notice and public hearing, that the natural gas resource would not be developed by any other entity by the spudding of a well within 12 months following the close of the hearing record:
1. the state of New York or any of its agencies; and
 2. ~~political subdivisions or municipalities of the state of New York.~~ [REDACTED]
[REDACTED]
[REDACTED]
- b) **General requirements.** The proposed well location must conform to the setback provisions in section 553.1.
- c) **Variance application requirements.** In addition to those items required under Part 554 for an application for a permit to drill and operate, an application for a variance must contain four (4) copies of the following:
1. a plat certified by a New York State licensed land surveyor or licensed professional engineer drawn at a scale of one inch equals one hundred feet (1" = 100') or another department-approved scale. The plat must show:
 - (i) the proposed well location by noting its [REDACTED] distance in feet south of the map's nearest reference latitude and its [REDACTED] distance in feet west of the map's nearest reference longitude;
 - (ii) the proposed well location with a 660-foot radius circle around it;
 - (iii) the boundaries of the property which includes the proposed well location; and
 - (iv) the location and outline of any road, body or stream of water, wetland, sport field or area, significant landmark or topographic feature, and each structure or building lying within [REDACTED] 660-foot radius circle of the proposed well location;

2. a plat certified by a New York State licensed land surveyor or licensed professional engineer drawn at a scale of one inch equals four hundred feet (1"=400') or another department-approved scale. The plat must show:
 - (i) the name of the 7½ minute topographic map for the area which includes the proposed well location;
 - (ii) the proposed well location with a 1320-foot radius circle around it; and
 - (iii) the name, complete mailing address, amount of surface acreage and property boundaries of each surface rights owner and oil and gas lessee within a 1320-foot radius circle of the proposed well location;
 3. a geologic description of the target formation;
 4. an affidavit confirming the owner's and/or operator's right to extract the gas resources at the proposed well location;
 5. a certified excerpt from the minutes of the owner's governing body or another acceptable form of public record stating that drilling of the well is economically justifiable and that the gas produced will be for the owner's exclusive use; and
 6. a proposed hearing site and the name and address of a newspaper with a circulation area covering the town in which the well is located.
- d) **Processing of application.** Upon receipt of a municipal variance application, the department must schedule a public hearing. If the department does not receive a timely and substantive objection before the scheduled hearing date, it may dispense with the hearing.
- e) **Variance issuance.** The department will issue the variance if:
1. the hearing is held and an order is developed granting the variance; or
 2. the hearing is waived and:
 - (i) the department has concluded that all the information in the application is in order;
 - (ii) the department does not receive any substantive written objection in dispute of

fact before the scheduled hearing date; and

- (iii) the department has no technical objection to the variance.

Section 553.4 Spacing unit orders

- a) **General requirements.** To promote effective development, use, or conservation of natural resources, the department may issue an order establishing well spacing units for a pool. The department will not consider establishing spacing units for formations in heavily developed pools where it is unreasonable or impractical. Spacing units must be of approximately uniform size and shape for the entire pool. Before the Commissioner issues any order establishing spacing units, the department must hold a public hearing. The spacing unit order must specify:
1. the size and shape of the units based on the maximum area that can be efficiently drained by one well based on recoverable reserves [REDACTED]; and [REDACTED]; and
 2. the acceptable location or area for drilling a well within each spacing unit, with exceptions for existing wells or for other good cause shown.
- b) **Application for spacing unit.** Any interested owner and/or operator may apply for a spacing unit order or the department may determine that a spacing unit order is required. A written application for a spacing unit order must include four (4) copies of the following information:
1. a plat certified by a New York State licensed land surveyor or licensed professional engineer drawn to a scale of one inch equals one thousand feet (1" = 1000') [REDACTED] [REDACTED] or larger or another department-approved scale. The plat must show the lease and unit boundaries of the lands underlain by the pool in the area for which the spacing unit order is proposed. The plat must include known well locations and lease or unit boundaries and provide the name and complete mailing address of the owner and/or operator of each lease and unit indicated on the plat;
 2. the distribution of ownership for each parcel based on the mineral rights acres owned as

- a percentage of the total acres within the unit;
 - 3. present well spacing and the proposed well spacing plan for the pool;
 - 4. all geologic and reservoir information on the nature and character of the target formation and its producing characteristics; and
 - 5. an estimate of the maximum drainage area for the proposed well including all substantiating information and test results in the vicinity of the proposed well.
- c) **Spacing unit variances.** An owner and/or operator may apply for a variance to a spacing unit order and the department must promptly schedule a public hearing. An application must include:
- 1. any changes or modifications to the information submitted under section 553.4(b);
 - 2. a statement explaining why the variance should be granted; and
 - 3. a proposed hearing site and the name and address of a newspaper with a general circulation area covering the vicinity of the well.
- d) **Modification of spacing unit order.** The department may modify a spacing unit order:
- 1. to include additional lands the department subsequently determines are ~~underlaid~~ [REDACTED] by the pool; or
 - 2. to change the size of the spacing units or to permit the drilling of additional wells in a reasonably uniform pattern.

Section 553.5 Voluntary integration and unitization

- a) **General requirements.** Voluntary integration and unitization in oil and gas pools is subject to the provisions of this section [REDACTED]. When two or more separately owned tracts are included within a spacing unit, or when there are separately owned interests in all or a part of a spacing unit, the owners and/or operators may integrate their tracts or interests for the development and operation of the spacing unit. An agreement for the unit or for the cooperative development and operation of all or part of a pool may be submitted to the department for approval.
- b) **Trusts and monopolies.** The department's approval of a voluntary integration and unitization

plan constitutes a complete defense to any suit charging violation of any statute of this state relating to trusts and monopolies on account of the agreement or operations conducted under the agreement. Failure to submit an agreement to the department for approval does not imply or constitute evidence that the agreement or operations conducted under the agreement are in violation of laws relating to trusts and monopolies.

Section 553.6 Compulsory integration and unitization

a) **General requirements.** Compulsory integration and unitization in oil and gas pools is subject to the provisions of this section [REDACTED].

1. The department may issue an order requiring the integration of interests in any spacing unit or the development or operation of all or part of any pool as a unit, if the department determines, after detailed study and analysis, notice and hearing, that the integration of interests in the spacing units is necessary to carry out the policy provisions of ECL 23-0301 under:

- (i) the conditions in the pool; and/or
- (ii) the conditions then existing in the state.

2. The hearing may be held at the same time as a well spacing hearing held under section 553.2 or section 553.4.

b) **Integration within individual spacing units.** If the well owner and/or operator does not control 100 percent of the mineral rights within the proposed unit and the owners and/or operators cannot reach an agreement under the voluntary integration procedures in section 553.5, the department must issue an order integrating all tracts or interests in the spacing unit for development and operation upon terms and conditions that are just and reasonable. The owner and/or operator must submit a report to the department within 30 days of determining the ~~commercial~~ productivity of the well. This report must contain the expected recovery and [REDACTED] drainage area, a recommended production unit and an analysis of the well's production

characteristics determined through a testing program approved by the department.

1. All regulated activities including, ~~but not limited to,~~ the drilling or operation of a well upon any portion of a spacing unit covered by an integration order is considered for all purposes to be equivalent to the owner and/or operator conducting the regulated activities upon each separately owned tract in the spacing unit. That portion of the production allocated to each tract included in a spacing unit covered by an integration order is considered for all purposes to have been produced from a well on the tract.
2. The integration order must authorize the drilling, equipping and operation of a well on the spacing unit and provide for the payment of the reasonable actual costs, including charges for supervision and interest. If the costs are disputed, the department must determine the proper costs.
3. If an owner and/or operator drills, equips, operates, or pays the expenses of drilling, equipping or operating a well for the benefit of another person, as provided for in an integration order, then the owner and/or operator is entitled to the other person's share of the spacing unit production minus a royalty of one-eighth or less. The owner's [REDACTED] [REDACTED] right to the other person's share of production ends when the market value of the other person's share, except for the royalty, equals twice the other person's share of the reasonable actual cost of drilling, equipping and/or operating the well, including charges for supervision and interest.

**PART 554
PERMIT TO DRILL AND OPERATE**

Sec.	
554.1	General requirements
554.2	Permit application
554.3	Application processing and permit issuance
554.4	[REDACTED]
554.5	Workover [REDACTED], deepening, plugging back and conversion
554.6	Posting and notice requirements
554.7	Permit transfers and fee refunds
554.8	Permits in underground mining areas
554.9	[REDACTED]

Section 554.1 General requirements

- a) **Applicability.** This Part applies to all wells regulated under Parts 550 - 560 of this Title. Parts 558 - 559 contain additional permit application requirements for [REDACTED] underground gas storage and solution mining facilities. The department may require additional or alternate information based on site-specific circumstances.

- b) **Permit name and permit term.** All permits issued after the effective date of this Part will be labeled "Permit to Drill and Operate" and will remain in effect until the well is plugged and abandoned. A permit to drill and operate authorizes commencement of drilling, as defined in section 555.1(c), for a period of 12 consecutive months from the date of issue. The department may extend the authorized drilling commencement period if administrative or judicial proceedings result in temporary suspension of the permit.

- c) **Authorization by rule.** On the effective date of this Part, wells in the following categories will be authorized by rule to continue operation subject to all of the requirements of Parts 550 - 560:
 - 1. wells drilled under a permit to drill;
 - 2. wells drilled under an acknowledgment of notice of intention to drill; and
 - 3. wells drilled prior to October 1, 1963.

- d) **General permit requirements.** The owner and/or operator must obtain a permit to drill and operate before commencing operations to drill, deepen, plug back, [REDACTED] convert or workover:

1. a well of any depth for the purpose of:
 - (i) exploring for, producing, or storing hydrocarbons [REDACTED]
[REDACTED]
 - (ii) injecting fluids to enhance recovery or to maintain reservoir pressure; or
 - (iii) exploring for salt and injecting or producing fluids for solution mining; or
 2. the following wells deeper than 500 feet below the earth's surface:
 - (i) a stratigraphic test well for the purpose of collecting geologic information;
 - (ii) a geothermal well for the purpose of exploring for or producing hot water or steam or recovering heat from geologic materials; or
 - (iii) a brine disposal well for the purpose of disposing of brine or other [REDACTED] waste [REDACTED] fluids.
- e) **Well re-entry.** Re-entry of a plugged well is considered a new well-drilling project. The owner and/or operator must obtain a permit to drill and operate and submit the financial security and permit application fee required in sections 552.2 and 554.2(e).
- f) **Waivers.** An exception to the requirements in this Part may be allowed upon the department's review and approval of the owner's and/or operator's justification for a waiver. The department cannot, however, grant a waiver to section 554.1(g).
- g) **Other permits and approvals.** The owner and/or operator must obtain all [REDACTED] [REDACTED] other required federal, state and local permits and approvals [REDACTED] [REDACTED] before commencing well site preparations.

Section 554.2 Permit application

- a) **Technical information.** The owner and/or operator must provide adequate technical information for the department to evaluate the proposed well drilling and operating activities. ~~The required information for a new well includes, but is not limited to, the following:~~
1. ~~proposed well type: gas, oil, injection, brine disposal, monitoring, geothermal,~~

- ~~stratigraphic, underground storage, solution mining;~~
- ~~2. proposed drilling rig type and drilling fluid;~~
 - ~~3. proposed casing and cementing program; and~~
 - ~~4. proposed well control equipment.~~
- b) **Environmental assessment form.** The application must include a completed environmental assessment form: attachment to application for a permit to drill and operate.
- c) **Certified plat.** The permit application must be accompanied by a neat legible plat certified by a New York State licensed land surveyor or licensed professional engineer. All plats must include a notation indicating the year of the North American Datum used.
1. All wells. The plat for all wells must be drawn to a scale of one inch equals four hundred feet (1" = 400') ~~or larger~~ or another department-approved scale and must show the following:
 - (i) the proposed well location;
 - (ii) the name of the 7½ minute topographic quadrangle for the area that includes the proposed well location; and
 - (iii) the ~~measured~~ distance in feet to the proposed well location:
 - (a) south from the 7½ minute quadrangle's nearest latitude line; and
 - (b) west from the 7½ minute quadrangle's nearest longitude line.
 2. Oil and gas wells. In addition to the requirements specified in section 554.2(c)(1), the plat must also show the following for any oil or gas well:
 - (i) the boundaries of the unit and the distance in feet from the well to the two (2) nearest boundaries; and
 - (ii) the name, API well number, direction and measured distance in feet from the proposed well location to the nearest well within one mile completed in the proposed target formation.
 3. Solution mining wells. In addition to the requirements specified in section 554.2(c)(1), the

plat for solution mining wells must also show the name, [REDACTED] distance, direction and API well [REDACTED] number of the closest solution mining well.

d) **Site features.** The permit application must also be accompanied by:

1. a [REDACTED] copy of the plat showing:
 - (i) the proposed location of the access road, pits, and tanks for both the drilling and the operating phases;
 - (ii) [REDACTED]
 - (a) [REDACTED]
 - (b) [REDACTED]
 - (iii) the location of all private water wells and natural springs utilized as a source of drinking water within 660 feet of the well; and
 - (iv) the location of all public water supply wells within 2000 feet of the well;
[REDACTED]
2. ~~plans for controlling erosion and sedimentation in areas where the department determines that the topography, soil type, nature of the proposed activities and/or other factors create the potential for erosion. The plan must identify structural, vegetative and/or stabilization measures to limit erosion and non point source pollution;~~
3. for underground storage wells, [REDACTED]
 - (i) the distance in feet from the proposed well location to the reservoir boundary and the buffer zone boundary, respectively; and
 - (ii) the location, name and API well [REDACTED] number of the closest well in the storage reservoir or any non-storage well within 2000 feet; and
4. for solution mining wells, [REDACTED]
 - (i) ~~the area to be affected by the removal of salt or other minerals from the well~~ [REDACTED]
[REDACTED] and
 - (ii) the distance in feet from the well to the nearest [REDACTED].

