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OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

Form #6

**NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE AUTHORIZED
BY THE WEST VIRGINIA LEGISLATURE**

AGENCY: Div. Environmental Protection-Office Water Resources TITLE NUMBER: 47

AMENDMENT TO AN EXISTING RULE: YES NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF RULE BEING PROPOSED: 57A

TITLE OF RULE BEING PROPOSED: "Groundwater Protection Standards at Steam
Generating Facilities"

THE ABOVE RULE HAS BEEN AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AUTHORIZATION IS CITED IN (house or senate bill number) HB 4223

SECTION 64-3-1(bb), PASSED ON March 11, 2000

THIS RULE IS FILED WITH THE SECRETARY OF STATE. THIS RULE BECOMES EFFECTIVE ON THE
FOLLOWING DATE: June 1, 2000

Carrie J. Chambers

Authorized Signature



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West Virginia Bureau of Environment

Cecil H. Underwood
Governor

Michael C. Castle
Commissioner

May 12, 2000

Ms. Judy Cooper
Director, Administrative Law
Division
Secretary of State's Office
Capitol Complex
Charleston, WV 25305

RE: 47CSR5A - "Groundwater Protection Standards at Steam Generating
Facilities"

Dear Ms. Cooper:

This letter will serve as my approval to file the above-referenced rule with your Office and the Legislative Rule-Making Review Committee as "Notice of Final Filing and Adoption of a Legislative Rule."

Your cooperation in the above request is very much appreciated. If you should have any questions or require additional information, please call Carrie Chambers in my office at 759-0515.

Sincerely,

Michael C. Castle
Commissioner

MCC:cc

cc: Dave Watkins
Carrie Chambers

RULE PROMULGATION HISTORY ABSTRACT

TITLE 47 SERIES 57A

DIVISION OF ENVIRONMENTAL PROTECTION OFFICE OF Water Resources

"Groundwater Protection Standards at Steam Electric Generating Facilities"

June 17, 1999	Filed for Public Hearing
July 21, 1999	Public Hearing Held
August 3, 1999	Agency Approved Rule Filed with Secretary of State and Legislative Rule-Making Review Committee
March 11, 2000	HB4233 Passed the Legislature
April 3, 2000	HB4233 Signed by Governor
May 12, 2000	Rule Final Filed with Secretary of State
June 1, 2000	Effective Date of Rule

**TITLE 47
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER RESOURCES
SERIES 57A
GROUNDWATER PROTECTION STANDARDS AT STEAM
ELECTRIC GENERATING FACILITIES**

FILED
May 12 3 29 PM '00
OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

§47-57A-1. General.

1.1. Scope. -- Variances may be granted by the legislative to allow groundwater quality standards to be exceeded for a single source or a class of sources which by their nature cannot be conducted in compliance with the requirements of W.Va. Code §22-12-5, "Groundwater Protection Act". The benefits of granting the variance must out weigh the benefits of complying with existing groundwater quality standards and demonstrate that there is no technologically feasible alternative available, and that granting the variance is more in the public interest than adherence to existing groundwater quality standards.

1.1.a. A study was initiated by Allegheny Power (AP) and American Electric Power (AEP) and conducted by the Electric Power Research Institute (EPRI) to ascertain the existing ground water quality at nine(9) steam electric generating facilities throughout the state. The study concluded that four(4) metals (beryllium, cadmium, chromium and nickel) were consistently exceeding groundwater quality standards at coal storage areas, and two(2) metals (nickel and selenium) were consistently exceeding ground water quality standards at ash disposal areas.

1.1.b. The purpose of this legislative rule is to grant relief from existing groundwater quality standards by establishing groundwater protection standards (GWPS) for variance applicable areas for both the coal storage and ash disposal sites at nine(9) steam electric power generating facilities within the state.

