

**Hearing Officer's Report for Re-adoption of in 15A NCAC  
02L .0100 “General Considerations”**

**Public Hearing Held  
on November 3, 2021**

**Presented to the  
North Carolina Environmental Management Commission  
on**

**March 10, 2022**

**Department of Environmental Quality  
Division of Water Resources**

## TABLE OF CONTENTS

- I SUMMARY OF RULEMAKING ACTIVITY
- II PUBLIC HEARING PROCESS
- III HEARING OFFICER MEETING
- IV SUMMARY OF PUBLIC COMMENTS AND HEARING OFFICER RESPONSES
- V ATTACHMENTS AND SUPPORTING DOCUMENTATION
  - A. Proposed 15A NCAC 02L .0100 Draft Rules
  - B. OSBM Approved Regulatory Impact Analyses
  - C. Public Hearing Announcement
  - D. Hearing Officer's Remarks
  - E. Public Hearing Division of Water Resources Staff Presentation
  - F. Public Hearing Registered Attendees
  - G. Public Hearing Speakers
  - H. Written Comments Received

## **I – SUMMARY OF RULEMAKING ACTIVITY**

The Classifications and Water Quality Standards Applicable to Groundwaters of North Carolina (15A NCAC 02L Rules) are implemented by the Division of Water Resources and Division of Waste Management and are divided into five sections: General Consideration (.0100), Classifications and Groundwater Quality Standards (.0200), Assignment of Underground Water Classifications (.0300), Risk-Based Assessment and Corrective Action for Petroleum Underground Storage Tanks (.0400), and Risk-Based Assessment and Corrective Action for Petroleum Releases from Aboveground Storage Tanks and Sources (.0500). These rules underwent rule review required by S.L. 2013-413 (HB74) during 2017. The final rule review report determined that rules in Section .0100 (General Considerations) were “necessary with substantive public interest”. The rules, therefore, needed to be re-adopted, and a readoption deadline of November 30, 2022, was established by the NC Rules Review Commission (RRC).

The NC Division of Water Resources (DWR) began the rulemaking process in early 2019 by preparing an initial draft of the rules and soliciting internal stakeholders for comments. In November 2020, DWR invited external stakeholders to comment on the final initial draft rules. DWR considered the external comments and updated the draft rules where applicable. The draft rules were completed in December 2020. DWR staff sent draft rules for a pre-review to the RRC in January 2021 and subsequently incorporated the RRC’s comments.

## **II – PUBLIC HEARING PROCESS**

In April 2021, DWR staff informed the Groundwater and Wastewater Management Committee (GWMMC) of the progress and content of the draft rules consisting of 15A NCAC 02L Section .0100. A Regulatory Impact Analyses (RIA) was completed for the 15A NCAC 02L .0100 rules in May 2021 which determined that no fiscal notes were necessary for the rule package. In July 2021, the GWMMC approved the final rules and request to proceed to the full Environmental Management Commission (EMC). In September 2021, the EMC approved the draft rules and request to proceed to public hearing. The link to September 9, 2021 EMC agenda is listed below:

[https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/EMC%20Meetings/2021/sept2021/Agenda\\_FINAL\\_EMC\\_September2021\\_Rev08-31-2021\\_Webpage.pdf](https://files.nc.gov/ncdeq/Environmental%20Management%20Commission/EMC%20Meetings/2021/sept2021/Agenda_FINAL_EMC_September2021_Rev08-31-2021_Webpage.pdf)

The Notice of Text was filed in Volume 36 Issue 08 of the NC Register dated October 15, 2021. In the abundance of caution, and to address protective measures to help prevent the spread of COVID-19, the DWR held an online public hearing (via WebEx) regarding the proposed readoption of the 02L .0100 rules and the associated regulatory impact analyses under the authority of the NC General Statutes, Chapter 143, on November 3, 2021 at 6:00pm.

The announcement of the hearing and a WebEx link, password, and call-in number were published in the October 15, 2021 edition of the North Carolina Register:

<https://files.nc.gov/ncoah/documents/files/Volume-36-Issue-08-October-15-2021.pdf>

The public hearing announcement is included in Attachment C.

Additionally, the announcement of the public comment period and the public hearing and background information was made available on the following websites:

DEQ Upcoming events: <https://deq.nc.gov/news/events>

DEQ Public notices and hearings: <https://deq.nc.gov/news/events/public-notice-hearings>

DEQ Proposed rules: <https://deq.nc.gov/permits-regulations/rules-regulations/proposed-rules>

The notice in the North Carolina Public Register also included information on how to submit comments. The sixty-day comment period for the proposed rule revisions began on October 15, 2021 and closed on December 14, 2021.

Four persons attended the public hearing, and no person presented oral comments. One set of written comments were received during the comment period. The comments came from DWR staff.

### **III – HEARING OFFICER MEETINGS, CONSIDERATIONS, AND RECOMMENDATIONS**

Following the close of the comment period on December 14, 2021, DWR staff worked with the hearing officer to consider and deliberate over the comments and then to develop recommendations presented in this report.

The comments received were used in developing specific rule changes. The comments received were mostly proposed minor grammatical changes and slight reorganizations for clarification. After considering the comments, the Hearing Officer recommends incorporating the changes into the proposed rules. The Hearing Officer's specific responses to all comments are presented in Section IV of this Hearing Officer's Report. The Hearing Officer's recommendation is that the EMC re-adopt the rules in 15A NCAC 02L .0100 with the Hearing Officer's amendments to the proposed rules noticed in the *NC Register*. The 15A NCAC 02L .0100 rules recommended for re-adoption are presented in Section V of this Hearing Officer's Report.

#### IV – SUMMARY OF PUBLIC COMMENTS AND HEARING OFFICER RESPONSES

Rule	Public Comment	Hearing Officer Response
.0103(a)	delete “citizens of North Carolina” to be consistent.	Acceptable
.0104(d)	Add “predicted or” in front of “expected” for consistency.	Acceptable
.0106(b)	replace the word “steps” with “requirements” as a better word choice.	Acceptable
.0106(c)(6)(A)	add “for natural attenuation corrective action” for clarification.	Acceptable
.0106(c)(6)(B)	add the word “the” before corrective action plan for grammar.	Acceptable
.0106(c)(6)(C)	add “for natural attenuation corrective action” for clarification.	Acceptable
.0106(d)(2)	don’t delete the “(2)” as this was an oversight.	Acceptable
.0106(e)(6)(A)	add “for natural attenuation corrective action” for clarification.	Acceptable
.0106(e)(6)(B)	make the same as .0106(c)(6)(B) for consistency.	Acceptable
.0106(e)(6)(C)	add “for natural attenuation corrective action” for clarification.	Acceptable
.0106(j)	add “prior to achieving the standards” at the end of the second sentence for clarification.	Acceptable
.0106(j)(1)	combine with (j) as this should all be one rule.	Acceptable
.0106(j)(2)	make this the new (i) as this should be a separate rule.	Acceptable
.0106(j)(3)	make this the new (l) as this should be a separate rule.	Acceptable
.0106(l)	fix the reference from (j)(1)(E) to (j)(5) after the (j)(1) is combined with (j).	Acceptable
.0106(p)(2)	add a reference to the new (l) which would have been (j)(3).	Acceptable
.0111(c)(6)(F)	instead of the words “that evaluates”, use “to evaluate” for grammar.	Acceptable
.0111(c)(6)(G)	add “or predictive calculations” after modeling for clarification and consistency.	Acceptable
.0111(c)(8)	change wording to “a copy of the calculations or model runs and all supporting technical data; and”. This is because of adding the predictive calculations to (c)(6)(G).	Acceptable
.0111(c)(9)	NEW. Add the following: [Note: this is in the current 02L Rule but was inadvertently left out of the proposed rule] <i>(c)(9) a demonstration that:</i> <i>(A) all necessary access agreements needed to monitor groundwater quality have been or can be obtained; and</i> <i>(B) the proposed corrective action plan would be consistent with all other environmental laws.</i>	Acceptable

Rule	Public Comment	Hearing Officer Response
.0111(d)	<p>Rearrange (d) to the following to be consistent with the current 2L Rule and to provide additional clarification [Note: this does not change the intent of the original 02L Rule or proposed Rule and is essentially just a reorganization of the proposed Rule (d) with no new requirements]:</p> <p><i>(d) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for natural attenuation shall include:</i></p> <ol style="list-style-type: none"> <li><i>(1) a summary of the results of the site assessment submitted in accordance with Paragraph (b) of this Rule;</i></li> <li><i>(2) the technical basis for the requested corrective action;</i></li> <li><i>(3) an evaluation of risk to receptors within the contaminant plume and in areas where the plume is predicted to migrate through modeling;</i></li> <li><i>(4) an evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based on current State or local government planning efforts;</i></li> <li><i>(5) the predicted time to return to compliance with the standards;</i></li> <li><i>(6) the results of any modeling or predictive calculations that show the projected movement of the contaminant plume until the predicted time to return to compliance with the standards;</i></li> <li><i>(7) all technical data utilized in support of any interpretations, conclusions, determinations, or evaluations made;</i></li> <li><i>(8) a copy of the calculations or model runs and all supporting technical data;</i></li> <li><i>(9) a monitoring plan to evaluate the effectiveness of the natural attenuation; and</i></li> <li><i>(10) a demonstration that:</i> <ol style="list-style-type: none"> <li><i>(A) all sources of contamination and free product have been removed or controlled pursuant to Rule .0106(f) of this Section;</i></li> <li><i>(B) the contaminant has the capacity to degrade or attenuate under the site-specific conditions;</i></li> <li><i>(C) the time and direction of contaminant travel can be predicted based on subsurface conditions and the contaminant's physical and chemical properties;</i></li> <li><i>(D) contaminant migration will not result in any violation of applicable standards at any existing or potential receptor;</i></li> <li><i>(E) contaminants have not and will not migrate onto adjacent properties, or that:</i> <ol style="list-style-type: none"> <li><i>(i) such properties are served by an existing public water supply system dependent on surface waters or hydraulically isolated groundwater; or</i></li> <li><i>(ii) the owners of such properties have consented in writing to the request;</i></li> </ol> </li> </ol> </li> </ol>	Acceptable

	<p><i>(F) if the contaminant plume is predicted or expected to intercept surface waters, the groundwater discharge will not possess contaminant concentrations that would result in violations of the surface water standards established under 15A NCAC 02B .0200;</i></p> <p><i>(G) all necessary access agreements needed to monitor groundwater quality have been or can be obtained;</i></p> <p><i>(H) public notice of the request has been provided in accordance with Rule .0114(b) and (c) of this Section; and</i></p> <p><i>(I) the proposed corrective action plan would be consistent with all other environmental laws.</i></p>	
.0113(b)	delete the words “Environmental Management” in front of the word “Commission” as they are unnecessary.	Acceptable
.0114(b)	Add “predicted or” in front of “expected” for consistency.	Acceptable

## **V – ATTACHMENTS AND SUPPORTING DOCUMENTATION**



**ATTACHMENT A – PROPOSED 15A NCAC 02L .0100 DRAFT RULES**

1                                   **SUBCHAPTER 02L - GROUNDWATER CLASSIFICATION AND STANDARDS**

2  
3                                   **SECTION .0100 - GENERAL CONSIDERATIONS**

4  
5   **15A NCAC 02L .0101    AUTHORIZATION PURPOSE**

6 (a) N.C. General Statute 143-214.1 directs that the Commission develop and adopt after proper study a series of  
7 classifications and standards which will be appropriate for the purpose of classifying each of the waters of the ~~state~~  
8 State in such a way as to promote the policy and purposes of the act. Pursuant to this statute, the rules in Sections  
9 .0200 and .0300 of this Subchapter establish a series of classifications and water quality standards applicable to the  
10 groundwaters of the ~~state~~ State.