_____ boundary _____ of the solution mining facility.

- e) **Application fee.** The permit application must be accompanied by a check or money order payable to the New York State Department of Environmental Conservation in the amount specified below. This depth fee schedule includes a \$100.00 charge which is credited to the oil and gas account. If the actual depth drilled exceeds the planned total depth, within 30 days the owner and/or operator must pay the additional amount to equal the correct fee:

<u>Planned Total Depth</u>	<u>Fee</u>
0 - 500 feet	\$225.00
501-1000 feet	\$350.00
1001-1500 feet	\$475.00
1501-2000 feet	\$600.00
2001-2500 feet	\$725.00
2501-3000 feet	\$850.00
3001-3500 feet	\$975.00
3501-4000 feet	\$1100.00
4001-4500 feet	\$1225.00
4501-5000 feet	\$1350.00
5001-5500 feet	\$1475.00
5501-6000 feet	\$1600.00
6001-6500 feet	\$1725.00
6501-7000 feet	\$1850.00
7001-7500 feet	\$1975.00
7501-8000 feet	\$2100.00
8001-8500 feet	\$2225.00
8501-9000 feet	\$2350.00
9001-9500 feet	\$2475.00
9501-10000 feet	\$2600.00
Over 10000 feet	\$2725.00

- f) **Directionally-drilled well permit application.** In addition to complying with the requirements of sections 554.2(a) to (e), the owner and/or operator must submit adequate information for the department to review the directional-drilling proposal.

1. Technical information. The owner and/or operator must submit information on the directional- drilling program with all measurements, including casing setting depths, given in both true vertical and measured depth. The permit application must include a proposed

vertical section and plan view drawing of the well showing:

- (i) surface location;
- (ii) depth to kickoff point;
- (iii) the angular rate of build;
- (iv) end of build;
- (v) target location(s); and
- (vi) bottom hole location [REDACTED].

2. Certified plat. In addition to the applicable requirements specified in sections 554.2(c)(1) through (3), the plat for a directionally-drilled well must show:

- (i) the proposed bottom hole location; and
- (ii) the measured [REDACTED] distance of the well's bottom hole location in feet south of the 7 ½ minute quadrangle's nearest latitude line and the measured [REDACTED] distance in feet west of the 7 ½ minute quadrangle's nearest longitude line.

3. Application fee. Permit application fees for directionally-drilled wells are computed on the total measured footage of the wellbore and not on vertical depth. Each sidetrack is considered to be a separate well. For a sidetrack well drilled from an existing well where an original application fee was paid, the fee for the sidetrack will be based on total measured (~~logged or drilled~~) depth [REDACTED] from the surface [REDACTED]

- a) **Application processing general.** The review of each permit application includes:
 - 1. a technical review of the well construction proposal;
 - 2. a pre-drilling site inspection of the well site, including access road location, pit locations, equipment storage and staging areas, vehicle turnarounds, [REDACTED] and any other areas used in the regulated activity; and
 - 3. an environmental review of the entire proposal conducted under the State Environmental Quality Review (SEQR) Act.

- b) **Application processing - wells near water supplies.** Permit applications for wells proposed within 2000 feet of a municipal or public water supply well require additional review. The department must give written notice to the local government and the organization that owns the water supply. A public water supply well means either a community or non-community well system which provides piped water to the public for human consumption if:
 - 1. the system has a minimum of five [REDACTED] service connections; or
 - 2. regularly serves a minimum average of 25 individuals per day at least 60 days per year.

[REDACTED]

Section 554.4 [REDACTED]

- a) **Directional wells.** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- b) **Completion reports.** [REDACTED]
[REDACTED]

- c) **Well deepening.** Before deepening a well, the owner and/or operator must [REDACTED] a permit to drill and operate that specifically covers the proposed procedure [REDACTED].
[REDACTED] The application to deepen the well

must be accompanied by a check or money order payable to the New York State Department of Environmental Conservation in the amount specified for the final depth for wells permitted [REDACTED] before August 25, 1981, [REDACTED]. For wells permitted after August 25, 1981, the permit application fee for the proposed well deepening is calculated on the basis of the additional depth drilled.

d) **Plugging back a well.** Before plugging back a well, the owner and/or operator must have [REDACTED] a permit to drill and operate that specifically covers the proposed procedure, [REDACTED].

- 1. [REDACTED]
 - (i) [REDACTED]
 - (ii) [REDACTED]
- 2. Application fee. [REDACTED]

e) **Well conversion.** Before converting a well, the owner and/or operator must have [REDACTED] a permit to drill and operate [REDACTED].

- 1. Approval process. The owner and/or operator must submit [REDACTED] application for [REDACTED].
 - (i) conversion of a well that is not covered by Parts 550 - 560 of this Title to one that is covered; [REDACTED]
 - (ii) conversion of any well from one type to another covered by Parts 550 - 560 of this Title. ;and
 - (iii) conversion of a well covered by Parts 550-560 of this Title to one that is not

~~covered.~~

- 2. Application fee. The application to convert the well must be accompanied by a check or money order payable to the New York State Department of Environmental Conservation in the amount specified for the final depth for wells permitted [REDACTED] before August 25, 1981, [REDACTED].
[REDACTED] No additional fee is required for converting wells permitted after August 25, 1981.

- 3. [REDACTED]
[REDACTED]
 - (i) [REDACTED]
[REDACTED]
 - (ii) [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

Section 554.5 Workover [REDACTED], ~~deepening, plugging back and conversion~~

- a) **Workover permit [REDACTED] requirements.** [REDACTED]
[REDACTED] before conducting any workover activity that could alter the casing, permanent configuration or status of a well [REDACTED].
[REDACTED], the owner and/or operator must obtain department approval. A workover permit application must be submitted on a department-approved form at least ten (10) days prior to the scheduled operations. No application fee is required.
- b) **Permit required.** Workover activities requiring [REDACTED] department approval include,

but are not limited to, the following:

1. perforating casing in a previously unperforated interval;
2. remedial work on a casing or liner;
3. running and cementing casing or tubing;
4. drilling;
5. repairing damaged casing or related cement jobs;
6. setting any type of plug or packer;
7. running and setting and/or cementing an inner string of casing, liner, or tubing; and
8. formation stimulation associated with a workover [REDACTED].

c) **Exempt from permit.** The following workover routines do not require a permit if conducted within the same completion interval:

1. pulling installed downhole equipment;
2. scraping, retrieval and replacement of casing or tubing [REDACTED].
3. resetting a packer for operations in the same zone;
4. paraffin treatments;
5. changing pumps; or
6. swabbing the well; [REDACTED]
7. raising or lowering tubing.

[REDACTED]

b) **Well deepening and plug back permit requirements.** Before deepening or plugging back a well, the owner and/or operator must have a permit to drill and operate that specifically covers the proposed procedure. At the time of the request, the department determines the information needed to evaluate the environmental and technical aspects of the proposed deepening or plugging back operation.

e) **Well conversion permit requirements.** Before converting or changing the designated use of a

~~well, the owner and/or operator must file an application for a permit to drill and operate so the department can assess the technical and environmental aspects of the well conversion or new use. The owner and/or operator must submit a permit application for:~~

- ~~1. conversion of a well that is not covered by Parts 550—560 of this Title to one that is covered;~~
- ~~2. conversion of any well from one type to another covered by Parts 550—560 of this Title; and~~
- ~~3. conversion of a well covered by Parts 550—560 of this Title to one that is not covered.~~

d) ~~**Application fee—deepening, plugging back and converting.** For wells permitted before August 25, 1981, the application to deepen, plug back or convert the well must be accompanied by a check or money order payable to the New York State Department of Environmental Conservation in the amount specified for the final depth.~~

- ~~1. For wells permitted after August 25, 1981, the permit application fee for the proposed well deepening is calculated on the basis of the additional depth drilled. No additional fee is required for plugging back or converting wells permitted after this date.~~
- ~~2. Regardless of a well's original permit date, no additional permit fee is required for plugging back a well within the same formation. This fee exception does not apply to lateral drilling within the same horizon.~~

Section 554.6 Posting and notice requirements

a) **Posting permits.** A copy of the permit [REDACTED] must be available at the well site during the entire period of site preparation. The owner and/or operator must post and maintain the [REDACTED] permit in a clearly visible and prominent location at the well site throughout drilling [REDACTED] operations. The permit must be visible and legible at all times.

b) **General notice requirements.** Before starting well site preparations [REDACTED], the owner and/or operator must: 1. give at least five (5) [REDACTED] days advance

notice by certified mail, return receipt requested, of the location of the well site and expected starting date to:

1. the clerk of the local government with jurisdiction over the land that will be physically affected; and
2. any person having surface rights affected by the regulated activity; ~~and~~.

c) **Department notice requirements.** [REDACTED] give the department verbal notice of the starting date at least 24 hours before starting well site preparations.

Section 554.7 Permit transfers and fee refunds

- a) **Well location changes and lost holes.** In the case of a [REDACTED] lost hole, the department may allow the owner and/or operator to transfer a valid permit to drill and operate to a new well location no more than 75 feet from the original permitted location, provided:
1. the new well is spudded before expiration of the authorized 12-month period to commence drilling;
 2. the following requirements are met before drilling starts at the new well location:
 - (i) the new well location complies with all applicable well setback requirements in Part 553;
 - (ii) at the same time the owner and/or operator requests department approval of the well location change, the owner and/or operator sends revised notices to the clerk of the local government and the surface rights owner. The minimum 5-day notice period required under section 554 (b)(1) does not apply in this case;
 - (iii) the owner and/or operator receives department approval for the change before the well is spudded at the new location; and
 - (iv) the owner and/or operator has obtained all other required permits and approvals;

and

3. within 15 days after the start of drilling operations at the new site, the owner and/or operator confirms the location change in writing by submitting a new permit application with the new well location marked on a [REDACTED] copy of the plat.
- b) **Incomplete permit applications.** If a permit application has remained incomplete for over one (1) year from the date of first submittal and the owner and/or operator has failed to provide all the necessary information for application processing, the application is considered withdrawn and the application fee cannot be refunded [REDACTED].
- c) **Application fee refund or transfer.** Before a permit has been issued, the owner and/or operator may request a refund of the permit application fee provided the application has not been incomplete for over one [REDACTED] year. Once a permit has been issued, the application fee cannot be refunded, but the owner and/or operator may request transfer of the fee to a new permit to drill and operate under sections 554.6(d) or (e). An application fee may be transferred only once unless the department waives this restriction for sufficient good cause. The owner and/or operator must submit a complete application for a permit to drill and operate for the proposed new well. If the owner and/or operator proposes transferring the fee to a deeper well, the application must be accompanied by any additional fee necessary to equal the applicable fee required under sections 554.2(e), 554.2(f)(3) or 554.4.
- d) **Transfer of permit to new well.** If the well has not been spudded before expiration of the authorized 12-month period to commence drilling, the owner and/or operator may request a transfer of the permit application fee to a permit application for a proposed new well belonging to the same owner and/or operator. The original permit will be voided. If the department approves the new permit application, the department will issue a new permit to drill and operate with a new API well [REDACTED] number, but the same 12-month period expiration date as in the original permit.

- e) **Transfer of permit to new owner.** If a well has not been completed within the authorized 12-month period to commence drilling, the owner and/or operator may request transfer of the permit to a new owner and/or operator as part of a well transfer procedure under section 551.3. The transferee must submit a new permit application signed by the transferee and both the transferee and transferor must otherwise comply with all the provisions of section 551.3. An addendum will be issued to the permit changing the well owner's and/or operator's name, but the API well [REDACTED] number and expiration date for the 12-month period will remain the same.

Section 554.8 Permits in underground mining areas

- a) **Registration of underground mines.** For purposes of this section [REDACTED], an underground mine does not include an underground gas storage or solution mining facility. Persons engaged in underground mining operations or having rights in underground mining properties may register with the department. Registered persons must be notified when activities regulated under Parts 550 - 560 of this Title are proposed which may affect the safety of their underground mining operation and/or property. Registered persons must provide the department with a map, at a scale of one inch equals four hundred feet (1 inch = 400') [REDACTED] [REDACTED] or larger or another department-approved scale, showing:
1. the location of their operation and/or property and the location of all other known underground mining operations and mining properties within 1000 feet;
 2. all known wells located within 1000 feet of their mining operations and/or properties; and
 3. the name and complete mailing address of the person registered for each mining operation, property and well.
- b) **Review of permit application.** Upon receipt of an application for a permit to drill and operate, the department must determine if the proposed well location is located within 1000 feet of any registered underground mining operations or properties. The department must inform the owner and/or operator applying for the permit of the location of the registered underground mining

operations and properties involved and provide the names and mailing addresses provided by the registered person. Processing of the permit application must be suspended until the department receives an acceptable plan for protecting any known or anticipated underground mining operations and properties.