- 1.2. Authority. - W.Va. Code §22-12-5(l).
- 1.3. Filing Date. - May 12, 2000
- 1.4. Effective Date. - June 1, 2000

§47-57A-2. Definitions

- 2.1. "Act" means the West Virginia Groundwater Protection Act, W.Va. Code §22-12-1 et seq.
- 2.2. "Class of sources" means a group of sources which engage in similar types of activities and release, or have the potential to release, similar types of pollutants to the groundwater.
- 2.3. "Constituent" means any chemical, or biological substance found in groundwater due to either natural or man-made conditions.
- 2.4. "Director" means the director of the Division of Environmental Protection of the Bureau of Environment.
- 2.5. "Groundwater" means the water occurring in the zone of saturation beneath the seasonal high water table, or any perched water zones.
- 2.6. "Groundwater Protection Standard" or "GWPS" means the concentration of a specified constituent, statistically calculated, which is achievable with a 95% (percent) confidence level.
- 2.7. "Groundwater Quality Standards" means the standards of purity and quality for groundwater of the state promulgated by the Environmental Quality Board pursuant to section 4 of the Act.
- 2.8. "ppb" - means parts per billion or $\mu\text{g/l}$.
- 2.9. "Preventative Action Limit" or "PAL" means a numeric value expressing the concentration of a substance in groundwater that, if exceeded, causes action to be taken to assure that standards of purity and quality of groundwater are not violated.
- 2.10. "Receptor" means a surface water body, a public or private drinking water supply and any off-site migration onto adjacent properties of groundwater for which the variance is granted.
- 2.11. "Source" means any facility or activity which has caused a release or is reasonably likely to cause a release.
- 2.12. "Variance" means a legislative rule modifying groundwater quality standards or preventative action limits, or both, for a source or class of sources, for one or more specific constituents.

2.13. "Variance applicable areas" means a geographic area for which the variance is allowed and is further delineated by geographic coordinates listed in section 3.0 of this rule.

§47-57-A-3. Variance Applicable Areas.

3.1. Variance applicable areas for coal storage sites at steam electric power generating facilities with their coordinates are as follows:

3.1.a. Albright; Preston County; 39°29'09", 79°38'07"; 39°29'09", 79°38'11"; 39°29'13", 79°38'15"; 39°29'07", 79°38'11":

3.1.b. Fort Martin; Monongalia County; 39°43'03", 79°55'14"; 39°42'43", 79°55'29"; 39°43'04", 79°55'17"; 39°42'47", 79°55'35":

3.1.c. Harrison; Harrison County; 39°23'15", 80°19'30"; 39°23'07", 80°19'25"; 39°23'14", 80°19'43"; 39°23'03", 80°19'41":

3.1.d. Kammer; Marshall County; 39°51'01", 80°48'52"; 39°50'58", 80°48'49"; 39°50'50", 80°49'09"; 39°50'45", 80°49'02":

3.1.e. Kanawha River; Kanawha County; 38°12'27", 81°25'23"; 38°12'24", 81°25'28"; 38°12'36", 81°25'29"; 38°12'35", 81°25'34":

3.1.f. Pleasants/Willow Island; Pleasants County; 39°21'56", 81°17'43"; 39°21'51", 81°17'49"; 39°22'10", 81°17'39"; 39°22'05", 81°18'00":

3.1.g. Rivesville; Marion County; 39°31'54", 80°06'26"; 39°31'53", 80°06'28"; 39°31'55", 80°06'37"; 39°31'34", 80°06'36" and:

3.1.h. Sporn; Mason County; 38°58'19", 81°55'35"; 38°58'11", 81°55'26"; 38°58'15", 81°55'43"; 38°58'05", 81°55'35".

3.2. Variance applicable areas for ash disposal sites at steam electric power generating facilities with their coordinates are as follows:

3.2.a. Kanawha River; Kanawha County; 38°12'19", 81°24'35"; 38°12'16", 81°24'34"; 38°12'17", 81°25'02"; 38°12'15", 81°25'03" and:

3.2.b. Sporn; Mason County; 38°57'57", 81°55'18"; 38°57'51", 81°55'14"; 38°57'51", 81°55'30"; 38°57'44", 81°55'26".