11 (b) ~~These~~ The rules in Section .0100 of this Subchapter ~~are shall applicable apply~~ to all permitted and unpermitted  
12 activities or actions, intentional or accidental, ~~which that~~ contribute to the degradation of groundwater quality,  
13 regardless of any permit issued by a governmental agency authorizing such action or ~~activity activity~~ activity. ~~except an An~~  
14 innocent landowner who is a bona fide purchaser of property which contains a source of groundwater contamination,  
15 who purchased such property without knowledge or a reasonable basis for knowing that groundwater contamination  
16 had occurred, or a person whose interest or ownership in the property is based or derived from a security interest in  
17 the property, shall not be considered a responsible party.

18  
19 *History Note:*    *Authority G.S. 143-214.1; 143-214.2; 143-215.3(a)(1); 143B-282;*  
20                            *Eff. June 10, 1979;*  
21                            *Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983.*

22  
23   **15A NCAC 02L .0102    DEFINITIONS**

24 The definition of any word or phrase used in ~~these the~~ Rules in this Subchapter shall be the same as given in G.S.  
25 143-212 and G.S. 143-213 except that the following words and phrases shall have the following meanings:

- 26       (1)    "Active remediation" means corrective action that includes active physical, biological, or chemical  
27            manipulation of groundwater or of the rock or soil media for the purpose of reducing the amount of  
28            contamination or minimizing the spread of contamination.
- 29       (2)    "Anthropogenic" means of, relating to, or resulting from the influence of human beings on nature.
- 30       (3)    "Background threshold values" mean statistically derived values of the concentrations of substances  
31            in environmental media not affected by site conditions, actions, or activities for use as a basis for  
32            compliance with the rules in this Subchapter.
- 33       ~~(4)~~(4) "Bedrock" means any consolidated rock encountered in the place in which it was formed or  
34            deposited and which cannot be readily excavated without the use of explosives or power equipment.
- 35       ~~(2)~~    "Commission" means the Environmental Management Commission as organized under G.S. 143B.

- 1 ~~(3)~~(5) "Chief administrative officer" shall be, for the purposes of this Rule, the mayor, chairman of the  
2 county commissioners, the county manager, or the city manager who is responsible for  
3 environmental issues in their jurisdiction.
- 4 (6) "Compliance boundary" means a boundary around ~~the a~~ waste disposal ~~area of a disposal~~ system at  
5 and beyond which ~~groundwater quality~~ standards may not be exceeded and ~~only~~ applies to facilities  
6 which have received ~~a an individual~~ permit issued under the authority of G.S. ~~443-215.1 or G.S.~~  
7 ~~130A.~~ ~~143 215.1~~, Article 9 of G.S. 130A, or Article 11 of G.S. 130A.
- 8 (7) "Compliance zone" means the area encompassed within the compliance boundary.
- 9 (8) "Constituent of interest" means any substance that is manmade or naturally occurring that is or may  
10 be associated with or influenced by site activities or actions and that is of interest to the protection  
11 of public health and the environment.
- 12 ~~(4)~~(9) "Contaminant" means any substance ~~occurring that occurs~~ in groundwater ~~as a result of~~  
13 anthropogenic sources or activities in concentrations which exceed the ~~groundwater quality~~  
14 standards specified in ~~Rule .0202 of this Subchapter.~~ standards.
- 15 (10) "Control" means the ability to direct, restrain, or influence sources of contamination and  
16 contaminant distribution.
- 17 ~~(5)~~(11) "Corrective action plan" means a plan for ~~controlling or~~ eliminating sources of groundwater  
18 contamination or for ~~restoring groundwater quality.~~ ~~achieving groundwater quality restoration or~~  
19 ~~both.~~
- 20 ~~(6)~~(12) "Director" means Director of the Division of ~~Environmental Management.~~ ~~Water Resources or~~  
21 ~~Waste Management or their delegate.~~
- 22 ~~(7)~~(13) "Division" means the Division of ~~Environmental Management.~~ ~~Water Resources or Waste~~  
23 ~~Management.~~
- 24 ~~(8)~~(14) "Exposure pathway" means a course taken by a contaminant by way of a transport medium after its  
25 release to the environment.
- 26 ~~(9)~~(15) "Free product" means a non-aqueous phase liquid which may be present within the saturated zone  
27 or in surface water.
- 28 ~~(10)~~(16) "Fresh ~~groundwaters"~~ ~~waters"~~ means those groundwaters having a chloride concentration equal to  
29 or less than 250 milligrams per liter.
- 30 ~~(11)~~(17) "Groundwaters" means ~~those~~ waters occurring in the subsurface under saturated conditions.
- 31 ~~(12)~~(18) "Hazardous substance" means any substance as defined by ~~Section 101(14) of the Comprehensive~~  
32 ~~Environmental Response, Compensation and Liability Act of 1980 (CERCLA).~~ ~~42 U.S.C. 9601(14).~~
- 33 ~~(13)~~(19) "Licensed geologist" means a person who has been ~~duly~~ licensed as a geologist in accordance with  
34 the requirements of G.S. 89E.
- 35 (20) "Licensed soil scientist" means a person who has been licensed as a soil scientist in accordance with  
36 the requirements of G.S. 89F.

- 1 ~~(14)~~(21) "Natural ~~remediation~~ attenuation" means those natural processes acting to restore groundwater  
2 quality, including dilution, filtration, sorption, ion-exchange, chemical ~~transformation~~  
3 transformation, and biodegradation.
- 4 (22) "Natural conditions or naturally occurring" means the physical, biological, chemical and  
5 radiological conditions which occur naturally and are not a result of anthropogenic sources or  
6 activities.
- 7 (23) "Person" shall be as defined in G.S. 130A-290(22).
- 8 (24) "Potable waters" means those waters suitable for drinking by humans.
- 9 ~~(15)~~(25) "Practical Quantitation Limit" means the lowest concentration of a given material that can be  
10 reliably achieved ~~among laboratories~~ within specified limits of precision and accuracy by a given  
11 analytical method during routine laboratory analysis.
- 12 ~~(16) "Natural conditions" means the physical, biological, chemical and radiological conditions which~~  
13 ~~occur naturally.~~
- 14 ~~(17) "Potable waters" means those waters suitable for drinking by humans.~~
- 15 ~~(18)~~(26) "Professional Engineer" means a person who has been ~~duly~~ registered and licensed as a professional  
16 engineer in accordance with the requirements of G.S. 89C.
- 17 ~~(19)~~(27) "Receptor" ~~means any human, plant, animal, or structure which is, or has the potential to be,~~  
18 ~~adversely effected by the release or migration of contaminants. Any well constructed for the purpose~~  
19 ~~of monitoring groundwater and contaminant concentrations shall not be considered a receptor. is as~~  
20 ~~defined in G.S. 130A-309.201 and, for the purposes of this Rule, shall also include waters of the~~  
21 ~~State as defined in G.S. 143-212(6).~~
- 22 ~~(20)~~(28) "Review boundary" means a boundary around a permitted waste disposal ~~facility, area~~ midway  
23 between a waste boundary and a compliance boundary at which groundwater monitoring ~~is~~ may be  
24 required.
- 25 ~~(21) "Saline groundwaters" means those groundwaters having a chloride concentration of more than 250~~  
26 ~~mg/l.~~
- 27 ~~(22)~~(29) "Saturated zone" means that part of the subsurface below the water table in which all the  
28 interconnected voids are filled with water under pressure at or greater than atmospheric. It does not  
29 include the capillary fringe.
- 30 (30) "Secretary" means the Secretary of the Department of Environmental Quality or their delegate.
- 31 ~~(23)~~(31) "Standards" "Standard" or "standards" means groundwater quality standards as specified in Rule  
32 .0202 of this Subchapter. Subchapter and any interim maximum allowable concentrations  
33 established by the Director per Rule .0202(c) of this Subchapter.
- 34 ~~(24)~~(32) "Suitable for drinking" means a quality of water which does not contain substances in concentrations  
35 which, either singularly or in combination if ingested into the human body, may cause death, disease,  
36 behavioral abnormalities, congenital defects, genetic mutations, or result in an incremental lifetime

1 cancer risk in excess of  $1 \times 10^{-6}$ , or render the water unacceptable due to aesthetic qualities, including  
2 taste, ~~odor~~ odor, or appearance.

3 ~~(25)~~ "Time of travel" means the time required for contaminants in groundwater to move a unit distance.

4 ~~(26)~~(33) "Waste boundary" means the perimeter of the permitted waste disposal area.

5 (34) "Waste disposal area" means that portion of a disposal system permitted under authority of G.S. 143-  
6 215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A whose purpose is the temporary or  
7 permanent disposal of waste.

8 ~~(27)~~(35) "Water table" means the surface of the saturated zone below which all interconnected voids are  
9 filled with water and at which the pressure is atmospheric.

10  
11 *History Note: Authority G.S. 143-214.1; 143-215; 143B-282;*

12 *Eff. June 10, 1979;*

13 *Amended Eff. October 1, 1993; August 1, 1989; July 1, 1988; March 1, 1985.*

#### 14 15 **15A NCAC 02L .0103 POLICY**

16 (a) The rules established in this Subchapter are intended to maintain and preserve the quality of the groundwaters,  
17 prevent and abate pollution and contamination of the waters of the state, protect public health, and permit management  
18 of the groundwaters for their best usage by the citizens of North Carolina. It is the policy of the Commission that the  
19 best usage of the groundwaters of the state is as a source of drinking water. These groundwaters generally are a potable  
20 source of drinking water without the necessity of significant treatment. It is the intent of these Rules to protect the  
21 overall high quality of North Carolina's groundwaters to the level established by the standards and to enhance and  
22 restore the quality of degraded groundwaters where feasible and necessary to protect human health and the  
23 environment, or to ensure their suitability as a future source of drinking water.

24 (b) ~~It is the intention of the Commission to protect all groundwaters to a level of quality at least as high as that required~~  
25 ~~under the standards established in Rule .0202 of this Subchapter. In keeping with the policy of the Commission to~~  
26 ~~protect, maintain, and enhance groundwater quality within the State of North Carolina, the~~ The Commission ~~will shall~~  
27 not approve any disposal system subject to the provisions of G.S. 143-215.1 which would result ~~in~~ in any of the  
28 following:

29 (1) ~~the~~ The significant degradation of groundwaters which have existing quality that is better than the  
30 assigned standard, unless such degradation is found to be in the best interests of the ~~citizens of North~~  
31 ~~Carolina public~~ public based upon the projected economic benefits of the facility and ~~a determination~~ that  
32 public health will be ~~protected, or~~ protected.

33 (2) ~~a~~ A violation of a ~~groundwater quality~~ standard beyond a designated compliance ~~boundary, or~~  
34 ~~boundary as a result of the permitted activities.~~ boundary as a result of the permitted activities.