- c) **Notification to registered mines.** Upon department acceptance of the draft plan of operations, the owner and/or operator applying for a permit must inform all registered persons with underground mining operations or properties within 1000 feet of the proposed well location that a permit application has been submitted to the department. The notice must be sent by certified mail, return receipt requested, and must include a copy of the permit application. Concurrently, a copy of each notice must be sent to the department by certified mail, return receipt requested. To allow for comments on the draft plan, the department must suspend processing of the permit application for ten (10) days. The draft plan of operations must be available for review at the appropriate regional office. The owner and/or operator is not required to provide notice by certified mail and the comment period is waived if the draft plan of operations submitted to the department is accompanied by a written statement from every registered person with an underground mining operation or property within 1000 feet consenting to the proposed well location and operations.
- d) **Processing of permit application.** If the department does not receive a written response objecting to the permit application within ten (10) days from the mailing of the notice, the department must continue processing the application. If the department receives a substantive written objection within ten (10) days from the notice mailing date from any person with an underground mining operation and/or property within 1000 feet, the department may schedule a public hearing to assist in making a decision on the application. The written objection must be based on the location or planned operation of the proposed well and explicitly state the expected detrimental impacts on existing or anticipated mining operations.

**PART 555
DRILLING AND COMPLETION PRACTICES AND REPORTS**

Sec.	
555.1	General requirements
555.2	Cable tool drilling practices
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Section 555.1 General requirements

- a) **Applicability.** This Part applies to the drilling [REDACTED] phase of all wells regulated under Parts 550 - 560 of this Title [REDACTED]. ~~The drilling phase includes~~ site preparation, drilling, deepening, plugging back, converting, completion, recompletion and workover activities. Parts 556 - 559 contain additional drilling requirements for hydrogen sulfide, wildcat, [REDACTED] [REDACTED] underground gas storage and solution mining wells. The department may impose additional or alternate drilling requirements on a site-specific basis.
- b) **General permit requirements.** Before commencing any activity regulated under this Part, the owner and/or operator must have a permit to drill and operate required under Part 554. All activities regulated under this Part must be conducted in accordance with permit requirements.
- c) **Commencement of drilling operations.** A well cannot be spudded with a backhoe or other construction equipment. To commence drilling operations, the owner and/or operator must spud the well by one of the following methods using a cable tool, rotary, or other drilling rig with a reasonable likelihood of continuing the drilling operations necessary to install the surface casing after installation of the conductor casing:
1. by penetrating the ground with a drilling bit; or
 2. by driving the conductor casing into the ground.

- d) **Equipment.** In addition to the requirements in section 550.4(a)(4), the owner and/or operator must comply with the following:
1. the material and construction of all outlets, fittings, and connections on the casing, blowout preventers and auxiliary wellhead equipment that may be subject to pressure must be designed to withstand the maximum anticipated surface pressure at the wellhead; and
 2. in some areas the department may require a diverter system for well control during the initial stages of drilling to direct well flows from shallow depths away from the rig and personnel. The system must be designed and constructed to provide flow diversion prior to setting the casing string upon which the blowout preventer stack and choke manifold will be installed.
- e) **Waivers.** An exception to the requirements in this Part may be allowed upon the department's review and approval of the owner's and/or operator's justification for a waiver.

Section 555.2 Cable tool drilling practices

- a) **Casing program.** Casing programs adopted for wells drilled with cable tools must be designed to protect any potential fresh water, oil or gas bearing horizons penetrated during drilling and to prevent migration of water, oil, gas or other fluids from one horizon to another.
- b) **Well control.** Well control equipment is required unless the owner and/or operator submits a written request for a waiver and it is approved by the department. The equipment must be installed, operational and maintained in good working order before drilling through any formation known or likely to contain oil, gas or other pressurized fluids. In case it becomes necessary, the wellhead must be able to accommodate additional well control equipment, ~~such as a bottle, lubricator or other equipment~~ specified [REDACTED] by the department.
- c) **Natural gas.** Natural gas encountered in any section of a cable tool hole above the target formation or completion interval must be controlled. Any gas escaping from the well during drilling

operations must be, as far as practicable, diverted to a safe distance from the well as required in section 555.1(d)(2).

Section 555.3 Rotary drilling practices

- a) **Well control.** ~~In areas where abnormal pressures may reasonably be expected,~~ The owner and/or operator must equip the well with pressure fittings and equipment of the proper size and working pressure and take all reasonable precautions for keeping the well under control at all times. All the well control equipment must be installed, operational and maintained in good working order. The owner and/or operator must notify the department immediately if the blowout preventer is closed ~~anytime except during a blowout preventer test~~ [REDACTED]
- b) **Drilling medium.** The drilling medium used for a rotary drilled well must be adequate to control blowouts and flows and isolate each oil, gas, brine or fresh water stratum above the target formation or completion interval.
1. **Drilling fluid.** The drilling fluid's characteristics and its planned use, testing and related drilling procedures must be designed to prevent loss of well control. Use of certain additives may require special storage, handling or disposal procedures. The owner and/or operator must maintain sufficient quantities of drilling fluid materials at the well site or have sufficient quantities readily available to assure well control.
 2. **Air.** When drilling with air or other gaseous substances:
 - (i) a rotating air-head in good working condition with stripper rubber of proper size and sufficient working pressure rating to control the maximum anticipated surface pressure expected while drilling must be installed on the ~~surface~~ [REDACTED] casing [REDACTED]. The department may request the owner and/or operator to demonstrate that the air-head and stripper rubber are in good working condition; and
 - (ii) the bloopie line must be securely anchored and extend a safe distance from the

wellbore.

Section 555.4 Casing, cementing and wellhead connections

- a) **General casing requirements.** The casing and cementing program must be designed to protect and isolate all water zones, potentially productive zones, lost circulation zones and abnormally pressured zones. The department must approve the proposed casing and cementing program submitted with the application for a permit to drill and operate required under section 554.2. In environmentally or technically sensitive areas additional measures may be required. The following minimum requirements apply to all casing unless modified by the department:
1. all liners and casing, except the conductor casing, must meet or exceed API standards unless otherwise approved by the department. Liners may be used with department approval;
 2. the casing setting depth for all strings except conductor must be calculated to position the casing seat in a formation competent enough to control pressure while drilling. ~~The casing setting depth must be based on all relevant factors including, but not limited to, the presence or absence of hydrocarbons or other minerals, fracture gradients, water zones, formation pressures, lost circulation zones, or other unusual characteristics;~~
 3. cementing must be conducted in accordance with the following minimum requirements unless modified by the department:
 - (i) the owner and/or operator must notify the department at least eight (8) hours before cementing operations start. If a department inspector is not present at the scheduled time, the department may require a copy of the cement ticket;
 - (ii) the cement slurry must be prepared according to the manufacturer's ~~or contractor's~~ specifications;
 - (iii) prior to cementing any casing strings, all gas flows must be killed to prevent gas channeling of the cement. If channeling occurs, the department may require remedial procedures ~~to repair the cement job;~~
 - (iv) a flush, spacer or extra cement must be used to separate the cement from the

borehole fluids to prevent dilution;

- (v) ~~enough material must be added to the cement to control lost circulation.~~ If lost circulation zones are identified during drilling operations, the owner and/or operator must:
 - (a) attempt to seal off the zone with lost circulation materials before pumping the cement slurry; and
 - (b) install cement baskets appropriately above ~~major~~ lost circulation zones;
 - (vi) the owner and/or operator must attempt to establish circulation by pumping the calculated volume necessary to circulate the cement. Circulation is considered established once fluid reaches the surface. If cement returns are not present at the surface or the top of cement drops, the department may require the owner and/or operator to run a log to determine the top of the cement and/or grout the well from the surface. If lost circulation is the cause for lack of cement returns, adequate lost circulation material must be added to the grouting cement. If cement grouting is inadequate [REDACTED], the department may require the owner and/or operator to perform additional remedial measures to ensure adequacy of the cement bond; [REDACTED]
 - (vii) all waiting-on-cement times must be adequate to achieve a minimum calculated 500 PSI compressive strength at the casing shoe before the casing is disturbed in any way. The waiting-on-cement time must be recorded on the drilling log; ~~and~~
 - (viii) ~~the owner and/or operator must have department approval to use any isolating medium other than cement;~~
4. when requested by the department, the owner and/or operator must submit cement tickets and/or other documents that indicate the above specifications have been followed; and
 5. at any stage in the life of the well, the department may require the owner and/or operator

to:

- (i) to run a cement bond log or other tests to determine the adequacy of the cement job; and
- (ii) perform remedial work to correct cementing problems.

b) **Conductor casing requirements.** When conductor casing is left in the ground, a pad of cement or other approved material must be placed around the wellbore to block the downward migration of surface water and pollutants.

c) **Surface casing requirements.** The following minimum requirements apply to the surface casing unless modified by the department:

1. the surface casing must be a string of new casing with a mill test of at least 1,100 pounds per square inch (PSI) or pressure tested used or welded casing that is approved by the department and meets the following minimum requirements:
 - (i) used casing must be:
 - (a) pressure tested before drilling out the casing shoe; or
 - (b) if there is no casing shoe, pressure tested before drilling out the cement in the bottom joint of casing;
 - (ii) plain-end casing that is welded together for use must be pressure tested as required by the department;
 - (iii) the minimum pressure for testing used casing or casing joined together by welding, must be determined by the department at the time of permit application; and
 - (iv) the department must be notified at least eight (8) hours prior to pressure testing casing. The results must be entered on the drilling log;
2. surface casing must extend at least 75 feet beyond the deepest fresh water zone encountered or 75 feet into competent bedrock, whichever is deeper. The surface casing must also be set deeply enough to allow the blowout preventer stack to contain any

formation pressures that may be encountered before the next casing is run;

3. surface casing must not extend into zones known to contain measurable quantities of shallow gas. In the event that such a zone is encountered before the fresh water is cased off, the owner and/or operator must notify the department and, with the department's approval, take whatever actions are necessary to protect the fresh water zone(s);
4. surface casing must be cemented back to the surface either during the primary cement job or by remedial cementing. No drilling ahead or other well activity is permitted [REDACTED] until this cementing is completed. The pump and plug [REDACTED] method must be used to cement surface casing. The amount of cement must be determined on a site-specific basis and a minimum of 25 percent excess cement must be used, with appropriate lost circulation materials, unless additional excesses are specified by the department; and
5. the diameter of the drilled surface hole must be large enough to allow running of centralizers in recommended hole sizes. If the manufacturer's specifications call for a larger [REDACTED] hole size than indicated in the table below, then the manufacturer's specifications take precedence. At least two (2) centralizers must be run on surface casing. The minimum spacing requirement is one (1) per 120 feet.

RECOMMENDED CENTRALIZER-HOLE SIZE COMBINATIONS

Centralizer Size Inches	Minimum Hole Size Inches	Minimum Clearance Inches
4 1/2	6 1/8	1 5/8
5 1/2	7 3/8	1 7/8
6 5/8	8 1/2	1 7/8
7	8 3/4	1 3/4
8 5/8	10 5/8	2
9 5/8	12 1/4	2 5/8
13 3/8	17 1/2	4 1/8

- d) **Intermediate casing requirements.** Intermediate casing string(s) and the cementing requirements for the casing string(s) must be reviewed and approved by the department on an individual well basis.
- e) **Production casing requirements.** The following minimum requirements apply to the production casing unless modified by the department:
1. the casing must be of sufficient strength to contain any expected formation or stimulation pressures;
 2. the pump and plug [REDACTED] method must be used for all production casing cement jobs ~~deeper than 1500 feet~~. If the pump and plug technique is not used (~~less than 1500 feet~~), the owner and/or operator must not displace the cement closer than 35 feet above the bottom of the casing. If plugs are used, the plug catcher must be placed at the top of the deepest full joint of casing;
 3. the production casing cement must extend at least 500 feet above the casing shoe or tie into the previous casing string, whichever is less. If any oil or gas shows are expected in the area or encountered, the production casing cement must extend at least 100 feet above any such shows. The department may allow the use of a weighted fluid in the annulus to prevent gas migration in specific instances when the weight of the cement column could be a problem;
 4. a minimum of 25 percent excess cement must be used. When caliper logs are run, a ten (10) percent excess is sufficient. Additional excess cement may be required by the department in certain areas;
 5. centralizers must be placed at the base and at the top of the production interval if casing is run and extends through that interval, with one [REDACTED] additional centralizer every 300 feet of the cemented interval; and
 6. the annular space between the surface casing and the production casing must be vented at all times. If ~~the annular gas~~ [REDACTED].