3.3. Variance applicable areas shall be permanently marked by stationary monuments or other highly visible alternative methods. These monuments shall be protected from damage or removal as long as the variance is in effect.

3.4. The facility shall communicate to the Director as to which method is used to mark the variance applicable areas.

§47-57A-4. Groundwater Protection Standards and Preventative Action Limits.

4.1. Groundwater protection standards, preventative action limits and compliance monitoring stations are hereby established for the following sites and for the following individual constituents: beryllium, cadmium, chromium, nickel and selenium. (See tables 57A-4A through 57A-4F at the end of this rule.)

4.2. The groundwater protection standards and preventative action limits are established for coal storage and ash disposal ponds at variance applicable areas and shall not pertain to other activities or areas at the facility.

4.3. Compliance with preventative action limits shall also be determined at the same monitoring stations as the groundwater protection standards.

4.4. If any groundwater protection standard (GWPS) or preventative action limit (PAL) is exceeded, the Director shall cause such action to be taken as specified in section 5.0 of this rule to assure that standards of purity and quality are not violated.

§47-57-A-5. Terms and Conditions.

5.1. Any constituent for which a variance is granted shall not cause a violation of water quality standards or groundwater quality standards at any receptor.

5.2. A sufficient number of monitoring wells of approved design and construction shall be installed and maintained between the variance applicable areas and the receptor. If the Director reasonably believes the current number and location of compliance monitoring wells is no longer adequate to monitor the variance applicable areas, the Director may order the installation of additional wells.

5.3. Groundwater protection standards and preventative action limits will be applied on intrawell comparisons; that is, each compliance monitoring well would stand alone, and not be collectively averaged with all wells monitoring the variance applicable areas.

5.4. Preventative action limits will be established at 80% (percent) of the groundwater protection standard or as otherwise determined by the Director.

5.5. Any expansion of existing coal storage areas or ash disposal ponds outside of its variance applicable areas is prohibited; unless these expanded areas employ all relevant mitigation practices in accordance with applicable rules promulgated pursuant to the Act.

5.6. Compliance monitoring shall begin on the effective date of this rule and shall continue in accordance with section 5.0 of this rule.

5.7. Compliance monitoring of the variance applicable areas shall be quarterly provided that three(3) successive preventative action limit (PAL) exceedences shall result in an increased monitoring frequency to monthly. Compliance monitoring will continue on a monthly basis until such time as the reason for the exceedences is resolved or the pattern of exceedences is broken by two(2) successive sampling events below the preventative action limits (PAL).

5.8. The Director upon determining that an exceedence of the preventative action limit (PAL) has occurred for any constituent shall notify the facility by certified mail that a verification sample shall be taken within thirty(30) days receipt of such notification to substantiate such exceedence. A verification sample which exceeds a preventative action limit (PAL) shall be deemed a second exceedence for purposes of establishing a pattern of exceedences.

5.9. If three(3) successive exceedences of the PAL should occur, the facility will initiate an assessment of the variance applicable area(s) which may include groundwater modeling to determine the cause of such exceedences. The results of such an assessment shall be reported to the Director.

5.10. If four(4) successive exceedences or five(5) exceedences of the PAL within a six(6) month period should occur, then the facility shall initiate a plan of mitigation to be approved by the Director in order to assure that groundwater protection standards are not violated.

5.11. If a groundwater protection standard is exceeded, sampling shall immediately be increased from quarterly to monthly. Compliance monitoring will continue on a monthly basis until such time as a reason for the exceedence is resolved, or until such time as there are two(2) successive sampling events below the preventative action limit (PAL).

5.12. The Director upon determining that an exceedence of the Groundwater Protection Standard (GWPS) has occurred for any constituent shall notify the facility by certified mail that a verification sample shall be taken within thirty(30) days receipt of such notification to substantiate such exceedence. A verification sample which exceeds a groundwater protection standard (GWPS) shall be deemed a second exceedence.

5.13. If a second successive exceedence of the groundwater protection standard (GWPS) should occur, the facility shall sample the receptor, and conduct an assessment of the variance applicable area(s) which may include groundwater modeling to determine the cause of such exceedence. The results of which shall be reported to the Director.