35 (3) ~~the~~ The impairment of existing groundwater uses or increased risk to ~~the public~~ public health ~~or safety of~~  
36 ~~the public~~ due to the operation of a ~~waste~~ disposal system.

1 (c) Violations of the standards resulting from groundwater withdrawals which are in compliance with water use  
2 permits issued pursuant to G.S. 143-215.15, shall not be subject to the corrective action requirements of Rule .0106  
3 of this ~~Subchapter.~~ Section.

4 (d) No person shall conduct or cause to be conducted, any activity which causes the concentration of any substance  
5 to exceed ~~that specified in Rule .0202 of this Subchapter,~~ the standards, except as authorized by the rules of this  
6 Subchapter.

7 (e) Work that is within the scope of the practice of geology and engineering, performed pursuant to the requirements  
8 of this Subchapter, ~~which that~~ involves site assessment, the interpretation of ~~subsurface~~ geologic conditions,  
9 preparation of ~~conceptual~~ corrective action ~~plans plans,~~ or any work requiring detailed technical knowledge of site  
10 conditions which is submitted to the Director, shall be performed by persons, ~~firms firms,~~ or professional corporations  
11 who are ~~duly~~ licensed to offer geological or engineering services by the appropriate occupational licensing board or  
12 are exempted from such licensing by G.S. 89E-6. Work which involves design of remedial systems or specialized  
13 construction techniques shall be performed by persons, ~~firms firms,~~ or professional corporations who are ~~duly~~ licensed  
14 to offer engineering services. Corporations that are authorized by law to perform engineering or geological services  
15 and are exempt from the Professional Corporation Act, G.S. 55B, may perform these services.

16  
17 *History Note:* Authority G.S. ~~143-214;~~ 143-214.1; 143-214.2; ~~143-215.3(e);~~ 143-215.3(a)(1); 143B-282;  
18 *Eff. June 10, 1979;*  
19 *Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983;*  
20 *RRC Objection Eff. September 17, 1993, due to lack of necessity for Paragraph (e);*  
21 *Amended Eff. November 4, 1993.*  
22

### 23 **15A NCAC 02L .0104 RESTRICTED DESIGNATION (~~RS~~)**

24 (a) The ~~RS designation~~ restricted designation (RS) ~~serves as a warning means~~ that groundwater ~~so designated~~ may  
25 not be suitable for use as a drinking water supply without treatment. ~~The designation is temporary and will be removed~~  
26 ~~by the Director upon a determination that the quality of the groundwater so designated has been restored to the level~~  
27 ~~of the applicable standards or when the groundwaters have been reclassified by the Commission. The Director is~~  
28 ~~authorized to designate GA or GSA groundwaters as RS under any of the following circumstances:~~

29 (1) ~~Where, as a result of man's activities, groundwaters have been contaminated and the Director has~~  
30 ~~approved a corrective action plan, or termination of corrective action, that will not result in the~~  
31 ~~immediate restoration of such groundwaters to the standards established under this Subchapter.~~

32 (2) ~~Where a statutory variance has been granted as provided in Rule .0113 of this Subchapter.~~

33 (b) The Director is authorized to apply the RS to GA or GSA groundwaters, as defined under Rule .0201 of this  
34 Subchapter, under any of the following circumstances:

35 (1) For sites undergoing risk-based remediation per Rule .0106(i) of this Section.

36 (2) Areas of remaining contamination where the Secretary has approved the termination of an approved  
37 corrective action per Rule .0106(j) of this Section.

1           (3)       Where a variance has been granted by the Commission as provided in Rule .0113 of this Section.

2 ~~(b)(c)~~ Groundwaters occurring within an area defined by a compliance boundary in a waste disposal permit are  
3 deemed ~~to be designated~~ RS.

4 ~~(e)(d)~~ The boundary of ~~a designated RS~~ the RS area ~~may be approximated in the absence of analytical data sufficient~~  
5 ~~to define the dimension of the area. The boundary~~ shall be located at least 250 feet or greater away from the predicted  
6 edge boundary of the contaminant ~~plume, plume~~ and shall include any areas into which the contamination is predicted  
7 or expected to migrate. Predictive modeling may be used to supplement site-specific sample data in characterizing the  
8 current and predicted future extent of the plume.

9 ~~(d) In areas designated RS, the person responsible for groundwater contamination shall establish and implement a~~  
10 ~~groundwater monitoring system sufficient to detect changes in groundwater quality within the RS designated area.~~  
11 ~~Monitoring shall be quarterly for the first year and may be reduced to semi-annually thereafter until the applicable~~  
12 ~~standards have been achieved. If during the monitoring period, contaminant concentrations increase, additional~~  
13 ~~remedial action or monitoring pursuant to these Rules may be required.~~

14 ~~(e) The applicant for an RS designation shall also provide written verification that all property owners within and~~  
15 ~~adjacent to the proposed RS area have been notified of the requested RS designation.~~

16 (e) Where the RS area crosses, intercepts, or adjoins surface waters, the RS shall not give the right to cause or  
17 contribute to an exceedance of the surface water standards established under 15A NCAC 02B .0200.

18 (f) Application for RS. The person requesting a RS shall provide to the Director a plan that includes the following:

19           (1)       The person's name, address, phone number.

20           (2)       The physical location of the of facility or site where the contamination originated.

21           (3)       If applicable, a copy of the Secretary's approval for termination of corrective action or a variance  
22 granted by the Commission as provided in Rule .0113 of this Section.

23           (4)       A summary of the site assessment and corrective actions including the results of any predictive  
24 modeling that estimates the time to return compliance for the RS area.

25           (5)       Maps showing the current horizontal and vertical extent of any contamination and the areas where  
26 the contamination is predicted or expected to migrate including the current and predicted quantities  
27 of any contaminants and all current and potential future receptors within 1,500 feet of  
28 contamination.

29           (6)       A map showing the proposed RS area including the county title number, county tax identification  
30 number, or the property tax book and page identifiers of the properties included within the proposed  
31 RS area.

32           (7)       A plan for monitoring the groundwater quality within the RS area that includes the current or  
33 proposed wells to be monitored, the frequency of the monitoring, and the constituents of interest to  
34 be monitored.

35           (8)       If the proposed RS area extends beyond the source property's boundary, a signed statement from  
36 each property owner agreeing to the proposed RS area on their property if required by programmatic  
37 statute.

1           (9)       If the proposed RS area crosses, intercepts, or adjoins surface waters, a plan to ensure the surface  
2                    water standards established under 15A NCAC 02B .0200 are not violated.

3       (g) The Director shall review the proposed plan and whether the proposed plan is protective of public health and the  
4       environment for receptors within the RS and otherwise complies with requirements of this Rule.

5       ~~(h)~~ Prior to approving the proposed plan in Paragraph (f) of this Rule, The the Division shall provide public notice  
6       of the intent to designate any groundwater with RS in accordance with the following requirements: as follows:

7           (1)       ~~Notice shall be published~~ Publish notice at least 30 days prior to any proposed final action in  
8                    accordance with ~~G.S. 143-215.4.~~ G.S. 143-215.4 ~~In addition, notice shall be provided to all property~~  
9                    ~~owners identified pursuant to Paragraph (e) of this Rule and to the local County Health Director and~~  
10                   ~~the chief administrative officer of the political jurisdiction(s) in which the contamination occurs.~~  
11                   and provide such notice to all property owners with signed statements per Subparagraph (f)(8) of  
12                   this Rule, to the local County Health Director, and the chief administrative officer of the  
13                   jurisdiction(s) in which the contamination occurs.

14          (2)       The notice shall contain the following information:

15           (A)       ~~name,~~ Name, address, and phone number of the agency issuing the public notice;

16           (B)       A copy of the plan in Paragraph (f) of this Rule or where the plan can be obtained.

17           ~~(B)~~       ~~the location and extent of the designated area;~~

18           ~~(C)~~       ~~the county title number, county tax identification number, or the property tax book and~~  
19                   ~~page identifiers;~~

20           ~~(D)~~       ~~a brief description of the action or actions which resulted in the degradation of groundwater~~  
21                   ~~in the area;~~

22           ~~(E)~~       ~~actions or intended actions taken to restore groundwater quality;~~

23           ~~(F)~~       ~~the significance of the RS designation;~~

24           ~~(G)~~ (C)       conditions Conditions applicable to removal of the RS designation; and

25           ~~(H)~~ (D)       ~~address~~ Address and phone number of a Division contact from whom interested parties  
26                    may obtain further information.

27          (3)       The Director shall consider all requests for a public hearing, and if ~~he~~ they ~~determines~~ determine  
28                    that there is significant public ~~interest~~ he interest, he or she shall issue public notice and hold a  
29                    public hearing in accordance with G.S. 143-215.4(b) and Rule ~~.0113(e).~~ .0113(e)(2) of this Section.

30          (4)       ~~These~~ The requirements of this Paragraph shall not apply to groundwaters defined in Paragraph  
31                    ~~(b)~~ (c) of this Rule.

32       (i) The Director shall approve the plan if the proposal complies with requirements of this Rule. Upon making a  
33       determination, the Director shall provide specific findings to support their decision to approve or disapprove a  
34       proposed plan and may require a person who proposes a plan to supply any additional information not provided in  
35       Paragraph (f) of this Rule necessary to make their determination.



1 (j) The process for recordation, application, and removal of an approved RS area shall be in accordance with G.S.  
2 143B-279.10 or G.S. 143B-279.11. The land use restriction shall be that groundwater within the RS may not be  
3 suitable for drinking without treatment.

4 (k) The RS shall also be removed if the groundwater within the RS is reclassified by the Commission per G.S. 143-  
5 214.1.

6  
7 *History Note:* Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-279.9; 143B-279.10; 143B-279.11; 143B-282(2);  
8 Eff. June 10, 1979;  
9 Amended Eff. October 1, 1993; December 1, 1989; August 1, 1989; December 30, 1983.

10  
11 **15A NCAC 02L .0105 ADOPTION BY REFERENCE**

12  
13 *History Note:* Authority G.S. 143-214.1;  
14 Eff. December 30, 1983;  
15 Repealed Eff. August 1, 1989.

16  
17 **15A NCAC 02L .0106 INITIAL RESPONSE, SITE ASSESSMENT, AND CORRECTIVE ACTION**

18 (a) Where groundwater quality has been degraded, the ~~goal of any~~ required corrective action shall be restoration to  
19 the level of the standards, or as closely thereto as is economically and technologically feasible ~~as determined by the~~  
20 ~~Department~~ in accordance with this Rule. ~~The corrective action strategies addressed in this Rule can be through either~~  
21 ~~active remediation in Paragraph (g) of this Rule, natural attenuation in Paragraph (h) of this Rule, or risk-based~~  
22 ~~remediation in Paragraph (i) of this Rule.~~ In all cases involving requests to the ~~Secretary, as defined in 15A NCAC~~  
23 ~~02C .0102, Secretary~~ for approval of corrective action ~~plans, plans~~ or termination of corrective action, the  
24 responsibility for providing all information required by this Rule lies with the person(s) making the request.