- present. At least one [REDACTED] of the outlets in the casing head must have a valve installed after the cement job and the valve must be left in the open position; and
10. the department must be notified at least 24 hours prior to any stimulation ~~and stimulation cannot commence until a department inspector is present.~~

Section 555.5 Deviated wells

- a) **Deviations.** A well must not vary unreasonably from the vertical drawn from the center of the hole at the surface. Without notice or hearing, the department may permit deviations by setting [REDACTED] a whipstock or other tool to drill past an obstruction, ~~to~~ straighten the hole, ~~to~~ sidetrack junk, or ~~to~~ correct other mechanical difficulties. [REDACTED], the ~~The~~ department may require an inclination or directional survey at the owner's and/or operator's sole cost, risk, and expense if for any reason the department believes [REDACTED] that a well has been excessively deviated.
- b) **Requests for wellbore surveys.** Any owner and/or operator may petition the department for permission to have an inclination and/or directional survey made in any wells on leases or units that offset the petitioner's wells, leases or units. If after public hearing on the petition, the department feels the request is justified and the petitioner has deposited sufficient security or bond, the department may issue an order authorizing a qualified company to perform and submit a certified well survey to the department at the sole cost, risk, and expense of the petitioner. In the event the survey reveals an unreasonable violation of the applicable well location or spacing requirements, the department must assess all ~~the~~ costs of the survey to the violator and may either require any excessively deviated well to be redrilled or plugged and abandoned at the option of its owner and/or operator.
- c) **Violations.** If an inclination or directional survey reveals any violation of the applicable well location or spacing provisions set forth in Part 553, the department may require that the well be redrilled or plugged and abandoned at the option of the owner and/or operator. The department

may also require any other appropriate remedy.

Section 555.6 Blowout preventers

- a) **General requirements.** Blowout preventers and related equipment must be installed, operational, and used and maintained in a manner necessary to ensure well control. Drilling without the required blowout preventers and related equipment installed and tested is sufficient cause to suspend or revoke the permit to drill and operate. A blowout preventer or other well control device is required on all wells unless the owner and/or operator submits a written request for a waiver and receives written department approval. A waiver can only be granted if:
1. the proposed well is not a wildcat;
 2. the proposed well does not have abnormal pressure or production characteristics and is not sited within one ■ mile of the Bass Island trend;
 3. there is no prior history of blowouts within a one mile radius of the proposed well;
 4. the proposed well is not sited in a primary or principal aquifer, or subject to the aquifer conditions in section 555.4(f); and
 5. the proposed well will be equipped with a pressure diverting device to control pressures.
- b) **Equipment.** The configuration of the blowout preventer assembly unit must be based on the surface environment, maximum anticipated surface pressures, geologic conditions and accepted engineering practices.
1. The blowout preventer must consist of pipe and blind rams or the spherical annular type. The working pressure of the blowout preventer and related equipment must exceed the maximum anticipated surface pressure.
 2. The blowout preventer must be actuated by an energy source other than rig hydraulics.
 3. High pressure threaded and coupled tubular steel with flanged connections at the wellhead must be used for all blowout prevention equipment control lines. All lines from

outlets on or below the blowout preventers must be securely anchored.

4. A flanged choke manifold assembly must be installed no closer than 25 feet from the wellhead. The assembly must not contain any elbows or T's either at the wellhead or before the choke [REDACTED] that controls the flow through the kill lines. Each kill line must be connected with welded flanges from the flange spool to the choke assembly.
 5. When drilling with air or other gaseous substances, the blowout preventer must be installed ~~beneath the rotating air head~~ on the casing through which drilling operations are being performed.
- c) **Testing.** The blowout preventer and related equipment must be installed and tested prior to drilling the surface casing shoe. The department must be notified eight (8) hours prior to testing the blowout preventer, but the inspector does not need to be present for the test to proceed. Blowout preventers and related equipment must be tested to 1000 PSI or as determined by the department. Blowout preventer tests must be noted in the driller's log book with time, date and details of the test. The department may request a pressure chart.

Section 555.7 Completion practices

- a) **Multiple completions.** The owner and/or operator must ~~obtain department approval for [REDACTED]~~ [REDACTED] multiple completions of wells that encounter separate pools that are not in communication. For wells in areas not previously designated for multiple completions, the owner and/or operator must ~~submit an application [REDACTED]~~ with all data and evidence necessary to prove separation of producible zones, ~~such as packer isolation tests [REDACTED]~~ [REDACTED]
- b) **Commingled production.** The owner and/or operator must obtain written department approval to commingle production in a single wellbore. The application to commingle production in a single wellbore must include details on the zones to be combined and identify whether they are separate reservoirs or multiple stratigraphic or lenticular accumulations with a common reservoir

pressure. The owner and/or operator must demonstrate that commingling will help prevent waste of oil and gas resources, promote conservation and assure protection of correlative rights without threatening freshwater formations. The department may also require isolation and pressure testing of discreet intervals to ascertain reservoir drainage for the purpose of protecting correlative rights.

Section 555.8 Completion reports, well logs and samples

- a) **Completion reports.** Within 30 days after the completion of any well, the owner and/or operator must file a completion report on a department-approved form summarizing the completion details.
1. Updated completion reports. Within 30 days after completing any of the following activities that change the wellbore configuration as described on the completion report, the owner and/or operator must file an updated completion report:
 - (i) well deepening;
 - (ii) well plug back;
 - (iii) well conversion; or
 - (iv) well workover [REDACTED]
 2. Interim completion reports. Within 30 days after the start of the initial temporary abandonment period allowed under section 560.3(b)(1), the owner and/or operator must submit an interim completion report unless the department waives this requirement. If a well already has department-granted temporary abandonment status under section 560.3(b) and an accurate completion report is not on file for the well, the owner and/or operator must submit an interim completion report with the next application for an extension of temporary abandonment status.
 3. Emergency completion reports. The department may require the owner and/or operator to file a completion report sooner than normally required if the information is needed to:
 - (i) determine the proper plugging requirements for any well; or

- (ii) investigate, prevent or remediate [REDACTED].
[REDACTED] an environmental problem or hazard.
 - 4. Lost holes. Within 30 days of moving the rig off a lost hole, the owner and/or operator must file a separate completion report on the lost hole.
 - 5. Dry holes. Within 30 days of completion of drilling a dry hole, the owner and/or operator must file a completion report.
 - 6. Certification. The owner and/or operator must certify the accuracy of the information on completion reports required ~~under this subdivision~~.
- b) **Well logs.** Each completion report submitted under section 555.8(a) must be accompanied by three (3) copies of each log run on the wellbore, including interpretation logs. All measurements in connection with the well log must be clearly specified, including the measurement datum for the well log and its elevation with respect to mean sea level.
- c) **Multiple completions.** When a well has a multiple completion, the completion report must include a written summary of the procedures, equipment and testing used to ensure separation of the pools.
- d) **Directionally-drilled wells.** When a well is directionally drilled, the completion report must include a directional survey report, certified by an official of the surveying company, with a final as-drilled vertical section and plan view drawing of the well and the bottom hole location measured from the nearest latitude and longitude.
- e) **Samples.** When the permit to drill and operate is issued it may include a permit condition requiring the owner and/or operator to provide the department with up to two (2) sets of bagged and labeled drill cutting samples. The samples must be washed unless the well is drilled with rotary tools using air or another approved gaseous substance as the drilling fluid.

**PART 556
OPERATING PRACTICES**

Sec.	
556.1	General requirements
556.2	Gas well operation
<u>556.3</u>	[REDACTED]
<u>556.4</u>	Oil and gas production
<u>556.5</u>	[REDACTED]
<u>556.6</u>	Injection wells

Section 556.1 General requirements

- a) **Applicability.** This Part applies to the operating phase of all wells regulated under Parts 550 - 560 of this Title. This phase is also known as the production phase for wells whose operation creates a product. Parts 556 - 559 contain additional operating requirements for hydrogen sulfide, wildcat, underground gas storage and solution mining wells. The department may impose additional or alternate operating requirements on a site-specific basis.

 - b) **Site identification.** The owner and/or operator must comply with the well and lease identification provisions of section 550.3. In addition, the department may require the owner and/or operator to install signs clearly identifying ownership of tanks, plants, structures or other equipment for the collection, transportation, processing or refining of oil, gas, brine or other products produced by wells regulated under Parts 550 - 560 of this Title.

 - c) **Pipelines and gathering lines.** Well operations may require the use of gathering lines or pipelines. [REDACTED]
[REDACTED]
1. The department has the authority to review the following:
 - (i) the gathering lines between the oil well and the tank battery; and
 - (ii) the lines from the gas well to the separator outlet.

 2. The department may set specific requirements for any pipeline or gathering line associated with or supporting operation of any well or facility subject to Parts 550—560 of this Title concerning:

- (i) ~~siting, design and construction;~~
 - (ii) ~~operation and maintenance;~~
 - (iii) ~~submission of maps, including maps of abandoned lines. The map must include a notation indicating the year of the North American Datum used to prepare the map;~~
 - (iv) ~~sampling and analysis of line contents;~~
 - (v) ~~testing for leaks or other suspected problems; and~~
 - (vi) ~~plugging, abandonment and reclamation.~~
3. ~~The department's review does not include gas gathering lines or pipelines under the jurisdiction), unless an environmentally sensitive area is disturbed which requires another department permit outside the jurisdiction of Parts 550—560 of this Title. No provision of Parts 550—560 of this Title is intended to diminish or impair the jurisdiction of the Public Service Commission with respect to regulation of the manufacture, transportation, distribution or sale of gas.~~
- d) **Valve installation.** Valves must be installed on all oil and gas wells ~~_____~~ ~~_____~~ to make it possible to check pressure on any casing and any annular space.
- e) **Waivers.** An exception to the requirements in this Part may be allowed upon the department's review and approval of the owner's and/or operator's justification for a waiver.

Section 556.2 Gas well operation

- a) **Gas well production control.** The owner and/or operator of any gas well must take all necessary precautions to keep each producing gas well under control at all times. Necessary precautions include ~~_____~~ ~~_____~~ but are not limited to, the installation, use, and regular testing of the following to properly contain and control the flow of gas:
- 1. ~~wellhead equipment;~~

- ~~2. drips;~~
- ~~3. dehydration units;~~
- ~~4. compressors; and~~
- ~~5. pipelines and gathering lines.~~

b) **Gas leak or venting.** The owner and/or operator must not allow the unauthorized discharge or leak of any gas. Discharge of gas into the air [REDACTED] is permissible under the following circumstances:

- 1. during a department-approved well test;
- ~~2. during blowdown of a well required to maintain the well or associated equipment;~~
- 2. during a clean-up period less than 48 hours after stimulation or completion operations.

The department may grant extensions to the 48 hour clean-up period, without notice and hearing, if the owner and/or operator submits a written application giving adequate justification for the request; and

- 3. other circumstances determined necessary by the department.

c) **Well blowdown.** [REDACTED]
[REDACTED]
[REDACTED]

Section 556.3 [REDACTED]

a) **Wellhead controls.** [REDACTED]
[REDACTED]

b) **Separators.** [REDACTED]
[REDACTED]
[REDACTED]

Section 556.4 Oil and gas production

- a) **Equipment restrictions.** Vacuum pumps, compressors, or other devices cannot be used for the purpose of creating a vacuum or other conditions to artificially increase production above the maximum natural output of any oil or gas bearing stratum. The department may grant a waiver of this prohibition upon review and approval of the owner's and/or operator's written demonstration of sufficient good cause.
- b) **Production measurement and records.** All production from oil and gas wells must be measured and reported, as required in section 551.5.
- c) **Gas-oil ratios and production allowables.** The department may limit the rate of production from oil and gas wells to protect the reservoir's production energy and prevent waste of oil and gas resources.
1. Gas-oil ratio measurement. For those wells not subject to department established alternative requirements for a specific pool, the department may require the owner and/or operator of any oil well to measure the well's gas-oil [REDACTED] (GOR) ratio and submit the results to the department.
 2. Limiting GOR.
 - (i) Default limiting GOR. If no limiting GOR has been established by the department for the pool, then a limiting GOR of two (2) MCF/BBL applies.
 - (ii) Department established limiting GOR. After adequate notice, the department may hold a hearing to establish a limiting GOR for a well or pool. A hearing may be scheduled at the request of any owner and/or operator or on the department's own motion. Subsequent hearings may be held to revise the limiting GOR.
 3. Production allowable. ~~The department must prepare a production schedule for~~ All wells or developed spacing units [REDACTED] subject to production restrictions because of a high GOR [REDACTED].
[REDACTED] The well must be operated in compliance with the

~~department's production schedule~~ [REDACTED]. Oil and gas not actually produced under the daily production allowable cannot be accrued and produced at a later date.

- e) ~~**Water oil ratio.** Upon department request, the owner and/or operator must conduct a water oil ratio survey on any well that is capable of production.~~
- d) **Waste prohibition.** Waste of the state's oil or gas resources is prohibited, ~~during routine well operation, except as authorized under section 556.3(b).~~ Owners and/or operators must at all times take all reasonable measures and precautions to prevent or correct waste of the state's oil and gas resources.