5.14. If a third successive exceedence of the groundwater protection standard (GWPS) should occur, or if there are four(4) exceedences of the Groundwater Protection Standard (GWPS) within a six(6) month period, the facility will initiate remedial action, including an evaluation of environmental and human health risks.

§47-57-A-6 Periodic Review.

6.1. No less frequently than every five(5) years the Director shall review all prior decisions granting these variances to determine their continual consistency with 47CSR57, "Groundwater Quality Standard Variances". Should the Director determine that any modification of such a decision is appropriate, the Director shall initiate rule making pursuant to W.Va. Code §29A-3.

TABLE 57A-4A.

Beryllium (ppb)			
Coal Storage Areas	Groundwater Protection Standard (GWPS)	Preventative Action Limit (PAL)	Compliance Monitoring Stations
Albright	24.0	19.2	MW 501, MW 502
Fort Martin	6.3	5.0	MW 608, MW610, MW 611
Kammer	52.0	41.6	MW 2, MW 3
Kanawha	109.0	87.2	MW-13, MW-14, MW-17
Pleasants/Willow Island	10.0	8.0	MW 903, MW 904, MW 906
Rivesville	9.1	7.3	MW 801, MW 802

TABLE 57A-4B.

Cadmium (ppb)			
Coal Storage Areas	Groundwater Protection Standard (GWPS)	Preventative Action Limit (PAL)	Compliance Monitoring Stations
Albright	58.0	46.4	MW 501, MW 502
Fort Martin	12.0	9.6	MW 608, MW 610, MW 611
Harrison	7.7	6.2	MW 701, MW 705, MW 706, MW 711
Kammer	182.0	145.6	MW 2, MW 3
Kanawha River	90.0	72.0	MW 13, MW 14, MW 17
Pleasants/Willow Island	8.6	6.9	MW 903, MW 904, MW 906
Rivesville	22.0	17.6	MW 801, MW 802
Sporn	6.4	5.1	MW 12, MW 13, MW 14

TABLE 57A-4C.

Chromium (ppb)			
Coal Storage Areas	Groundwater Protection Standard (GWPS)	Preventative Action Limit (PAL)	Compliance Monitoring Stations
Albright	190.0	152.0	MW 501, MW 502
Fort Martin	440.0	352.0	MW 608, MW 610, MW 611
Kammer	669.0	535.2	MW 2, MW 3
Kanawha River	140.0	112.0	MW 13, MW 14, MW 17
Pleasants/Willow Island	300.0	240.0	MW 903, MW 904, MW 906
Rivesville	120.0	96.0	MW 801, MW 802

TABLE 57A-4D.

Nickel (ppb)			
Coal Storage Areas	Groundwater Protection Standard (GWPS)	Preventative Action Limit (PAL)	Compliance Monitoring Stations
Albright	970.0	776.0	MW 501, MW 502
Fort Martin	433.0	347.0	MW 608, MW 610, MW 611
Harrison	328.0	263.0	MW 701, MW 705, MW 706, MW 711
Kammer	844.0	675.2	MW 2, MW 3
Kanawha River	2900.0	2320.0	MW 13, MW 14, MW 17
Pleasants/Willow Island	744.0	595.2	MW 903, MW 904, MW 906
Rivesville	299.0	240.0	MW 801, MW 802
Sporn	490.0	441.0	MW 12, MW 13, MW 14

TABLE 57A-4E.

Nickel (ppb)			
Ash Disposal Ponds	Groundwater Protection Standard (GWPS)	Preventative Action Limit (PAL)	Compliance Monitoring Stations
Sporn	119.0	95.2	MW 10

TABLE 57A-4F.

Selenium (ppb)			
Ash Disposal Ponds	Groundwater Protection Standard (GWPS)	Preventative Action Limit (PAL)	Compliance Monitoring Stations
Kanawha River	120.0	96.0	MW 2, MW 3, MW 5