25 (b) Any person conducting or controlling an ~~activity activity, permitted or unpermitted,~~ that results in the discharge  
26 of a waste or hazardous substance or oil to the ~~ground surface, vadose zone, or~~ groundwaters of the ~~State, or in~~  
27 ~~proximity thereto, State~~ shall take action upon discovery to terminate and control the discharge, mitigate any hazards  
28 resulting from exposure to the ~~pollutants contaminants,~~ and ~~notify the Department, as defined in 15A NCAC 02C~~  
29 ~~.0102, of the discharge.~~ follow the requirements in Paragraphs (c), (d), or (e) of this Rule.

30 (c) Any person conducting or controlling an activity that has not been permitted by the Department pursuant to G.S.  
31 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A ~~and~~ that results in an increase in the concentration of a  
32 substance in excess of the standard, other than agricultural ~~operations, operations defined under G.S. 106-581.1, shall:~~  
33 shall take the following steps:

- 34 (1) ~~within~~ Within 24 hours of discovery of the violation, notify the Department of the activity that has  
35 resulted in the increase and the contaminant concentration ~~levels; levels, if known.~~
- 36 (2) ~~respond~~ Respond in accordance with Paragraph (f) of this ~~Rule; Rule.~~
- 37 (3) submit a report to the Secretary assessing the cause, significance, and extent of the violation; and

1 (4) ~~implement an approved corrective action plan for restoration of groundwater quality in accordance~~  
2 ~~with a schedule established by the Secretary. In establishing a schedule, the Secretary shall consider~~  
3 ~~a schedule proposed by the person submitting the plan. A report shall be made to the Health Director~~  
4 ~~of the county or counties in which the contamination occurs in accordance with the requirements of~~  
5 ~~Rule .0114(a) in this Section.~~

6 (3) Implement a monitoring program in accordance with Rule .0110 of this Section.

7 (4) Submit a site assessment report to the Director in accordance with Rule .0111 of this Section.

8 (5) Submit a notification in accordance with the requirements of Rule .0114(a) of this Section.

9 (6) If required, submit a corrective action plan to the Director in accordance with Rule .0111 of this  
10 Section or pursue risk-based remediation per Paragraph (i) of this Rule. If a corrective action plan  
11 is submitted for active remediation or natural attenuation, then:

12 (A) For natural attenuation corrective action, submit a notification in accordance with the  
13 requirements of Rule .0114(b) of this Section.

14 (B) Implement the corrective action plan upon its approval by the Secretary.

15 (C) For natural attenuation corrective action, submit a notification in accordance with the  
16 requirements of Rule .0114(c) of this Section.

17 ~~Any activity not permitted pursuant to G.S. 143-215.1 or G.S. 130A-294 shall, for the purpose of this Rule, be deemed~~  
18 ~~not permitted by the Department and subject to the provisions of this Paragraph.~~

19 (d) ~~For Any any person conducting or controlling an activity that is conducted under the authority of a permit initially~~  
20 ~~issued by the Department on or after December 30, 1983 pursuant to G.S. 143-215.1 143-215.1, Article 9 of G.S.~~  
21 ~~130A, or Article 11 of G.S. 130A or G.S. 130A-294 and that results in an increase in concentration of a substance in~~  
22 ~~excess of the standards: standards at or beyond the review boundary:~~

23 (1) ~~at or beyond a review boundary: The Director may require, based on information including data~~  
24 ~~trends, geologic and hydrogeologic conditions, and spacing between the review and compliance~~  
25 ~~boundaries, that the person shall demonstrate, through predictive calculations or modeling, that one~~  
26 ~~or more of the following natural site conditions, facility design and operational controls will prevent~~  
27 ~~a violation of standards at the compliance boundary: boundary:~~

28 (A) geologic or hydrogeologic conditions;

29 (B) facility design; or

30 (C) operational controls.

31 ~~Alternately, the person may submit a plan for alteration of existing site conditions, facility design,~~  
32 ~~or operational controls that will prevent a violation at the compliance boundary, and implement that~~  
33 ~~plan upon its approval by the Secretary.~~

34 (2) ~~at or beyond a compliance boundary: the person shall respond in accordance with Paragraph (f) of~~  
35 ~~this Rule, assess the cause, significance and extent of the violation of standards and submit the~~  
36 ~~results of the investigation, and a plan and proposed schedule for corrective action to the Secretary.~~  
37 ~~The permittee shall implement the plan as approved by and in accordance with a schedule~~

1 ~~established by the Secretary. In establishing a schedule the Secretary shall consider any schedule~~  
2 ~~proposed by the permittee, the scope of the project, the extent of contamination, and the corrective~~  
3 ~~action being proposed. If an exceedance of the standards is predicted at or beyond the compliance~~  
4 ~~boundary, the person may submit a plan for alteration of existing site conditions, facility design, or~~  
5 ~~operational controls that will prevent a violation at the compliance boundary, and implement that~~  
6 ~~plan upon its approval by the Director. In approving the plan, the Director shall consider geologic~~  
7 ~~and hydrogeologic conditions, the nature and extent of the contamination, technical and economic~~  
8 ~~feasibility, and public health impacts on all potential receptors should the contaminated plume reach~~  
9 ~~them.~~

10 ~~(e) For any person conducting or controlling an activity that is conducted under the authority of a permit issued by~~  
11 ~~the Department pursuant to G.S. 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A that results in an~~  
12 ~~increase in concentration of a substance in excess of the standards beyond the compliance boundary or within the~~  
13 ~~compliance zone as specified by Rule .0107(q) of this Section, the person shall take the following steps:~~

14 ~~(1) Within 24 hours of discovery of the initial violation, notify the Department of the activity that has~~  
15 ~~resulted in the increase, the contaminants that are in exceedance, and the contaminant concentration~~  
16 ~~levels.~~

17 ~~(2) Respond in accordance with Paragraph (f) of this Rule.~~

18 ~~(3) Implement a monitoring program in accordance with Rule .0110 of this Section.~~

19 ~~(4) Submit a site assessment report to the Director in accordance with Rule .0111 of this Section.~~

20 ~~(5) Submit a notification in accordance with the requirements of Rule .0114(a) of this Section.~~

21 ~~(6) If required, submit a corrective action plan to the Director in accordance with Rule .0111 of this~~  
22 ~~Section or pursue risk-based remediation per Paragraph (i) of this Rule. The corrective action plan~~  
23 ~~may include alteration of existing site conditions, facility design, or operational controls that will~~  
24 ~~prevent a violation at the compliance boundary. If a corrective action plan is submitted for active~~  
25 ~~remediation or natural attenuation, then:~~

26 ~~(A) For natural attenuation corrective action, submit a notification in accordance with the~~  
27 ~~requirements of Rule .0114(b) of this Section.~~

28 ~~(B) Implement the corrective action upon its approval by the Secretary.~~

29 ~~(C) For natural attenuation corrective action, submit a notification in accordance with the~~  
30 ~~requirements of Rule .0114(c) of this Section.~~

31 ~~(e) Any person conducting or controlling an activity that is conducted under the authority of a permit initially issued~~  
32 ~~by the Department prior to December 30, 1983 pursuant to G.S. 143-215.1 or G.S. 130A-294, and that results in an~~  
33 ~~increase in concentration of a substance in excess of the standards at or beyond the compliance boundary specified in~~  
34 ~~the permit, shall:~~

35 ~~(1) within 24 hours of discovery of the violation, notify the Department of the activity that has resulted~~  
36 ~~in the increase and the contaminant concentration levels;~~

37 ~~(2) respond in accordance with Paragraph (f) of this Rule;~~

- 1           ~~(3)     submit a report to the Secretary assessing the cause, significance and extent of the violation; and~~  
2           ~~(4)     implement an approved corrective action plan for restoration of groundwater quality at or beyond~~  
3           ~~the compliance boundary, in accordance with a schedule established by the Secretary. In establishing~~  
4           ~~a schedule the Secretary shall consider any schedule proposed by the person submitting the plan. A~~  
5           ~~report shall be made to the Health Director of the county or counties where the contamination occurs~~  
6           ~~in accordance with the requirements of Rule .0114(a) in this Section.~~

7 (f) Initial response actions required to be conducted prior to or concurrent with the site assessment required in  
8 Paragraphs ~~(e), (d), or (e)(c) and (e)~~ of this Rule shall include:

- 9           (1)     Prevention of fire, explosion, or the spread of noxious ~~fumes; fumes.~~  
10          (2)     Abatement, containment, or control of the migration of ~~contaminants; contaminants.~~  
11          (3)     Removal, treatment, or control of any primary pollution source such as buried waste, waste  
12                 stockpiles, or surficial accumulations of free ~~products; products.~~  
13          (4)     Removal, treatment, or control of secondary pollution sources that would be potential continuing  
14                 sources of pollutants to the groundwaters, such as contaminated soils and non-aqueous phase liquids.  
15                 Contaminated soils that threaten the quality of groundwaters shall be treated, contained, or disposed  
16                 of in accordance with rules in this ~~Chapter Subchapter~~ and in 15A NCAC 13 applicable to such  
17                 activities. The treatment or disposal of contaminated soils shall be conducted in a manner that will  
18                 not result in a violation of ~~the standards or North Carolina Hazardous Waste Management rules.~~  
19                 ~~standards or 15A NCAC 13 Rules.~~

20                 The initial response actions shall be documented in the site assessment report required under Rule .0111(b)  
21                 of this Section. The Director may request written documentation of the response actions in advance of the  
22                 site assessment report if there is an immediate threat to human health.

23 ~~(g) The site assessment conducted pursuant to the requirements of Paragraphs (e), (d), or (e) of this Rule, shall include:~~

- 24           ~~(1)     The source and cause of contamination;~~  
25           ~~(2)     Any imminent hazards to public health and safety, as defined in G.S. 130A-2, and any actions taken~~  
26           ~~to mitigate them in accordance with Paragraph (f) of this Rule;~~  
27           ~~(3)     All receptors and significant exposure pathways;~~  
28           ~~(4)     The horizontal and vertical extent of soil and groundwater contamination and all significant factors~~  
29           ~~affecting contaminant transport; and~~  
30           ~~(5)     Geological and hydrogeological features influencing the movement, chemical, and physical~~  
31           ~~character of the contaminants.~~

32 ~~Reports of site assessments shall be submitted to the Department as soon as practicable or in accordance with a~~  
33 ~~schedule established by the Secretary. In establishing a schedule the Secretary shall consider a proposal by the person~~  
34 ~~submitting the report.~~

35 ~~(h) Corrective action plans for restoration of groundwater quality, submitted pursuant to Paragraphs (e), (d), and (e)~~  
36 ~~of this Rule shall include:~~

- 37           ~~(1)     A description of the proposed corrective action and reasons for its selection;~~

- 1           (2)     Specific plans, including engineering details where applicable, for restoring groundwater quality;
- 2           (3)     A schedule for the implementation and operation of the proposed plan; and
- 3           (4)     A monitoring plan for evaluating the effectiveness of the proposed corrective action and the
- 4                     movement of the contaminant plume.