Section 556.5

Oil and gas [REDACTED]

[REDACTED]

[REDACTED] A production test that is not associated with stimulation or completion activities must be approved by the department. Oil or gas well production test requirements include, but are not limited to, the following:

- a) [REDACTED] The owner and/or [REDACTED] operation must notify the department at least 24 hours before commencing a production test on an oil or gas well [REDACTED]
- b) the owner and/or operator must specify the type, [REDACTED] and expected duration of the test;
- c) the owner and/or operator must use proper separation and containment equipment;
- d) the department may require that the owner and/or operator or a designated representative be on the well site at all times during the test;
- e) the owner and/or operator must notify:
 - (i) the department at least 24 hours prior to any significant changes in the originally proposed well testing program and obtain department approval if the department approved of the original testing program [REDACTED]

- (ii) offset residents and local police and fire departments prior to conducting the test; [REDACTED]
- f) ~~when flaring is part of the production test, the owner and/or operator must obtain department approval and~~ conduct the flare test as required; [REDACTED] use proper flare equipment. The flare equipment must be constructed to prevent damage to surrounding vegetation and be designed to reduce weather interference with flaring; ~~and~~
6. ~~the department may also specify:~~
- (i) ~~the type of pressure recording device;~~
 - (ii) ~~the timing of the production test;~~
 - (iii) ~~direct measurements of initial reservoir pressure; and~~
 - (iv) ~~installation of pressure bombs in other wells suspected of being in communication with the well.~~
- [REDACTED]

Section 556.6 Injection wells

Based on site-specific circumstances and proposed usage, the department may set requirements for any injection well used in an activity regulated under Parts 550 - 560 of this Title. The department may impose specific requirements that include, but are not limited to:

- a) injection fluid composition, storage and handling;
- b) type of downhole injection equipment;
- c) limits on injection pressure and propagation of fractures;
- d) injection formation or interval;
- e) injection well testing; and
- f) injection well reporting.

**PART 557
WILDCAT AND SPECIAL
REQUIREMENT WELLS**

Sec.	
557.1	General requirements
557.2	Drilling and completion requirements
557.3	Operating [REDACTED] requirements
557.4	Discovery wells [REDACTED]
<u>557.5</u>	[REDACTED]

Section 557.1 General requirements

- a) **Applicability.** The department may designate any of the following wells subject to all or portions of this Part:
1. a wildcat well, which includes a well:
 - (i) drilled to discover a previously unknown pool;
 - (ii) drilled one (1) mile or more from the nearest well producing from any formation other than the Medina Group; or
 - (iii) drilled two and a half (2½) miles or more from the nearest well producing from the Medina Group;
 2. a Bass Island well, which is an oil and gas well completed in a Bass Island pool lying below the Marcellus shale and above the top of the Camillus horizon; or
 3. a well drilled in any geographic area or formation known or suspected to have abnormal pressure or producing characteristics.
- b) **Public notice.** The department may require public notice and a comment period for any permit application for a well covered under this Part.
- c) **Waivers.** An exception to the requirements in this Part may be allowed upon the department's review and approval of the owner's and/or operator's justification for a waiver.

Section 557.2 Drilling and completion requirements

- a) **Well prognosis and crew member responsibilities.** The owner and/or operator must provide both the department and the drilling company with a well prognosis, indicating anticipated formation tops with appropriate warning comments. The owner and/or operator must ensure that copies of this prognosis and the individual crew member responsibilities for blowout control are clearly posted and maintained in the dog house.
- b) **Fire department notification.** The owner and/or operator must notify the local fire department of the well's location and the potential hazards prior to penetrating:
1. a Bass Island pool lying below the Tully horizon and above the top of the Camillus horizon;
 2. the Oriskany formation; and
 3. any other formation and/or geographic area where the department determines this precaution is required.
- c) **Surface casing.** Surface casing must be set a minimum of 100 feet into bedrock or to a depth the department determines necessary to isolate freshwater zones, lost circulation zones or low pressure formations.
- d) **Well control.** In addition to complying with the other blowout prevention requirements of section 555.6, the owner and/or operator must:
1. unless otherwise approved by the department, test the blowout preventer before drilling out each casing string except the conductor;
 2. install a new air-head rubber in the rotating head before penetrating the target formation;
 3. provide appropriate amounts of bentonite, weight material and lost circulation material on-site to aid in well control;
 4. provide backup mud pumping capability on-site and connected, either with a secondary

- mud pump or with a standby service company pump truck;
5. provide additional kill fluid on-site ready for use, if required by the department based on well conditions. The amount of kill fluid must be 100 percent over the amount required to fill the wellbore; and
 6. provide additional well control measures, if required by the department, ~~consisting of~~ [REDACTED] [REDACTED] either running [REDACTED] intermediate casing to a depth approved by the department or drilling [REDACTED] on a fluid other than air. In making the determination to require extra well control measures, the department will consider:
 - (i) expected depth of well;
 - (ii) depth of surface casing; and
 - (iii) knowledge of regional geology and formation pressures.
- e) **Casing seat test.** The owner and/or operator must perform a casing seat test on the casing shoe that will be exposed to the pressure of the target formation. The test must be performed before drilling more than 20 feet of new hole. The formation at the shoe must be tested to a minimum of the mud weight equivalent required to control the target formation pressure or the anticipated pressure at total depth of the well. If the owner and/or operator conducts a step rate test to determine the breakdown pressure of the formation at the casing seat and the pressure is such that the anticipated mud weight equivalent is achieved at the shoe, a separate BOP Test is not required.
- f) **Production casing.** In the event the well is completed in the Medina formation with no hydrocarbon shows in or above the Onondaga or associated fault zone, the production casing must be cemented back a minimum of 100 feet above the Onondaga and associated fault formations. However, if shows are encountered, the cement must be increased by an additional 50 percent excess.
- g) **Penetration of formation.** The owner and/or operator must penetrate the target formation during

daylight hours except when the drilling contractor certifies that the rig is equipped with a vapor-proof lighting system and air shut-off on the rig engines. The owner and/or operator must notify the department of the owner's and/or operator's intention to penetrate the target formation at least eight (8) hours before that interval is reached. The ~~owner or the owner's~~ [REDACTED] designated representative must be at the well site before and during the penetration of the formation.

- h) **Logging.** A minimum log suite of gamma-ray and density must be run.

Section 557.3 Operating [REDACTED] requirements

- a) **Well pPressure [REDACTED] measurement.** The owner and/or operator must [REDACTED] [REDACTED] measure initial bottom hole pressure by taking a direct measurement of static bottom hole pressure across the target formation. The measurement must be performed after well completion, but before the well is placed in operation.

[REDACTED]
[REDACTED]

- b) **Spacing unit.** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- c) **Production reporting.** The department may require quarterly reporting that supersedes the annual well production reporting requirements in section 551.5(a). The report must include the actual amount of oil and gas produced from the well, the number of days of production, and a calculation of the gas-oil ratio for each production period. The report must be filed no later than 30 days after the end of the three-month period to which it pertains.

[REDACTED]

Section 557.4

[REDACTED]

a) **General requirements.** [REDACTED]

[REDACTED]

1. Applicability. For Bass Island wells, the provisions of section 557.4 supersede section 556.4(c). In turn, a department order establishing a production allowable for a particular Bass Island pool may supersede all or part of section 557.4.
2. Daily production allowable. Oil and gas not actually produced under the daily production allowable established by the department cannot be produced at a later date.

b) **Gas-oil ratio measurement.** Th [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

1. Seven-day production. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- 2. Gas measurement. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

c) **Production allowable.**

1. GOR less than or equal to 2 MCF. The provisions of section 557.4(c)(1) apply if a Bass Island well has a GOR less than or equal to 2 (two) MCF per BBL of oil. The daily gas production is limited to gas produced with the daily oil production allowable.

- (i) Wildcat first year. For one (1) year from the date on which a Bass Island wildcat well's production begins, the daily production allowable is 200 barrels of oil per day, regardless of the number of acres assigned to the well. After one [REDACTED] year, the daily oil production allowable must be determined by the method stated in section 557.4(c)(1)(ii), [REDACTED]

Example for various acreage wells

40 Acres = 200 BBL/ Day

80 Acres = 200 BBL/Day

- (ii) Standard production allowable. The daily oil production allowable for the days a Bass Island well is on production is two and a half (2½) barrels of oil for each acre assigned to the well on the application for a permit to drill and operate, but not to exceed 200 barrels per day.

Example for 40 acre well.

2 ½ BBL X 40 acres = 100 BBL/Day

Example for 80 acre well

$$2 \frac{1}{2} \text{ BBL} \times 80 \text{ acres} = 200 \text{ BBL/Day}$$

- (iii) Exceptions. On an administrative basis, the department may approve of a production allowable above the [REDACTED] if the owner and/or operator submits bottom hole oil sample analyses and other data [REDACTED] demonstrate that the well can produce oil without going below the bubble point pressure at the midpoint of the production interval. [REDACTED] and the bubble point is [REDACTED] reached, the daily production allowable must be determined by the method stated in section 557.4(c)(1)(ii). Data demonstrating that continued daily production in excess of 200 barrels of oil is warranted must be submitted to the department monthly.

2. GOR greater than 2 MCF. If a Bass Island well has a GOR greater than 2 (two) MCF of gas per BBL of oil:

- (i) the well's oil production is limited to the amount determined by multiplying the allowable as calculated under [REDACTED] section 557.4(c)(1)(i), (ii) or (iii) by a fraction, the numerator of which is the [REDACTED] of two (2) MCF of gas per BBL of oil and the denominator of which is the latest reported GOR; and
- (ii) gas production is limited to gas produced with the allowed oil production.

Example for 40 acre well with allowable of 100 BBL calculated under (c)(1)(ii) and a reported GOR of 4 MCF/BBL:

$$100 \times \frac{2 \text{ MCF/BBL}}{4 \text{ MCF/BBL}} = 100 \times \frac{1}{2} = 50 \text{ BBL}$$

3. GOR greater than 100 MCF. If the GOR is infinite [REDACTED] the well is limited in daily gas production to the amount determined by multiplying the daily oil allowable as calculated under pertinent section 557.4(c)(1)(i), (ii) or (iii) by two (2) MCF

per day of gas.

Example for 40 acre well with allowable of 100 BBL calculated under (c)(1)(ii):

$$100 \frac{\text{BBL}}{\text{Day}} \times 2 \frac{\text{MCF}}{\text{Day}} = 200 \frac{\text{MCF}}{\text{Day}}$$

- d) **Adjustments.** The owner and/or operator of a Bass Island well may petition the department at any time to change the following on an administrative basis.
1. **Production allowable.** If GOR test results are submitted with the request to revise the production allowable, the owner and/or operator must follow the procedures in section 557.4(b).
 2. **Limiting GOR.** The department may increase a well's limiting GOR above two (2) MCF whenever the owner and/or operator presents data to the department adequately justifying the increase.
- e) **Quarterly production reports.** The department [REDACTED] the owner and/or operator to file quarterly reports of the oil and gas produced from a well on a department-approved form. If quarterly reports are required, the owner and/or operator does not need to file the annual well report required under section 551.5(a). The end days of the three-month periods are March 31st, June 30th, September 30th, and December 31st. The report must state the actual amount of oil and gas produced from the well during the reporting period and the number of days in each of those months the well was on production. The report must contain the calculation of the GOR for that well for each period in each month during which oil and gas was produced and for the three-month period the report covers. The report must be filed no later than 30 days after the end of the three-month period to which it pertains.

Section 557.5 Discovery wells [REDACTED]

- a) **General requirements.** If a well subject to this Part is a discovery well, the owner and/or

~~operator must:~~

- ~~1. perform well testing, as determined by the department;~~
- ~~2. perform a geologic analysis including maps and cross sections; and~~
- ~~3. propose a spacing unit as required under Part 553. The department may grant permission to drill a second well to confirm the field, but commercial production will not be allowed from either well until spacing has been established.~~

b) **Field or pool names.** The department assigns a name to each newly discovered field or pool following an organized system designed to prevent duplication and eliminate confusion. Each new name is added to the statewide glossary maintained by the department. Upon notification by the department that a well has been classified as a new field discovery, the owner and/or operator of the well must submit three (3) proposed names to the department in writing within 30 days after receiving the notice. The names must be listed in order of decreasing preference to the owner and/or operator. The department will then either choose one of the submitted names or assign another appropriate name. The field or pool name assigned by the department must be used in all correspondence, forms, and for any other relevant identification purpose.

**PART 558
UNDERGROUND GAS STORAGE**

Sec.	
558.1	General requirements
558.2	Underground storage permit
558.3	Underground storage modification permit
558.4	Monitoring, inspection and testing requirements
558.5	Records and reports
558.6	Well and facility abandonment

Section 558.1 General requirements

a)**Applicability.** The requirements of this Part apply to all facilities that use wells to inject and retrieve natural gas or liquified petroleum gas from underground storage reservoirs. An underground storage reservoir is any reservoir or natural or constructed cavern used for storage of natural gas or liquified petroleum gas. Wells covered by this Part are also subject to all the requirements in Parts 550 - 556 and Part 560 unless otherwise specifically stated. The department may impose additional or alternate requirements on a site-specific basis.

b)**Permit and approval requirements.** All underground storage activities must be conducted in accordance with permit or authorization by rule requirements.

1.Existing underground storage facilities are authorized by rule to operate according to the baseline operational parameters which are those parameters reported on the annual gas storage report for the calendar year in which this Part is effective.