5     ~~(i) In the evaluation of corrective action plans, the Secretary shall consider the extent of any violations, the extent of~~  
6     ~~any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology~~  
7     ~~available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and~~  
8     ~~costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from~~  
9     ~~groundwater quality restoration.~~

10    ~~(j)(g) Corrective action using active remediation. A corrective action plan prepared pursuant to Paragraphs (e), (d),~~  
11    ~~or (e)(c) or (e) of this Rule shall be implemented using a remedial technology demonstrated to provide the most~~  
12    ~~effective means, taking into consideration geological and hydrogeological conditions at the contaminated site, for~~  
13    ~~restoration of groundwater quality to the level of the standards. Corrective action plans prepared pursuant to~~  
14    ~~Paragraphs (e) or (e) of this Rule may request an exception as provided in Paragraphs (k), (l), (m), (r), and (s) of this~~  
15    ~~Rule. Corrective action plans for active remediation shall include the information in Rule .0111(c) of this Section.~~

16    ~~(k) Any person required to implement an approved corrective action plan for a site subject to Paragraphs (e) or (e) of~~  
17    ~~this Rule may request that the Secretary approve such a plan without requiring groundwater remediation to the~~  
18    ~~standards. A request submitted to the Secretary under this Paragraph shall include a description of site specific~~  
19    ~~conditions, including information on the availability of public water supplies for the affected area; the technical basis~~  
20    ~~for the request; and any other information requested by the Secretary to evaluate the request in accordance with~~  
21    ~~Subparagraphs (1) through (7) of this Paragraph. The person making the request shall demonstrate:~~

- 22           (1)     ~~that all sources of contamination and free product have been removed or controlled pursuant to~~  
23                     ~~Paragraph (f) of this Rule;~~
- 24           (2)     ~~that the time and direction of contaminant travel can be predicted with reasonable certainty;~~
- 25           (3)     ~~that contaminants have not and will not migrate onto adjacent properties, or that:~~
  - 26                     (A)     ~~such properties are served by an existing public water supply system dependent on surface~~  
27                             ~~waters or hydraulically isolated groundwater; or~~
  - 28                     (B)     ~~the owners of such properties have consented in writing to the request;~~
- 29           (4)     ~~that the standards specified in Rule .0202 of this Subchapter will be met at a location no closer than~~  
30                     ~~one year time of travel upgradient of an existing or foreseeable receptor, based on travel time and~~  
31                     ~~the natural attenuation capacity of subsurface materials or on a physical barrier to groundwater~~  
32                     ~~migration that exists or will be installed by the person making the request;~~
- 33           (5)     ~~that, if the contaminant plume is expected to intercept surface waters, the groundwater discharge~~  
34                     ~~will not possess contaminant concentrations that would result in violations of standards for surface~~  
35                     ~~waters contained in 15A NCAC 02B .0200;~~
- 36           (6)     ~~that public notice of the request has been provided in accordance with Rule .0114(b) of this Section;~~  
37                     and

1 ~~(7) that the proposed corrective action plan would be consistent with all other environmental laws.~~  
2 ~~(4)(h) Corrective action using natural attenuation. Any person required to implement an approved corrective action~~  
3 ~~plan for a site subject to Paragraphs (c) or (e) of this Rule may request that the Secretary approve such a plan based~~  
4 ~~upon natural processes of degradation and attenuation of contaminants. Corrective action plans for natural attenuation~~  
5 ~~shall make the demonstration and include the information in Rule .0111(d) of this Section. A request submitted to the~~  
6 ~~Secretary under this Paragraph shall include a description of site specific conditions, including written documentation~~  
7 ~~of projected groundwater use in the contaminated area based on current state or local government planning efforts;~~  
8 ~~the technical basis for the request; and any other information requested by the Secretary to evaluate the request in~~  
9 ~~accordance with Subparagraphs (1) through (10) of this Paragraph. The person making the request shall demonstrate:~~

- 10 ~~(1) that all sources of contamination and free product have been removed or controlled pursuant to~~  
11 ~~Paragraph (f) of this Rule;~~  
12 ~~(2) that the contaminant has the capacity to degrade or attenuate under the site specific conditions;~~  
13 ~~(3) that the time and direction of contaminant travel can be predicted based on subsurface conditions~~  
14 ~~and the contaminant's physical and chemical properties;~~  
15 ~~(4) that contaminant migration will not result in any violation of applicable groundwater standards at~~  
16 ~~any existing or foreseeable receptor;~~  
17 ~~(5) that contaminants have not and will not migrate onto adjacent properties, or that:~~  
18 ~~(A) such properties are served by an existing public water supply system dependent on surface~~  
19 ~~waters or hydraulically isolated groundwater; or~~  
20 ~~(B) the owners of such properties have consented in writing to the request;~~  
21 ~~(6) that, if the contaminant plume is expected to intercept surface waters, the groundwater discharge~~  
22 ~~will not possess contaminant concentrations that would result in violations of standards for surface~~  
23 ~~waters contained in 15A NCAC 02B .0200;~~  
24 ~~(7) that the person making the request will put in place a groundwater monitoring program that, based~~  
25 ~~on subsurface conditions and the physical and chemical properties of the contaminant, will~~  
26 ~~accurately track the degradation and attenuation of contaminants and contaminant by products~~  
27 ~~within and down gradient of the plume and to detect contaminants and contaminant by products~~  
28 ~~prior to their reaching any existing or foreseeable receptor at least one year's time of travel~~  
29 ~~upgradient of the receptor and no greater than the distance the groundwater at the contaminated site~~  
30 ~~is predicted to travel in five years;~~  
31 ~~(8) that all necessary access agreements needed to monitor groundwater quality pursuant to~~  
32 ~~Subparagraph (7) of this Paragraph have been or can be obtained;~~  
33 ~~(9) that public notice of the request has been provided in accordance with Rule .0114(b) of this Section;~~  
34 ~~and~~  
35 ~~(10) that the proposed corrective action plan would be consistent with all other environmental laws.~~

36 ~~(i) Corrective action using risk-based remediation. A person choosing to use risk-based remediation shall comply~~  
37 ~~with the requirements in G.S. 130A Article 9 Part 8.~~

1 ~~(m)(j)~~ Termination of active remediation prior to achieving the standards. The Department or any Any person required  
2 to implement an approved corrective action plan for a site subject to ~~Paragraphs (e) or (e)~~ Paragraph (g) of this Rule  
3 may request that the Secretary approve termination of ~~corrective action.~~ the active remediation prior to achieving the  
4 standards. The owner and operator of an active remediation system shall demonstrate that, by terminating the active  
5 remediation and then implementing an approved natural attenuation corrective action under Paragraph (h) of this Rule,  
6 all potential receptors will be protected. A request submitted to the Secretary under this Paragraph shall include:

7 ~~(1) A request submitted to the Secretary under this Paragraph shall include:~~

8 ~~(A) a discussion of the duration of the corrective action, the total project cost, projected annual~~  
9 ~~cost for continuance and evaluation of the success of the corrective action;~~

10 ~~(B) an evaluation of alternate treatment technologies that could result in further reduction of~~  
11 ~~contaminant levels, projected capital, and annual operating costs for each technology; and~~

12 ~~(C) the effects, including health and safety impacts, on groundwater users if contaminant levels~~  
13 ~~remain at levels existing at the time corrective action is terminated.~~

14 (1) A discussion of the duration of the corrective action, the total project cost, projected annual cost for  
15 continuance, and evaluation of the success of the corrective action.

16 (2) An evaluation of alternate treatment technologies that could potentially result in further reduction  
17 of contaminant levels, projected capital, and annual operating costs for each technology.

18 (3) The effects, including public health impacts, on groundwater users if contaminant levels remain at  
19 levels existing at the time corrective action is terminated.

20 (4) The proposed contaminant concentrations to actively remediate to in the source area and all  
21 predictive calculations and model runs demonstrating that the standards will be met at all existing  
22 or potential receptors, based on travel time and the natural attenuation capacity of subsurface  
23 materials or on a barrier to groundwater migration that exists or will be installed by the person  
24 making the request.

25 (5) A demonstration that continuation of active remediation would not result in a significant reduction  
26 in the concentration of contaminants. This demonstration shall show the duration and degree of  
27 success of existing remedial efforts to attain the standards. For the purpose of this Rule, a  
28 "significant reduction" is demonstrated by showing that the asymptotic slope of the contaminant  
29 concentrations over time is less than a ratio of 1:40 over a term of one year based on four consecutive  
30 quarters with sampling events spaced at least three months apart.

31 (6) A natural attenuation corrective action plan for the remaining contamination in accordance with  
32 Paragraph (h) of this Rule.

33 ~~(2) In addition, the person making the request shall demonstrate:~~

34 ~~(A) that continuation of corrective action would not result in a significant reduction in the~~  
35 ~~concentration of contaminants. This demonstration shall show the duration and degree of~~  
36 ~~success of existing remedial efforts to attain standards. For the purpose of this Part, a~~  
37 ~~"significant reduction" is demonstrated by showing that the asymptotic slope of the~~

1 contaminants curve of decontamination is less than a ratio of 1:40 over a term of one year  
2 based on quarterly sampling;

3 (B) that contaminants have not and will not migrate onto adjacent properties, or that:

4 (i) such properties are served by an existing public water supply system dependent  
5 on surface waters or hydraulically isolated groundwater; or

6 (ii) the owners of such properties have consented in writing to the request;

7 (C) that, if the contaminant plumes are expected to intercept surface waters, the groundwater  
8 discharge will not possess contaminant concentrations that would result in violations of  
9 standards for surface waters contained in 15A NCAC 02B .0200;

10 (D) that public notice of the request has been provided in accordance with Rule .0114(b) of this  
11 Section; and

12 (E) that the proposed termination would be consistent with all other environmental laws.

13 ~~(3) The Secretary shall not authorize termination of corrective action for any area that, at the time the~~  
14 ~~request is made, has been identified by a state or local groundwater use planning process for resource~~  
15 ~~development.~~

16 ~~(4) The Secretary may authorize the termination of corrective action, or amend the corrective action~~  
17 ~~plan after considering all the information in the request. In making the authorization, the Secretary~~  
18 ~~shall consider health and safety impacts on all existing and foreseeable receptors and the impacts~~  
19 ~~the contaminated plume may have if it reaches them. Upon termination of corrective action, the~~  
20 ~~Secretary shall require implementation of a groundwater monitoring program that, based on~~  
21 ~~subsurface conditions and the physical and chemical properties of the contaminants, will accurately~~  
22 ~~track the degradation and attenuation of contaminants at a location of no less than one year's~~  
23 ~~predicted time of travel upgradient of any existing or foreseeable receptor. The monitoring program~~  
24 ~~shall remain in effect until there is sufficient evidence that the contaminant concentrations have been~~  
25 ~~reduced to the level of the standards. For the purpose of this Part, "sufficient evidence" means that~~  
26 ~~sampling and analyses demonstrate that contaminant concentrations have been reduced to the level~~  
27 ~~of the standards on multiple sampling events.~~

28 (k) The Secretary shall not authorize termination of active remediation for any area that, at the time the request is  
29 made, has been identified by a state or local groundwater use planning process for resource development.

30 (l) The Secretary may authorize the termination of active remediation, or amend the corrective action plan after  
31 considering all the information in the request. In making the authorization, the Secretary shall consider  
32 geologic and hydrogeologic conditions, the nature and extent of the contamination, technical and economic  
33 feasibility, and public health impacts on all potential receptors should the contaminated plume reach them.  
34 The Secretary will review the request for completeness and may request any additional information necessary  
35 to make their authorization.

36 (m) In the evaluation of active remediation or natural attenuation corrective action plans, the Secretary shall consider  
37 the extent of any violations, the extent of any threat to human health, the extent of damage or potential adverse impact



1 to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants  
2 in the environment, geologic and hydrogeologic conditions, the time estimated to achieve groundwater quality  
3 restoration, technical and economic feasibility, and the public and economic benefits to be derived from groundwater  
4 quality restoration.

5 (n) ~~Upon a determination by the Secretary that~~ Where continued corrective action would result in no significant  
6 reduction in contaminant ~~concentrations, concentrations as determined in Part (j)(5) of this Rule, and the contaminated~~  
7 ~~groundwaters can be rendered potable by treatment using technologies that are in use in other applications and shown~~  
8 ~~to be effective for removal of contaminants,~~ the person may request that the Secretary ~~may~~ designate the ~~remaining~~  
9 area of degraded groundwater RS. ~~Where the remaining degraded groundwaters cannot be made potable by such~~  
10 ~~treatment, the~~ The Secretary Commission may also consider a request for reclassification of the groundwater to a GC  
11 classification as outlined in Rule ~~.0204~~ .0319 of this Subchapter.

12 (o) If at any time the Secretary determines that a new technology is available that would remediate the contaminated  
13 groundwater to the standards specified in Rule .0202 of this Subchapter, the Secretary may require the ~~responsible~~  
14 ~~party person~~ to evaluate the economic and technological feasibility of implementing the new technology in an active  
15 groundwater remediation corrective action ~~plan in accordance with a schedule established by the Secretary.~~ plan. The  
16 Secretary's determination to utilize new technology at any site or for any particular contaminant or constituent of  
17 interest shall include a consideration of the factors in ~~Paragraph (h) of this Rule.~~ Rule .0111(c) of this Section.

18 (p) Where the standards are exceeded as a result of the application of pesticides or other agricultural chemicals, the  
19 Secretary shall request the Pesticide Board or the Department of Agriculture and Consumer Services to assist the  
20 Department in determining the cause of the violation. If the violation is determined to have resulted from the use of  
21 pesticides, the Secretary shall request the Pesticide Board to take appropriate regulatory action to control the use of  
22 the chemical or chemicals responsible for, or contributing to, such violations, or to discontinue their use.

23 ~~(q) The approval pursuant to this Rule of any corrective action plan, or modification or termination thereof, that~~  
24 ~~permits the migration of a contaminant onto adjacent property, shall not affect any private right of action by any party~~  
25 ~~that may be affected by that contamination.~~

26 ~~(+)(q)~~ If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the  
27 concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial  
28 or noncommercial underground storage tank as defined in G.S. 143-215.94A, any person required to implement an  
29 approved corrective action plan pursuant to this Rule and seeking reimbursement for the Commercial or  
30 Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds shall implement a corrective action  
31 plan meeting the requirements of Paragraph ~~(k) or (l)(g) or (h)~~ of this Rule unless the person demonstrates to the  
32 Secretary that:

- 33 (1) contamination resulting from the discharge cannot qualify for approval of a plan based on the  
34 requirements of the Paragraphs; or
- 35 (2) the cost of making such a demonstration would exceed the cost of implementing a corrective action  
36 plan submitted pursuant to ~~Paragraph (e) of this Rule.~~ Rule .0111(c) of this Section.

1 ~~(s)(r)~~ If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the  
2 concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial  
3 or noncommercial underground storage tank as defined in G.S. 143-215.94A, the Secretary may require any person  
4 implementing or operating a previously approved corrective action plan pursuant to this Rule to:

- 5 (1) develop and implement a corrective action plan meeting the requirements of Paragraphs ~~(k)~~ and  
6 ~~(j)(g)~~ and (h) of this Rule; or  
7 (2) seek discontinuance of corrective action pursuant to Paragraph ~~(m)(j)~~ or (l) of this Rule.

8 (s) Pursuant to this Rule, the approval of any corrective action plan, modification, or termination thereof, that permits  
9 the migration of a contaminant onto adjacent property, shall not affect any private right of action by any party that  
10 may be affected by that contaminant.

11  
12 *History Note: Authority G.S. 143-215.1; 143-215.3; ~~143-215.94A~~; 143-215.94T; 143-215.94V; 143B-282;*  
13 *~~1995 (Reg. Sess. 1996) c. 648, s. 1;~~*  
14 *Eff. August 1, 1989;*  
15 *Amended Eff. October 1, 1993; September 1, 1992;*  
16 *Temporary Amendment Eff. January 2, 1998; January 2, 1996;*  
17 *Amended Eff. July 1, 2016; October 29, 1998.*

#### 18 19 **15A NCAC 02L .0107 COMPLIANCE BOUNDARY**

20 (a) For disposal systems individually permitted prior to December 30, 1983, the compliance boundary ~~is~~ shall be  
21 established at a horizontal distance of 500 feet from the waste boundary or at the property boundary, whichever is  
22 closer to the source.

23 (b) For disposal systems individually permitted on or after December 30, 1983, a compliance boundary shall be  
24 established at a horizontal distance of 250 feet from the waste boundary, or 50 feet within the property boundary,  
25 whichever point is closer to the source.

26 (c) The compliance boundary shall be established ~~by the Director, or his designee~~ at the time of permit issuance.  
27 issuance and shall remain in place for the duration of the permit. Any sale or transfer of property which affects a  
28 compliance boundary shall be reported immediately to the Director, or his designee. For disposal systems which are  
29 not governed by Paragraphs (e) or (f) of this Rule, the compliance boundary affected by the sale or transfer of property  
30 will be re-established consistent with Paragraphs (a) or (b) of this Rule, whichever is applicable.

31 ~~(d) Except as provided in Paragraph (g) of this Rule, no water supply wells shall be constructed or operated within~~  
32 ~~the compliance boundary of a disposal system individually permitted or re-permitted after January 1, 1993.~~

33 (d) The compliance boundary and zone shall extend vertically from the surface through the water table to the  
34 maximum depth of saturation.

35 (e) The permitted activity shall not cause or contribute to an exceedance of the surface water standards established  
36 under 15A NCAC 02B .0200.

1 (f) Multiple contiguous properties under common ownership and permitted for use as a waste disposal area shall be  
2 treated as a single property with regard to determination of a compliance zone and setbacks to property lines as per  
3 Paragraphs (a) or (b) of this Rule.

4 (g) Where compliance zones for separately permitted waste disposal areas under the same ownership on the same  
5 property intersect, the Director shall combine the compliance zones into one single compliance zone with a single  
6 compliance boundary.

7 (h) The permittee shall establish a monitoring program within the compliance zone per the requirements in Rule .0110  
8 of this Section.

9 (i) Except as provided in Paragraph (m) of this Rule, no new water supply wells shall be constructed within the  
10 compliance zone of a disposal system individually permitted after January 1, 1993.

11 ~~(j)~~ Except as provided in Paragraph ~~(g)~~(m) of this Rule, a permittee shall not transfer if the land within an  
12 established compliance ~~boundary zone~~ of a disposal system permitted ~~or re-permitted~~ after January 1, 1993 ~~unless: is~~  
13 transferred and that land is serviced by a community water system as regulated under 15A NCAC 18C, the source of  
14 which is located outside the compliance boundary, the deed shall contain notice of the permit, including the permit  
15 number, a description of the type of permit, and the name, address and telephone number of the permitting agency.

16 (1) ~~the land transferred is serviced by a community water system as defined in 15A NCAC 18C, the~~  
17 ~~source of which is located outside the compliance boundary; and~~

18 (2) ~~the deed transferring the property:~~

19 (A) ~~contains notice of the permit, including the permit number, a description of the type of~~  
20 ~~permit, and the name, address and telephone number of the permitting agency; and~~

21 (B) ~~contains a restrictive covenant running with the land and in favor of the permittee and the~~  
22 ~~State, as a third party beneficiary, which prohibits the construction and operation of water~~  
23 ~~supply wells within the compliance boundary; and~~

24 (C) ~~contains a restrictive covenant running with the land and in favor of the permittee and the~~  
25 ~~State, as a third party beneficiary, which grants the right to the permittee and the State to~~  
26 ~~enter on such property within the compliance boundary for groundwater monitoring and~~  
27 ~~remediation purposes.~~

28 ~~(k)~~ Except as provided in Paragraph ~~(g)~~(m) of this Rule, if at the time a permit is issued ~~or reissued~~ after January  
29 1, 1993, the permittee is not the owner of the land within the compliance ~~boundary, zone,~~ it shall be a condition of the  
30 permit issued or renewed that the landowner of the land within the compliance ~~boundary, zone,~~ if other than the  
31 permittee, execute and file in the Register of Deeds in the county in which the land is located, an easement running  
32 with the land ~~which:~~ that contains either a notice of the permit, including the permit number, a description of the type  
33 of permit, and the name, address and telephone number of the permitting agency; or a reference to a notice of the  
34 permit with book and page number of its recordation if such notice is required to be filed by statute. The Director  
35 shall, upon request by the landowner, file a document terminating the easement with the appropriate Register of Deeds  
36 once the following conditions have been met:

37 (1) all required groundwater remediation has been completed;

- 1           (2)     ~~groundwater monitoring is no longer required; and~~
- 2           (3)     ~~monitoring wells have been abandoned in accordance with 15A NCAC 02C .0113.~~
- 3           (1)     contains:
- 4                 (A)     ~~either a notice of the permit, including the permit number, a description of the type of~~
- 5                             ~~permit, and the name, address and telephone number of the permitting agency; or~~
- 6                 (B)     ~~a reference to a notice of the permit with book and page number of its recordation if such~~
- 7                             ~~notice is required to be filed by statute;~~
- 8           (2)     ~~prohibits the construction and operation of water supply wells within the compliance boundary; and~~
- 9           (3)     ~~reserves the right to the permittee and the State to enter on such property within the compliance~~
- 10                           ~~boundary for groundwater monitoring and remediation purposes. The easement may be terminated~~
- 11                           ~~by the Director when its purpose has been fulfilled or the need for the easement no longer exists.~~
- 12                           ~~Under those conditions the Director shall, upon request by the landowner, file a document~~
- 13                           ~~terminating the easement with the appropriate Register of Deeds.~~
- 14     (1) ~~Any sale or transfer of property which affects a compliance boundary shall be reported to the Director within seven~~
- 15     ~~days of the final sale or transfer. For disposal systems which are not governed by Paragraphs (j) or (k) of this Rule,~~
- 16     ~~the compliance boundary affected by the sale or transfer of property shall be reestablished consistent with this Rule.~~
- 17     ~~(g)(m) The requirements of Paragraphs (d), (e) and (f) of this Rule are not applicable to~~ For ground adsorption ~~sewage~~
- 18     ~~treatment and disposal systems serving four or fewer single family dwellings or multiunit dwellings of four or fewer~~
- 19     ~~units. units regulated under 15A NCAC 02T .0600, the requirements of Paragraphs (i), (j), and (k) of this Rule shall~~
- 20     ~~not be applicable.~~
- 21     ~~(h) The boundary shall form a vertical plane extending from the water table to the maximum depth of saturation.~~
- 22     ~~(i)(n) For ground absorption sewage treatment and disposal systems which are permitted regulated under 15A NCAC~~
- 23     ~~02T .0600, 18A .1900, the compliance boundary shall be established at the property boundary.~~
- 24     ~~(j)(o) Penalties authorized pursuant to G.S. 143-215.6A(a)(1) will shall not be assessed for violations of the standards~~
- 25     ~~within a compliance boundary zone unless the violations are the result of violations of permit conditions or negligence~~
- 26     ~~in the management of the facility.~~
- 27     ~~(k) The Director shall require:~~
- 28                 (1)     ~~that permits for all activities governed by G.S. 143-215.1 be written to protect the quality of~~
- 29                             ~~groundwater established by applicable standards, at the compliance boundary;~~
- 30                 (2)     ~~that necessary groundwater quality monitoring shall be conducted within the compliance boundary;~~
- 31                             ~~and~~
- 32                 (3)     ~~that a violation of standards within the compliance boundary resulting from activities conducted by~~
- 33                             ~~the permitted facility be remedied through clean up, recovery, containment, or other response when~~
- 34                             ~~any of the following conditions occur:~~
- 35                             (A)     ~~a violation of any standard in adjoining classified groundwaters occurs or can be reasonably~~
- 36                                     ~~predicted to occur considering hydrogeologic conditions, modeling, or other available~~
- 37                                     ~~evidence;~~