2.A facility permit is required for a new underground storage facility under section 558.2. Facility conversion from storage of liquified petroleum gas to natural gas or vice versa is considered creation of a new facility and requires a facility permit.

3.A modification permit is required for a major modification of an existing facility under section 558.3. Written department approval is required for any minor changes that do not require a modification permit. The department determines modifications by comparison with:

(i)the approved work program in the most recent facility permit or facility

modification permit; or

(ii) the baseline operational parameters of a facility existing on the effective date of this section [REDACTED]

4. Modifications to facilities grandfathered under ECL §23-1301(3) are subject to all modification permit and approval requirements.

5. Before commencing operations on an individual well at a permitted or approved facility, the owner and/or operator must also have any permits required by Parts 554 and 560.

6. The requirements of Part 559 apply to underground storage facilities with storage caverns created or expanded by the solution mining process. The requirements of section 559.3 remain in effect until cavern development or expansion ceases.

c) **Buffer zone.** For each underground storage reservoir, the department must approve the size and extent of the area surrounding the underground storage reservoir which is necessary to protect the integrity of the reservoir. The buffer zone may not extend more than 3500 linear feet from the underground storage reservoir.

d) **Waivers.** An exception to the requirements in this Part may be granted upon the department's review and approval of the owner's and/or operator's justification for a waiver.

Section 558.2 Underground storage permit

a) **Permit application - technical information.** The application for an underground storage permit must include, but is not limited to, the following:

1. a schedule for development and construction of the storage facility;
2. a geotechnical profile and geologic cross sections showing the lithology and extent of the storage reservoir, caprock, underlying formations, and faults if present;
3. a discussion of the factors controlling the lateral extent of the storage reservoir;
4. the original reservoir pressure at discovery, if applicable, and the proposed maximum operating storage reservoir pressure;

5. a discussion of the properties of the storage reservoir including production history, producing depth of storage reservoir, determination of original gas in place; total gas production and remaining native gas, if applicable;
6. estimates of working gas and cushion gas volumes and proposed well and field deliverabilities;
7. core analysis and threshold pressure testing results for the formations encapsulating the storage reservoir, if applicable;
8. a well summary covering all plugged and unplugged wells which documents the individual histories and current status of each well located within the storage reservoir and buffer zone limits, including those wells not completed in the storage formation. Completion reports and any available well logs must be provided;
9. a proposed remediation plan for those wells not properly completed or plugged within the storage reservoir and buffer zone limits;
10. well integrity testing procedures;
11. a copy of the Environmental Assessment prepared for the Federal Energy Regulatory Commission, if applicable;
12. the proposed safety and emergency systems; and
13. for cavern storage proposals only, the following additional information is required regarding facility design:
 - (i) type of storage cavern and construction method;
 - (ii) cavern dimensions, including height and diameter, and individual and total project capacity;
 - (iii) the distance between all caverns measured from the center point.Unless otherwise substantiated by technical analysis, the distance between two adjacent solution-mined caverns for natural gas storage must be a minimum S/D of 4:1, where S equals the distance between the centers of the two ████ caverns and D equals the averaged value of the

maximum diameter for each of the two caverns;

(iv) individual cavern pressures, including maximum, operating and minimum pressures. Unless otherwise substantiated by geomechanical analysis and/or testing, the maximum operating pressure (PSI) must be equal to 0.85 of the casing shoe depth (CSD) in feet, or 0.9 of the confining stress at CSD calculated on the basis of lithology and overburden. The minimum operating pressure (PSI) must be 0.3 CSD; and

(v) technical studies of the storage cavern formation and confining rock including analysis of mechanical and chemical properties, cavern closure and stability, surface subsidence, and effects from neighboring activities based on core analysis, logging data, or other evaluation techniques.

b) Permit application - map. The permit application must be accompanied by a neat legible map or maps drawn at a scale approved by the department that includes the following items:

1. the surface projection of the proposed storage reservoir and the buffer zone boundary;
2. an isopach map and contour map of the proposed storage formation;
3. the location, total depth and API well identification number of all existing plugged and unplugged wells within the storage reservoir and buffer zone boundaries;
4. the location of all proposed wells within the storage reservoir and buffer zone boundaries; and
5. the proposed location of compressors and any other major surface equipment.

c) Permit application - storage rights. The permit application must be accompanied by an affidavit attesting to the following:

1. that at least 75 percent of the storage rights in the reservoir and in the buffer zone have been acquired; and
2. that the owner and/or operator will acquire the outstanding storage rights either by

negotiation or by filing condemnation proceedings within two (2) years of the first injection of gas after the issuance of the storage permit.

d)**Permit application - EAF.** The permit application must be accompanied by a completed full environmental assessment form (EAF) from Part 617.20 Appendix A of this Title.

e)**Permit application - fee.** The permit application must be accompanied by a non-refundable application fee payable to the department of \$10,000 or in accordance with the ECL.

Section 558.3 Underground storage modification permit

a)**General requirements.** An underground gas storage modification permit is required for any increase in the total storage capacity, including but not limited to changes caused by an increase in cavern size or the number of caverns, an increase in the maximum approved operating pressure, redefinition of the storage reservoir or gas migration.

b)**Permit application - technical information.** The application for a storage modification permit must comply with the following requirements:

1. when the proposed increase in total storage capacity would be accomplished by increasing the maximum approved operating pressure, the application must include, but is not limited to, the following information:

- (i) a detailed explanation of the proposed pressure modification with the schedule for construction and development of the modified storage facility;
- (ii) a geotechnical profile and geologic cross sections showing the lithology and extent of the storage reservoir, caprock, underlying formations, and faults, if present;
- (iii) a discussion of the factors controlling the lateral extent of the storage reservoir;
- (iv) the original reservoir pressure at discovery, if applicable, and the proposed maximum operating storage reservoir pressure;

- (v) a discussion of storage reservoir properties including production history, producing depth of storage reservoir, current storage reservoir pressure, determination of original gas in place; total gas production and remaining native gas, if applicable;
 - (vi) estimates of working gas and cushion gas volumes and proposed well and field deliverabilities;
 - (vii) core analysis and threshold pressure testing results for the formations encapsulating the storage reservoir;
 - (viii) a plugged and unplugged well summary as required in section 558.2(a)(8);
 - (ix) a proposed remediation plan for those wells not properly completed or plugged within the storage reservoir and buffer zone limits;
 - (x) well integrity testing procedures;
 - (xi) a copy of the Environmental Assessment prepared for the Federal Energy Regulatory Commission, if applicable; and
 - (xii) the proposed safety and emergency systems; and
2. when the proposed increase in total storage capacity would be accomplished by cavern expansion the application must contain:
- (i) a detailed explanation of the proposed modification and a schedule for development and construction of the storage facility;
 - (ii) the information required in sections 558.3(b)(1)(ii) through (xii); and
 - (iii) for cavern storage proposals only, information on the facility design including, but not limited to:
 - (a) type of storage cavern;
 - (b) current and proposed cavern dimensions and individual and total cavern capacity;
 - (c) distance between caverns; and

(d) current and proposed pressures for individual caverns, including maximum, operating and minimum pressures.

c) **Permit application - map.** The permit application must be accompanied by a neat legible map or maps drawn at a scale approved by the department that must include:

1. the surface projection of the existing and proposed storage reservoir and buffer zone boundary, including individual caverns, if applicable;
2. the location, total depth and API well identification number of all existing plugged and unplugged wells within the storage reservoir and buffer zone boundaries;
3. the location of all proposed wells within the storage reservoir and buffer zone boundaries; and
4. the location of all existing and proposed compressors, other major surface equipment and pipelines.

d) **Permit application - EAF.** The permit application must be accompanied by a completed environmental assessment form (EAF) from Part 617.20 Appendix A of this Title.

e) **Permit application - fee.** The permit application must be accompanied by a non-refundable application fee payable to the department of \$5,000 or in accordance with the ECL.

Section 558.4 Monitoring, inspection and testing requirements

a) **Cavern testing.** Prior to placing a solution mined storage cavern into service, the owner and/or operator must conduct sonar and mechanical integrity tests of each cavern to confirm the cavern's capacity, configuration, and integrity and submit the results to the department.

b) **Cavern capacity.** Each solution mined storage cavern must have the capacity verified at least once every five (5) years. The configuration of the roof of each cavern must also be verified at that time as determined by down hole log or other method approved by the department. The department can require capacity verification activities be undertaken at any time with appropriate

notice and justification.

- c) **Cavern capacity increase.** Annual estimates of solution mined cavern capacity must be submitted with the annual storage report to the department and any increase in storage capacity must be accompanied by an explanation. An increase in individual or total cavern capacity of 20 percent or more over the originally authorized or permitted capacity will require an underground gas storage modification permit. Any cavern subject to this requirement must be removed from service until the modification permit is issued unless otherwise approved by the department.
- d) **Storage well integrity.** Prior to the injection of gas, the owner and/or operator must submit a certification to the department that all wells located within the storage reservoir and buffer zone limits used for injection, withdrawal, observation or monitoring have sufficient casing(s) to maintain well integrity at minimum and maximum anticipated operating pressure.
- e) **██████████ monitoring wells.** As a condition to granting a permit under section 558.2 or 558.3 or as otherwise required, the department may require the installation of monitoring wells to monitor groundwater quality, the presence of storage gas or other subsurface conditions in the vicinity of the storage reservoir.
- f) **Self-certification.** Underground storage wells are exempt from the self-inspection and annual well report requirements for individual wells under section 551.5. Instead, the owner and/or operator must biannually inspect all wells within the storage reservoir and buffer zone area. The inspection must be conducted once in the winter prior to submittal of the annual report and once in the summer. The inspection results must be recorded and retained for five (5) years from the date of the inspection and be available to the department upon request. Each record must include a certification signed by the owner and/or operator that the inspection was performed and the well is in compliance with Parts 550 - 560 of this Title and applicable permits, approvals and orders.

1. Unplugged wells. The owner and/or operator must inspect all unplugged wells within the storage reservoir and buffer zone limits that are used for injection, withdrawal, observation or monitoring. At a minimum the inspection must include:

- (i) the wellhead pressure or water level measurement, as appropriate;
 - (ii) the open flow on the annulus of the production casing or the annulus pressure if the annulus is shut in;
 - (iii) a measurement or best estimate of any gas escaping from the well;
- and
- (iv) a check for progressive corrosion, rusting, or other signs of equipment deterioration.

2. Plugged wells. The owner and/or operator must inspect all plugged wells within the storage reservoir and buffer zone limits for signs of plug deterioration. The inspection must include, but is not limited to:

- (i) a check for leaks of gas or other fluids escaping from the wellbore. The owner and/or operator must measure or estimate the amount of fluids escaping from the well; and
- (ii) a check for progressive corrosion, rusting or other damage to the wellhead or any surface equipment remaining on the plugged well.

g) **Inactive Well testing.** Prior to putting a well back into service that has not been used for injection, withdrawal, or monitoring for more than one year, the owner and/or operator must test the well for fluid loss or leaks in the casing, tubing and packer and submit the certified test results to the department.

h) **Fluid loss detection.** The department may require the testing of wells or storage facilities to check for storage gas loss.

Section 558.5 Records and reports

a) **Commencement of operations.** For all new underground storage operations, the owner and/or operator must verbally notify the department at least 24 hours prior to the date injection is started.

b) **Quarterly progress reports.** During the construction of a new underground storage facility or

modification of an existing underground storage facility, the owner and/or operator must file quarterly progress reports until the department determines the reports are no longer needed.

c) **Annual report.** [REDACTED]

[REDACTED] the owner and/or operator must file an annual report for each underground storage facility on a department-approved form. This report is due annually on [REDACTED] March 31 and must cover the previous calendar year ending December 31. The report must include the following items:

1. an annual underground storage report on a department-approved form including, but not limited to:
 - (i) the estimated surface acreage or shape of the reservoir and buffer zone boundary;
 - (ii) an estimate of the storage balance and total capacity and working capacity of the reservoir;
 - (iii) reservoir data: and
 - (iv) corrosion data;
2. an updated map of the storage reservoir, buffer zone and lease boundaries showing any change from the prior year, including the addition of new wells. When the map is unchanged from the prior year, an affidavit attesting to this fact satisfies this requirement;
3. a summary of any gas losses from the storage reservoir. An explanation of the losses and the methods used to verify or track such losses must be included;
4. the amount of brine produced and the method and place of disposal; and
5. a storage well inventory on a department-approved form, including the well name and number, API [REDACTED] number, well type and well status.