- 1           (B)     ~~an imminent hazard or threat to the public health or safety exists; or~~  
2           (C)     ~~a violation of any standard in groundwater occurring in the bedrock other than limestones~~  
3                     ~~found in the Coastal Plain sediments, unless it can be demonstrated that the violation will~~  
4                     ~~not adversely affect, or have the potential to adversely affect a water supply well.~~

5     

(p) The Director shall require that permits for all activities governed by G.S. 143-215.1, Article 9 of G.S. 130A, or  
6     Article 11 of G.S. 130A be written in such a way to protect groundwater at or beyond the compliance boundary.

7     

(q) The Director shall require that exceedances of the standards resulting from activities conducted by the permitted  
8     facility within the compliance zone be remedied through clean-up, recovery, containment, facility design, or  
9     operational control if any of the following occur:

- 10           (1)     A violation of the standards occurs or is predicted to occur through groundwater modeling in  
11                     groundwater at or beyond the compliance boundary as a result of the permitted activities.  
12           (2)     A violation of the surface water standards established under 15A NCAC 02B .0200 occurs or is  
13                     predicted to occur through modeling as a result of the permitted activities.  
14           (3)     An imminent hazard as defined in G.S.130A-2 exists.  
15           (4)     An exceedance of the standards occurs in bedrock within the compliance zone as a result of the  
16                     permitted activities unless it can be demonstrated that the violation will not adversely affect any  
17                     receptor.

18  
19     History Note:     Authority G.S. ~~143-215.1(b);~~ 143-215.1; 143-215.3(a)(1); 143B-282;  
20                             Eff. August 1, 1989;  
21                             Amended Eff. October 1, 1993; November 2, 1992.

22  
23     **15A NCAC 02L .0108     REVIEW BOUNDARY**

24     A review boundary is established around any waste disposal system area midway between the compliance boundary  
25     and the waste boundary. When the concentration of any substance equals or exceeds the standard at the review  
26     boundary as determined by monitoring, the permittee shall be required to take action in accordance with the provisions  
27     of Rule ~~.0106(e)(2)(A).~~0106(d) of this ~~Subchapter.~~ Section.

28  
29     History Note:     Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143B-282;  
30                             Eff. August 1, 1989.

31  
32     **15A NCAC 02L .0109     DELEGATION**

33     (a) The Director is delegated the authority to enter into consent special orders under G.S. 143-215.2 for violations of  
34     the standards except when a public meeting is required as provided in 15A NCAC ~~2H~~ 02H .1203.

35     (b) The Director is delegated the authority to prepare a proposed special order to be issued by the Commission without  
36     the consent of the person affected and to notify the affected person of that proposed order and of the procedure set out  
37     in G.S. 150B-23 to contest the proposed special order.

1 (c) The ~~Director, or his designee~~ Director shall give public notice of proposed consent special orders as specified in  
2 15A NCAC ~~2H 02H~~ .1203.

3  
4 *History Note:* Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.3(a)(4);  
5 Eff. August 1, 1989;  
6 Amended Eff. October 1, 1993; October 1, 1990.  
7

## 8 15A NCAC 02L .0110 MONITORING

9 (a) Except where exempted by statute or this Subchapter, the Director may require any person who causes, ~~permits~~  
10 permits, or has control over any discharge of ~~waste, waste~~ or ~~groundwater~~ cleanup program, ~~shall install and to~~  
11 implement a monitoring program system, at such locations, and in such ~~detail, detail~~ as ~~the Director, or his designee~~  
12 may require required to evaluate the effects of the discharge upon the ~~environment or~~ waters of the ~~state, State,~~  
13 including the effect of any actions taken to restore groundwater quality, as well as the efficiency of any treatment  
14 facility. The Director shall consider information including the geologic and hydrogeologic conditions, potential  
15 receptors, and risks to public health and the environment in determining the nature and extent of any required  
16 monitoring program. The monitoring program plan shall be prepared under the ~~responsible~~ charge of a ~~Professional~~  
17 professional Engineer engineer or Licensed licensed Geologist geologist and bear the seal of the ~~same. same if required~~  
18 under G.S. 89C or G.S. 89E.

19 (b) Monitoring systems within the monitoring program shall be constructed and operated in a manner that will not  
20 result in the contamination of ~~adjacent groundwaters of a higher quality.~~ waters of the State.

21 (c) The Director may require modification of a monitoring program or system or require additional monitoring of a  
22 contaminant or constituent of interest if it is determined to be in the best interest to public health and the environment.

23 (d) Monitoring systems within the monitoring program shall be able to:

- 24 (1) Track the migration, degradation, and attenuation of contaminants and contaminant by-products  
25 from the source area through a point of compliance such as a compliance boundary (if applicable),  
26 within a contaminant plume, and in areas where the contaminant plume is expected or predicted to  
27 migrate.
- 28 (2) Be used to determine the background groundwater quality that is not affected by site conditions,  
29 actions, or activities.
- 30 (3) Detect contaminants and contaminant by-products prior to their reaching any potential receptor.
- 31 (4) Detect if a groundwater contaminant plume is causing or contributing to exceedances of the surface  
32 water standards established under 15A NCAC 02B .0200.

33 ~~(e)(c)~~ Monitoring shall be conducted and results reported in a manner and at a frequency specified by the ~~Director,~~  
34 ~~or his designee.~~ Director based on information including the geologic and hydrogeologic conditions, potential  
35 receptors, and risks to public health and the environment.

36 (f) Monitoring programs shall remain in effect until it is demonstrated that the contaminant concentrations resulting  
37 from site activities or actions have been reduced to a level at or below the standards for a minimum of four consecutive

1 quarters with monitoring events spaced at least three months apart. The Director may require an extension of  
2 monitoring if the Director determines that concentrations are fluctuating at or near the standards or the data trends  
3 suggest that concentrations may be increasing. Once the Director is satisfied that the standards have been met or that  
4 corrective action is no longer necessary to ensure compliance with the Rules of this Subchapter, the Director shall  
5 furnish a letter stating that no further action is required. The Director shall also require a plan be submitted for  
6 maintaining or abandoning the monitoring wells in accordance with 15A NCAC 02C .0100.

7  
8 *History Note: Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143-215.66; 143B-282;*  
9 *Eff. August 1, 1989;*  
10 *Amended Eff. October 1, 1993.*

11  
12 **15A NCAC 02L .0111 REPORTS**

13 (a) Any person subject to the requirements ~~for corrective action specified~~ in Rule .0106 of this ~~Section~~ Subchapter  
14 shall submit to the Director, ~~in such detail as the Director may require, a written report that describes:~~ plans or reports  
15 including those associated with initial response, site assessment, and corrective action. Reports shall be submitted in  
16 accordance with a schedule established by the Director. In establishing a schedule, the Director shall consider a  
17 proposal by the person submitting the plan or report.

18 (1) ~~the results of the investigation specified in Paragraphs (c) and (d) of Rule .0106 of this Section,~~  
19 ~~including but not limited to:~~

20 (A) ~~a description of the sampling procedures followed and methods of chemical analyses used;~~  
21 ~~and~~

22 (B) ~~all technical data utilized in support of any conclusions drawn or determinations made.~~

23 (2) ~~the results of the predictive calculations or modeling, including a copy of the calculations or model~~  
24 ~~runs and all supporting technical data, used in the demonstration required in Paragraph (d) of Rule~~  
25 ~~.0106 of this Section; and~~

26 (3) ~~the proposed methodology and timetable associated with the corrective action for those situations~~  
27 ~~identified in Paragraphs (c) and (d) of Rule .0106 of this Section.~~

28 ~~(b) The report shall be prepared under the responsible charge of a Professional Engineer or Licensed Geologist and~~  
29 ~~bear the seal of the same as specified in Rule .0106(d) of this Section.~~

30 (b) A site assessment conducted pursuant to the requirements of Paragraphs (c) or (e) in Rule .0106 of this Section  
31 shall include:

32 (1) a description of the site including current and historical operations at the facility and all current and  
33 historical waste streams;

34 (2) the source and cause of contamination;

35 (3) any imminent hazards to public health and any actions taken to mitigate them;

36 (4) a description of the initial response actions taken in accordance with Rule .0106(f) of this Section;

37 (5) all potential receptors and expected exposure pathways;

- 1           (6)     the horizontal and vertical extent of soil and groundwater contamination and all significant factors  
2                     affecting contaminant transport;
- 3           (7)     background threshold values for affected media;
- 4           (8)     geological and hydrogeological features influencing the movement, chemical, and physical  
5                     character of the contaminants;
- 6           (9)     the nature and extent of any surface water or sediment contamination resulting from interactions  
7                     with contaminated soil or groundwater;
- 8           (10)    a description of the sampling procedures followed, and methods of chemical analyses used;
- 9           (11)    all technical data utilized in support of any interpretations, conclusions, determinations, or  
10                    evaluations made; and
- 11          (12)    the results of predictive calculations or modeling, including a copy of the calculations or model runs  
12                    and all supporting technical data.
- 13   (c) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for active  
14   remediation shall include:
- 15           (1)     a summary of the results of the site assessment submitted in accordance with Paragraph (b) of this  
16                     Rule;
- 17           (2)     the technical basis for the requested corrective action;
- 18           (3)     an evaluation of risk to receptors within the contaminant plume and in areas where the plume is  
19                     predicted to migrate through modeling;
- 20           (4)     an evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based  
21                     on current State or local government planning efforts;
- 22           (5)     a summary of the available technology that could feasibly be used as a potential remedial strategy  
23                     based on the specific site conditions and nature and extent of the contamination that includes the  
24                     predicted time to return to compliance with the standards and the estimated costs to implement each  
25                     potential strategy;
- 26           (6)     the proposed remedial technology that the person proposes to implement that includes:
- 27                     (A)     the rationale for selecting the proposed technology;
- 28                     (B)     plans and specifications, including engineering details;
- 29                     (C)     a schedule for implementation and operation of the technology;
- 30                     (D)     the predicted time to return to compliance with the standards;
- 31                     (E)     the estimated costs to implement and operate the technology;
- 32                     (F)     a monitoring plan to evaluate the effectiveness of the technology; and
- 33                     (G)     the results of any modeling or predictive calculations that show the projected movement of  
34                             the contaminant plume until the predicted time to return to compliance with the standards;
- 35           (7)     all technical data utilized in support of any interpretations, conclusions, determinations, or  
36                     evaluations made; and
- 37           (8)     a copy of the calculations or model runs and all supporting technical data; and



1 (9) a demonstration that:

2 (A) all necessary access agreements needed to monitor groundwater quality have been or can  
3 be obtained; and

4 (B) the proposed corrective action plan would be consistent with all other environmental laws.