Section 558.6 Well and facility abandonment

a) **General requirements.** In addition to the requirements of this section [REDACTED], the owner and/or operator

must comply with the plugging and abandonment requirements of Part 560.

b) **Temporary abandonment and shut in.** Wells at underground storage facilities are subject to the temporary abandonment and shut-in requirements of section 560.3.

c) **Cessation of operations and facility abandonment.** Ninety (90) days before permanent cessation of operations, the owner and/or operator of an underground storage facility must notify the department in writing of the date of and the reasons for terminating operations. Ninety (90) days prior to abandoning an underground storage facility the owner and/or operator must submit:

1. applications for individual permits to plug and abandon all wells within the underground storage facility, as required in Part 560 of these regulations; and
 2. a facility closure plan for department approval. The plan must contain the following:
 - (i) a history of operations, including start-up and termination dates, significant events or changes in operations, initial gas in place at start-up and total gas volumes cycled through the reservoir, the operational storage pressure-volume relationship over the life of the project including abandonment pressure, and gas in place at abandonment including any remaining native gas;
 - (ii) a map at a scale approved by the department showing the final reservoir and buffer zone boundaries, including the location of wells, access roads, compressors, and major facilities; and
 - (iii) a summary of proposed closure procedures, including plans and procedures for well plugging and abandonment, including reclamation.
- d) **Closure requirements.** The owner and/or operator must reclaim all affected land and leave it in a condition that does not constitute a present or future threat to the public health, safety or welfare, the environment or the safety or value of property. If the storage facility owner and/or operator fails to return the affected land to a condition satisfactory to the department, the department will oversee the restoration and the owner and/or operator is liable for the total cost.
- e) **Closure report.** Within 60 days of closure, the owner and/or operator must submit a certified

facility closure report in a format approved by the department which must include:

1. a summary of procedures used and any problems encountered during facility closure;
2. the volume of gas in place at closure, including any remaining native gas; and
3. final closure storage reservoir pressure.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

PART 559

SOLUTION MINING

Sec.

- 559.1** **General requirements**
- 559.2** **Operation, monitoring and testing**
- 559.3** **Records, reports and certification**
- 559.4** **Well and project [REDACTED] abandonment**

Section 559.1 **General requirements**

a) **Applicability.** The requirements of this Part apply to all [REDACTED] solution mining wells. A solution mining well may be a withdrawal well, an injection well or a well equipped for both injection and withdrawal to dissolve and recover subsurface salt. Wells covered by this Part are also subject to the requirements in Parts 550 - 557 and 561 [REDACTED] unless otherwise specifically stated. [REDACTED].

[REDACTED]

[REDACTED] The department may impose additional or alternate requirements on a site-specific basis.

b) **Federal permit requirement.** Operation of a solution mining well is contingent upon issuance of applicable Class III Underground Injection Control (UIC) permit [REDACTED] from the United States Environmental Protection Agency (USEPA). Solution mining wells must be operated in accordance with both the owner's and/or operator's UIC permit and the requirements of this Part. The owner and/or operator must submit a copy of the UIC permit and any permit modifications to the department upon request.

e) **Review and approval requirements.** The owner and/or operator [REDACTED] [REDACTED] must submit the items listed in sections 559.1(e)(1) through (e)(4). Owners and/or operators of new solution mining projects must submit these items for department review and approval prior to commencement of solution mining. [REDACTED].

[REDACTED] Owners and/or operators of [REDACTED] solution mining projects existing on the effective date of this Part [REDACTED] must submit these items [REDACTED] [REDACTED] to the

department within 180 days of the effective date for department review and acceptance. [REDACTED].

[REDACTED] A facility holding a state underground storage or modification permit prior to the effective date of this Part and that has all required UIC permits is not subject to the requirements of this subdivision for the permitted cavern development or expansion activities.

1. Description of all existing, planned and proposed cavern development methods, including cavern growth control measures or roof padding techniques, if any, and minimum well,

[REDACTED] and gallery spacings, [REDACTED].
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

2. Schematic or other appropriate drawings of the surface and subsurface details of the existing, planned and proposed cavern development system, including the anticipated final shape and dimensions of the solutioned caverns [REDACTED].

[REDACTED]

3. Spill contingency plan and surface containment measures for any leak or discharge of fluid associated with [REDACTED] roof padding.

4. Neat legible map or maps drawn at a department approved scale [REDACTED].

[REDACTED] that include the following information for existing, planned and proposed solution mining activities:

- (i) [REDACTED] wells [REDACTED].

[REDACTED] and gallery locations [REDACTED].

~~For solution mining projects existing on the effective date of this Part where surveying is conducted less frequently than every two (2) years, the owner and/or operator may submit justification for continuing the established program based on operational history of the project and past surveying results.~~

[REDACTED]

- d) **Notice of approval or acceptance.** The department will [REDACTED] notify the owner and/or operator whether the submittal is complete or the department requires additional information. Once the submittal is complete, the department will send the owner and/or operator written notice of:
 1. changes and/or supplemental information necessary to satisfy the requirements of this Part; or
 2. department approval or acceptance of the project [REDACTED] elements described in sections 560.1(e)(1),(2),(3) and (6) [REDACTED]. Once the notice of approval or acceptance is issued, these elements constitute the approved plan for solution mining activities within the area shown on the map described in section 560.1(e)(4). [REDACTED]

[REDACTED] Any material change to an approved plan is a modification and is subject to further department review and approval prior to implementation. A change in well location, gallery location or an increase in the total number of wells or galleries [REDACTED] does not constitute a material change to an approved plan provided the wells, galleries and final cavern boundaries are located within the solution mining [REDACTED] tracts described in section 559.1(e)(4)(ii) and the elements described in sections 559.1(e)(1), (2), (3), (5) and (6) remain unchanged, [REDACTED]

[REDACTED]

- e) **Environmental assessment form.** The owner and/or operator must submit a completed full environmental assessment form (EAF) from Part 617.20 Appendix A of this Title prior to commencing:

1. [REDACTED] a new solution mining project [REDACTED], or
 2. [REDACTED] modification of an [REDACTED] existing project [REDACTED].
- [REDACTED] as described in section 559.1(e)(2) [REDACTED]

(iv) [REDACTED]

f) **Waivers.** An exception to the requirements in this Part may be granted upon the department's review and approval of the owner's and/or operator's justification for a waiver.

Section 559.2 Operation, monitoring and testing

a) **Commencement of operations.** The owner and/or operator must notify the department in writing ~~24~~ hours prior to the date ~~at~~ injection will be started for the ~~project~~.

1. all new solution mining ~~projects~~ that commence operations after the effective date of this Part; and

2. all modifications approved under section 559.1(~~dc~~)(2) which involve injection outside of the ~~solution mining tracts~~ described in sections 559.1(eb)(4)(i) ~~or outside of solution mining tracts described in other department approved modifications.~~

b) **Injection fluids and pressure.** Injection is limited to fluids and pressures specified in the USEPA UIC Class III permit.

eb) **Fluid loss.** The owner and/or operator may be required to test wells, caverns, pipelines or storage facilities if department review of monitoring and ~~operational data~~ indicates ~~fluid loss.~~

ec) **Cavern stability and Subsidence.** The owner and/or operator must conduct all solution mining activities in a manner that ensures ~~underground cavern control~~ and prevents catastrophic or damaging subsidence.

1. Subsidence monitoring. The owner and/or operator must monitor ~~all~~ its solution mining projects .

(i) The department must approve the type, number, location and construction of subsidence ~~monuments and benchmark(s).~~ The department may require the inclusion of any ~~active or plugged~~ wells as subsidence ~~monuments.~~

(ii) A New York State licensed land surveyor or licensed professional engineer must certify that the survey measurements were performed at a level of accuracy acceptable to the department.

(iii) For new solution mining ~~projects~~ initiated after the effective date of this Part, the owner and/or operator must take surveying measurements ~~at~~ ~~the time solution mining is initiated~~

and at intervals approved by the department, but no less frequently than every two (2) years for the life of the project

. For ~~solution mining~~ projects existing on the effective date of this Part, the owner and/or operator must take surveying measurements at the frequency specified in the approved plan described in section 560.1(c)(6)

The department may require more frequent surveying at any time based upon ~~evaluation of past surveys~~ or occurrence of non-routine incidents. After individual well field abandonment or project ~~abandonment~~, the owner and/or operator

must take surveying measurements [REDACTED] at periods [REDACTED] approved by the department. At any time, the owner and/or operator may request [REDACTED] a change in surveying frequency or discontinuation of subsidence monitoring for abandoned areas. The department may approve the change provided the owner and/or operator has submitted sufficient evidence that catastrophic or damaging subsidence is unlikely to occur in or adjacent to the abandoned area [REDACTED].

(iviii) Within 90 days of survey completion in the field, the owner and/or operator must submit a [REDACTED] report for the department's review and approval. The report must include [REDACTED].

[REDACTED] survey measurements, a subsidence contour map and a narrative interpretation. If the department requires additional information to interpret the survey report, [REDACTED].

[REDACTED] the owner and/or operator must provide the information within 15 days of [REDACTED] department request. [REDACTED].

[REDACTED].

[REDACTED].

[REDACTED].

(iv) If the subsidence monitoring report indicates that corrective action is necessary to prevent sinkhole formation or other surface or subsurface damage, then the report must include a [REDACTED].

[REDACTED] plan and implementation schedule for corrective action to prevent impacts including those described in section 559.2(d)(2)(iii).

2.Subsidence occurrence. If subsidence results in a sinkhole or other surface or subsurface damage, the owner and/or operator must:

- (i) immediately suspend [redacted] operation of all wells connected to the underground caverns associated with the ~~sinkhole or other~~ surface or subsurface damage;
- (ii) comply with the non-routine incident requirements in section 550.6(f). The written report [redacted] required [redacted] ~~under section 550.6(f)(3)~~ must include a description of safety measures taken to protect public safety in and near the ~~sinkhole or~~ damaged area; and
- (iii) submit a remediation plan and implementation schedule for department review and approval within 15 days of any surface or subsurface damage and/or ground [redacted] water impacts resulting from solution mining activities. Remediation may include, but is not limited to, restoration or replacement of potable, agricultural, industrial or other water supplies that the department determines are no longer usable or sufficient due to subsidence.

ed) **Cavern dimensions.** The department may require [redacted] determination of cavern dimensions at any time ~~based on cavern stability issues, mineral rights boundary issues~~ [redacted] [redacted] or [redacted] non-routine incidents, ~~including subsidence.~~

1. Mineral rights [redacted] boundary. The owner and/or operator must conduct all solution mining activities in a manner that ensures that the mined area does not extend outside the owner's and/or operator's mineral rights [redacted] boundary. [redacted] If mining extends beyond the mineral rights [redacted] boundary, the owner and/or operator must suspend operation of the involved wells ~~unless~~ [redacted] the [redacted].

affected mineral rights owner, provides written authorization to the department for continued well operation

2.Cavern delineation. The department must approve the method of determining cavern dimensions based on site-specific circumstances. The owner and/or operator must notify the department 48 hours before any field test run to determine cavern dimensions. Methods that may be approved by the department include, but are not limited to:

- (i)volumetric calculations based on production;
- (ii)downhole sonar surveys; and
- (iii)other surface or subsurface geophysical methods.

3.Report. Within 30 days of completing field tests or other procedures to determine cavern dimensions, the owner and/or operator must submit a written report notifying the department of any mining outside the mineral rights boundary or other deviations from expected parameters. The report must contain an explanation for any related problems and a prediction of potential subsidence impacts.

4.Correction plan. The department may require the owner and/or operator to submit a correction plan and implementation schedule for department review and approval.

Section 559.3 Records, reports and certification

a)**Daily records.** Records must be maintained on a daily basis and must be available to the department on

request showing the source, salt saturation level, volume and pressure of:

1. fluids injected or withdrawn for solution mining; and
2. fluids injected or withdrawn for roof padding.

b) **Annual report.** Solution mining wells are exempt from the annual well report required for individual wells under section 551.5. Instead, an annual report must be filed for each solution mining project [REDACTED] on a department-approved form. This report is due annually on [REDACTED] March 31 and must cover the previous calendar year ending December 31. The report must include the following items:

1. injection and withdrawal volumes in units specified by the department for each well and total days each well was used for each purpose during the calendar year;
2. injection and withdrawal volumes of fluids injected or withdrawn for roof padding purposes;
3. summary of average and maximum injection pressures;
4. a well inventory of all **active and inactive** solution mining wells listing each well and its year-end status. The inventory must include wells plugged during the year, and any monitoring, disposal or other wells used in conjunction with the solution mining operation; and
5. a map drawn at a department-approved scale [REDACTED] showing [REDACTED] the mineral rights [REDACTED] boundary [REDACTED] and the surface projection of year-end cavern boundaries with a notation of estimation methods, the location of all subsidence monuments [REDACTED] and all **active, inactive and plugged** solution mining wells, and any monitoring, disposal or other wells used in conjunction with the solution mining operation.

c) **Self-certification.** Solution mining wells are exempt from the self-certification requirement for individual wells under section 551.5(b). Instead, the owner and/or operator must annually certify on a department-approved form that all [REDACTED] well sites [REDACTED] have been inspected

during the reporting year to ensure compliance with Parts 550 - 561 of this Title and all applicable permits, approvals and orders, and if necessary, that appropriate corrective actions were taken to bring the well sites into compliance.

Section 559.4 Well and project abandonment

a) **General requirements.** In addition to the requirements of this section, the owner and/or operator must comply with the plugging and abandonment and reclamation requirements of Part 561.

b) **Cavern isolation.** When any solution mining well is plugged, a bridge plug or cavern isolation plug approved by the department must be set in the production casing within 25 feet above the top of the cavern, unless a variance is approved by the department based on cavern or wellbore conditions. A minimum of 50 feet of cement must be placed on top of the plug. Other plugs must be placed in the wellbore as required by Part 561.

c) **Temporary abandonment and shut-in.** All solution mining wells are subject to the general temporary abandonment and shut-in requirements in section 561.3. The Department may approve exemption of a solution mining well from the shut-in time limits in section 561.3 provided that:

1. the owner and/or operator demonstrates the existence of salt reserves recoverable by future well operation and the necessity of maintaining the well in shut-in condition for the most efficient salt development;
2. the well is otherwise in compliance with Part 550 - 561 of this Title and any applicable state or federal permits, approvals and orders;
3. the well is subject to mechanical integrity testing at any time upon request of the department, based on cavern stability issues or non-routine incidents; and
4. the owner and/or operator inspects the well at least twice monthly during the shut-in period.

d)**Closure requirements.** Upon final project [REDACTED] cessation, the owner and/or operator must plug the wells, begin any required monitoring procedures, reclaim the affected land and place the premises in a condition that does not constitute a present or future threat to the environment or the public health, safety or welfare. Future remediation and restoration may also be required in those instances where post-closure surface or subsurface damage are [REDACTED] attributed to prior operation of solution mining wells. If the solution mining well owner and/or operator fails to return the premises to a condition satisfactory to the department, the department will oversee the restoration and the owner and/or operator will be liable for the total cost.

**PART 560
PLUGGING AND ABANDONMENT**

Sec.	
560.1	General requirements
560.2	Plugging methods, procedures, and reports
560.3	Temporary abandonment and shut in
560.4	Good samaritan plugging and abandonment

Section 560.1 General requirements

- a) **Applicability.** This Part applies to the plugging and abandonment phase of all wells regulated under Parts 550 - 560 of this Title. Parts 558 - 559 of this Title contain additional plugging and abandonment requirements for underground gas storage and solution mining facilities. The department may impose additional or alternate plugging and abandonment requirements on a site-specific basis.
- b) **Goals and responsibilities.** All wells must be plugged and abandoned in a manner that confines oil, gas, water, or other fluids to the reservoirs in which they naturally occur and in such a manner to prevent pollution. Proper plugging and abandonment includes reclamation. The owner and/or operator must reclaim all affected land as required in section 550.6. ~~The owner and/or operator may not transfer plugging and abandonment responsibility or other legal responsibilities for a well by surrendering the lease.~~ [REDACTED]
- c) **Permit requirements.** Plugging and abandonment operations on an individual well or facility must not commence until the owner and/or operator receives the applicable plugging and abandonment permit(s). A copy of the permit(s) must be posted at the well site during the plugging and abandonment operation. All plugging and abandonment operations must be conducted in accordance with permit requirements. Variations from the approved plugging and abandonment plan must be approved in advance by the department.
- d) **Permit application.** The owner and/or operator must submit one [REDACTED] copy of an application to plug and abandon a well to the appropriate regional office. The application must be on a

~~submitted to the department is accompanied by a written statement from every registered person with an active underground mine within 1000 feet consenting to the proposed plugging operations, the notice by certified mail and the ten day waiting period are not required.~~ [REDACTED]

[REDACTED]

[REDACTED] None of the requirements of this paragraph apply [REDACTED]

[REDACTED] if:

(i) the well is a dry hole and is being plugged immediately upon completion of drilling; and

(ii) the [REDACTED] owner and/or operator has already complied with section 554 [REDACTED] regarding notification of underground mines for a drilling and operating permit application [REDACTED]

- e) **Permit term.** A permit to plug and abandon is valid for a period of six (6) [REDACTED] consecutive months from the date of issue. An extension may be granted by the department for sufficient good cause.
- f) **Notification and witness of plugging operations.** The owner and/or operator must notify the department in advance of the commencement of plugging operations. Plugging operations may commence without the presence of a department representative unless prohibited [REDACTED] in the permit to plug and abandon.
- g) **Waivers.** An exception to the requirements in this Part may be allowed upon the department's review and approval of the owner's and/or operator's justification for a waiver.

Section 560.2 Plugging methods, procedures and reports

- [REDACTED]
- a) **General plugging requirements.** Cement plugs must be placed in wells across or within 25 feet above all fluid producing zones, across all casing stubs and casing shoes, below the base of the freshwater zone and/or across the surface casing shoe, and at the ground surface. Intervals not occupied by cement must be filled with an approved fluid, as specified by the department.
- b) **Casing and tubing recovery.** All uncemented casing and tubing must be withdrawn from the wellbore and a minimum 50-foot plug must be set across all casing and tubing stubs. In the event uncemented casing cannot be retrieved, the department may require cement to be placed behind uncemented casing. The owner and/or operator may request that the department waive the requirement to withdraw uncemented casing. The request must include specific measures or procedures in place of casing retrieval that are no less protective of the environment.
- c) **Fluid zone plugs.** The configuration and setting depth of all fluid zone plugs must be approved by the department based on site-specific conditions. Plugging plans must meet the department's minimum requirements.
1. Fluid zone plug. All plugs must extend completely across any fluid producing zone to a minimum of 25 feet above the top of the fluid producing zone. Any plug extending less than 50 feet above the top of a fluid producing zone must be tagged.
 2. Alternate plug above the productive horizon. On a case-by-case basis, the department may approve an alternative to the fluid zone plug. A department-approved bridge must be set within 25 feet above the productive horizon and then followed by a minimum of 25 feet of cement. Any cement plug extending

less than 50 feet above the top of the bridge must be tagged.

3. Injection well plug. For a zone of fluid injection which has been isolated by a flood packer, the following requirements apply:
 - (i) a plug or blind packer must be set at the bottom of the tubing;
 - (ii) the tubing must be filled with cement to a point 50 [REDACTED] above the flood packer and severed immediately above the cement;
 - (iii) an additional amount of cement must be placed from the flood packer to at least 25 feet above the severed tubing. If a method other than direct tagging is used to locate the original top of flood packer cement, the length of the cement must be increased to 75 feet above the severed tubing; and
 - (iv) if the amount of cement placed in section 560.2(c)(3)(iii) has a calculated length of less than 50 feet, it must be tagged after a minimum 12-hour waiting-on-cement period. A shorter period may be approved if an accelerator is added to the cement.
- d) **Casing shoe plugs.** A minimum 50-foot cement plug must be placed across all casing shoes and must be set on top of a department-approved bridge. If the casing is uncemented [REDACTED] the minimum plug length must be 75 feet, with 50 feet below the shoe and 25 feet above. The department may require tagging of a casing shoe plug in uncemented casing.
- e) **Surface plugs.** The surface plug must be placed in a manner that prevents erosion and does not interfere with normal soil cultivation.
 1. Normal surface plug. The surface plug must be a minimum of ten (10) feet in length with the top of the plug one (1) foot below ground level. In agricultural areas, the top of the plug must be located four (4) feet below ground level.

2. Alternative oil well surface plug. When uncemented surface casing cannot be retrieved in oil wells less than 2000 feet deep, the department may require or allow a surface plug of non-cementing material similar in texture, composition, and permeability to the surrounding sediments. The plugging material and plug placement procedures must be approved by the department.
- f) **Tagging.** [REDACTED] The owner and/or operator must wait at least eight (8) hours before tagging a plug.
 - g) **Junk-in-the-hole.** When a fluid producing zone is identified below junk-in-the-hole, attempts to remove the junk and place cement below the junk must be made, as specified by the department. A cement plug at least 50 feet in length must be placed above any junk left in the hole.
 - h) **Plugging report.** The owner and/or operator must submit a plugging report on a department-approved form, subject to department review and approval, within 30 days of plugging.

560.3 Temporary abandonment and shut in

- a) **General requirements.** It is unlawful to abandon a well or lease or ~~be the owner~~ [REDACTED] and/or operator [REDACTED] of a lease that contains abandoned wells without plugging and abandoning all [REDACTED] wells, including reclamation as required in section 550 [REDACTED].
- b) **Temporary abandonment.** Temporary abandonment requirements apply to any unplugged well that has not been completed.
 1. **Ninety-day limit.** ~~After expiration of the authorized 12 month period to commence drilling~~ [REDACTED] it is unlawful for a well to be temporarily abandoned for more than 90 days without department approval. Before the end of the 90-day

period, the owner and/or operator must resume activities required to complete or recomplete the well, permanently plug and abandon the well or obtain written department approval for extended temporary abandonment status under section 560.3(b)(2). If the owner and/or operator elects to resume activities, the well must be covered by a valid permit to drill and operate authorizing the required activities or the owner and/or operator must obtain a new permit.

2. Extension for sufficient good cause. The owner and/or operator must submit a written application on a department-approved form requesting that the department grant a well extended temporary abandonment status. The department cannot consider an application unless the well is in compliance with Parts 550 - 560 of this Title and any applicable permits, approvals and orders. The department may administratively grant temporary abandonment status for no more than 90 days without notice or hearing if the owner and/or operator can demonstrate sufficient good cause for the request. The application must be accompanied by an interim completion report as required by section 555.8(a)(2). As a condition to granting temporary abandonment status, the department may require site reclamation or other measures necessary for environmental protection during the temporary abandonment period. The department may grant subsequent 90-day extensions upon application. The initial 90-day temporary abandonment period and any additional temporary abandonment periods cannot total more than one ■ year.

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- c) **Shut-in wells.** Shut-in requirements apply to any unplugged well that has been completed. It is unlawful for a well to be shut in for more than one ■ year without department approval.

Without notice or hearing, the department may administratively grant extended shut-in status for a maximum of ten (10) years.

1. Basic requirements. [REDACTED] the owner and/or operator must submit a written application on a department-approved form requesting that the department grant a well extended shut-in status. The owner and/or operator must demonstrate sufficient good cause for the request, such as: pipeline access is pending, a well transfer is pending, conversion of well to other use is imminent, or the owner and/or operator has proposed reworking or recompleting the well. The department cannot consider an application unless partial site reclamation has been completed and the well is in compliance with Parts 550 - 560 of this Title and any applicable permits, approvals and orders. The department may require other measures necessary for environmental protection during the shut-in period.

2. Fifth year. [REDACTED]
[REDACTED]

- (i) [REDACTED]
- (ii) perform a mechanical integrity test and submit the results for department approval. The test must provide sufficient information to determine the integrity of the casing. Department notice and approval is required before running the test; and
- (iii) comply with all other requirements set by the department.

3. Sixth to tenth years. [REDACTED]
[REDACTED]
[REDACTED]

4. End of shut-in status. Before the end of the one-year shut-in period [REDACTED] the owner and/or operator must
- (i) produce or operate the well
 - (ii) permanently plug and abandon the well or
 - (iii) obtain written department approval for extended shut-in status [REDACTED].

5. Solution mining exemption. Wells at solution mining projects are subject to the requirements of section 560.3, but may be eligible for an exemption under section 559.4(c). [REDACTED]

- d) **Return to operation.** The department's accounting of the shut-in period under section 560.3(c) is not interrupted unless the well is returned to continuous production or operation for a period of 90 consecutive days.

Section 560.4 Good samaritan plugging and abandonment

- a) **PolicyGeneral requirements.** Under the provisions of section 550 (i), the department may authorize [REDACTED] any person to enter, take temporary possession of, plug and abandon or replug and abandon any well, reclaim any well site, facility site or affected land and/or abate or prevent any adverse effects which constitute a danger to public health, safety or welfare, whenever the owner and/or operator neglects or refuses to comply with the plugging and abandonment and reclamation requirements of this Part or applicable permits, approvals or orders. The authorized person, known herein as a good samaritan, must have a permit to plug and abandon as required by section 560.1 and provide advance written notice by certified mail, return receipt requested, to the well owner and/or operator,

the mineral rights owner, the surface owner and the department before commencing plugging and abandonment operations. The notification must inform the addressee of their right to file written comments with the department within 30 days of [REDACTED] receipt of the materials. The owner and/or operator must hold harmless both New York State and the authorized person for all resulting accounts, damages, costs, or judgments.

b) **Compensation for damages.** Any person who plugs and abandons a well or performs other department authorized operations under this section [REDACTED] must either repair any resulting damage or compensate the surface owner for any resulting damage or disturbance. In the event that costs and compensation cannot be agreed to by the parties, the department must determine the costs and compensation. Compensable damages include, but are not limited to, the following:

1. the reasonable cost of repairing or replacing any water well;
2. the reasonable value of crops destroyed, damaged or prevented from reaching market;
3. the reasonable cost to repair or replace personal property of like age, wear and quality;
4. the reasonable costs to reclaim or repair real property including roads; and
5. lost income or expense incurred.

c) **Salvage rights.** Any person authorized to plug and abandon a well under this section [REDACTED], may elect to take any casing, equipment or other salvage resulting from the plugging operation.

d) **Limitation of effort and expense.** Any person authorized to plug and abandon a well or perform other operations under this section [REDACTED] is not required to take any action or incur any expense to retrieve or protect any casing, equipment or salvageable material, except as

necessary to comply with specific provisions of Parts 550 - 560 of this Title and any applicable permits, approvals and orders.

- e) **Recovery of state funds.** In the event funds from the oil and gas account or other state funds are used to plug and abandon or replug and abandon a well or any other operations under section 550.9(i), the department is entitled to recover the full costs from the well owner and/or operator.