5 (d) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for natural  
6 attenuation shall include:

7 (1) a summary of the results of the site assessment submitted in accordance with Paragraph (b) of this  
8 Rule;

9 (2) the technical basis for the requested corrective action;

10 (3) an evaluation of risk to receptors within the contaminant plume and in areas where the plume is  
11 predicted to migrate through modeling;

12 (4) an evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based  
13 on current State or local government planning efforts;

14 (5) the predicted time to return to compliance with the standards;

15 (6) the results of any modeling or predictive calculations that show the projected movement of the  
16 contaminant plume until the predicted time to return to compliance with the standards;

17 (7) all technical data utilized in support of any interpretations, conclusions, determinations, or  
18 evaluations made;

19 (8) a copy of the calculations or model runs and all supporting technical data;

20 (9) a monitoring plan to evaluate the effectiveness of the natural attenuation; and

21 (10) a demonstration that:

22 (A) all sources of contamination and free product have been removed or controlled pursuant to  
23 Rule .0106(f) of this Section;

24 (B) the contaminant has the capacity to degrade or attenuate under the site-specific conditions;

25 (C) the time and direction of contaminant travel can be predicted based on subsurface  
26 conditions and the contaminant's physical and chemical properties;

27 (D) contaminant migration will not result in any violation of applicable standards at any  
28 existing or potential receptor;

29 (E) contaminants have not and will not migrate onto adjacent properties, or that:

30 (i) such properties are served by an existing public water supply system dependent  
31 on surface waters or hydraulically isolated groundwater; or

32 (ii) the owners of such properties have consented in writing to the request;

33 (F) if the contaminant plume is predicted or expected to intercept surface waters, the  
34 groundwater discharge will not possess contaminant concentrations that would result in  
35 violations of the surface water standards established under 15A NCAC 02B .0200;

36 (G) all necessary access agreements needed to monitor groundwater quality have been or can  
37 be obtained;

1 (H) public notice of the request has been provided in accordance with Rule .0114(b) and (c) of  
2 this Section; and

3 (I) the proposed corrective action plan would be consistent with all other environmental laws.

4 (e) All reports and plans shall be prepared under the charge of a professional engineer, licensed soil scientist, or  
5 licensed geologist if required under G.S. 89C, G.S. 89E, or G.S. 89F.

6  
7 *History Note: Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143B-282;*  
8 *Eff. August 1, 1989;*  
9 *Amended Eff. October 1, 1993.*

### 11 15A NCAC 02L .0112 ANALYTICAL PROCEDURES

12 Tests or analytical procedures to determine compliance or noncompliance with the standards established in Rule .0202  
13 of this Subchapter ~~will shall~~ be in accordance ~~with:~~ with 15A NCAC 02H .0805(a)(1).

14 ~~(1) The most sensitive of the following methods or procedures for substances where the standard is at~~  
15 ~~or above the method detection limit value:~~

16 ~~(a) The most recent version of Standard Methods for the Examination of Water and~~  
17 ~~Wastewater, published jointly by American Public Health Association, American Water~~  
18 ~~Works Association and Water Pollution Control Federation;~~

19 ~~(b) Methods for Chemical Analysis of Water and Waste, 1979, U.S. Environmental Protection~~  
20 ~~Agency publication number EPA-600/4-79-020, as revised March 1983;~~

21 ~~(c) Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, 3rd Edition, 1986,~~  
22 ~~U.S. Environmental Protection Agency publication number SW-846;~~

23 ~~(d) Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Federal Register~~  
24 ~~Vol. 49, No. 209, 40 CFR Part 136, October 26, 1984;~~

25 ~~(e) Methods or procedures approved by letter from the Director upon application by the~~  
26 ~~regulated source; or~~

27 ~~(2) A method or procedure approved by the Director for substances where the standard is less than the~~  
28 ~~method detection limit value.~~

29  
30 *History Note: Authority G.S. 143-215.3(a)(1); 143B-282;*  
31 *Eff. August 1, 1989;*  
32 *Amended Eff. October 1, 1993.*

### 34 15A NCAC 02L .0113 VARIANCE

35 (a) The Commission, on its own initiative or pursuant to a request under G.S. 143-215.3(e), may grant variances to  
36 the rules of this Subchapter.

1 (b) Requests for variances are ~~filed by letter from~~ submitted by the applicant to the Environmental Management  
2 Commission. The application shall be ~~mailed~~ submitted in writing to the chairman of the Commission in care of the  
3 ~~Director, Division of Environmental Management, Post Office Box 29535, Raleigh, N.C. 27626-0535. Director.~~

4 (c) The application shall contain the following information:

- 5 (1) Applications filed by counties or municipalities must shall include a resolution of the County Board  
6 of Commissioners or the governing board of the municipality requesting the variance.
- 7 (2) A description of the past, ~~existing~~ existing, or proposed activities or operations that have or would  
8 result in a discharge of contaminants to the groundwaters.
- 9 (3) Description of the proposed area for which a variance is requested. A ~~detailed~~ location ~~map,~~ map  
10 showing the orientation of the facility, potential for groundwater contaminant migration, as well as  
11 the area covered by the variance request, with reference to at least two geographic references  
12 including ~~(numbered~~ numbered roads, named streams/streams, ~~etc.)~~ etc. must shall be included.
- 13 (4) Supporting information to establish that the variance will not endanger the public ~~health and safety,~~  
14 health, including health and environmental effects from exposure to groundwater contaminants.  
15 ~~(Location~~ Location of wells and other water supply sources including details of well ~~construction~~  
16 construction, if known, within 1/2 mile of site must shall be shown on a ~~map,~~ map.
- 17 (5) Supporting information to establish that requirements of this Rule cannot be achieved by providing  
18 the best available technology economically reasonable. This information must shall identify specific  
19 technology considered, ~~and~~ the costs of implementing the ~~technology~~ technology, and the impact of  
20 the costs on the applicant.
- 21 (6) Supporting information to establish that compliance would produce serious financial hardship on  
22 the applicant.
- 23 (7) Supporting information that compliance would produce serious financial hardship without equal or  
24 greater public benefit.
- 25 (8) A copy of any Special Order that was issued in connection with contaminants in the proposed area  
26 and supporting information that applicant has complied with the Special Order.
- 27 (9) A list of the names and addresses of any property owners within the proposed area of the ~~variance~~  
28 variance, as well as ~~any~~ property owners adjacent to the site covered by the variance.

29 (d) Upon receipt of the application, the Director ~~will~~ shall review it for completeness and request additional  
30 information if ~~necessary,~~ incomplete. When the application is complete, the Director shall give public notice of the  
31 application and schedule the matter for a public hearing in accordance with G.S. 143-215.4(b) and the procedures set  
32 out in Paragraph (e) of this Rule.

33 (e) Notice of Public Hearing:

- 34 (1) Notice of public hearing on any variance application shall be circulated in the geographical areas of  
35 the proposed ~~variance~~ variance, ~~by the Director at~~ At least ~~30~~ 20 days prior to the date of the ~~hearing;~~  
36 hearing, the Director shall:

- 1 (A) ~~by publishing~~ publish the notice one time in a newspaper having general circulation in said  
2 county;
- 3 (B) ~~by mailing submit the notice~~ to the North Carolina Department of ~~Environment, Health,~~  
4 ~~and Natural Resources,~~ Health and Human Services, Division of Environmental Health  
5 Section and appropriate local ~~health agency;~~ health director;
- 6 (C) ~~by mailing submit the notice~~ to any other federal, state or local agency upon request;
- 7 (D) ~~by mailing submit the notice~~ to the local governmental unit or units having jurisdiction  
8 over the geographic area covered by the variance;
- 9 (E) ~~by mailing submit the notice~~ to any property owner within the proposed area of the  
10 variance, as well as any property owners adjacent to the site covered by the ~~variance; and~~  
11 variance;
- 12 (F) ~~by mailing submit the notice~~ to any person or group upon ~~request.~~ request; and  
13 (G) post the notice on the Department website.
- 14 (2) The contents of public notice of any hearing shall include ~~at least~~ the following:
- 15 (A) ~~name,~~ name, address, and phone number of agency holding the public hearing;
- 16 (B) ~~name~~ name and address of each applicant whose application will be considered at the  
17 meeting;
- 18 (C) a brief summary of the variance request;
- 19 (D) a geographic description of a proposed area for which a variance is requested;
- 20 (E) a brief description of activities or operations which have or will result in the discharge of  
21 contaminants to the ~~groundwaters~~ waters of the State described in the variance application;
- 22 (F) a brief reference to the public notice issued for each variance application;
- 23 (G) information regarding the time and location for the hearing;
- 24 (H) the purpose of the hearing;
- 25 (I) the address and phone number of premises at which interested persons may obtain further  
26 information, request a copy of each application, and inspect and copy forms and related  
27 documents; and
- 28 (J) a brief description of the nature of the hearing including the rules and procedures to be  
29 followed. The notice shall also state that additional information is on file with the Director  
30 and may be inspected at any time during normal working hours. Copies of the information  
31 on file will be made available upon request and payment of cost or reproduction.
- 32 (f) All comments received within 30 days following the date of ~~the public hearing publication in the newspaper in~~  
33 Part (e)(1)(a) of this Rule shall be made part of the application file and shall be considered by the Commission prior  
34 to taking final action on the application.
- 35 (g) In determining whether to grant a variance, the Commission shall consider whether the applicant has complied  
36 with any Special ~~Order,~~ Order or Special Order by Consent issued under G.S. 143-215.2.

1 (h) If the Commission's final decision is unacceptable, the applicant may file a petition for a contested case in  
2 accordance with Chapter 150B of the General Statutes. If the petition is not filed within 60 days, the decision on the  
3 variance shall be final and binding.

4 (i) A variance shall not operate as a defense to an action at law based upon a public or private nuisance theory or any  
5 other cause of action.

6  
7 *History Note:* Authority G.S. 143-215.3(a)(1); 143-215.3(a)(3); 143-215.3(a)(4); 143-215.3(e); 143-215.4;  
8 Eff. August 1, 1989;  
9 Amended Eff. October 1, 1993.

### 11 15A NCAC 02L .0114 NOTIFICATION REQUIREMENTS

12 (a) Any person subject to the requirements of Rule ~~.0106(e)~~ .0106(c) or (e) of this Section shall submit to the local  
13 ~~Health Director,~~ health director and the chief administrative officer of the ~~political~~ jurisdictions in which the  
14 groundwater contamination has occurred, a ~~report that describes:~~

- 15 (1) ~~The area extent of the contaminant plume;~~
- 16 (2) ~~The chemical constituents in the groundwater which exceed the standards described in Rule .0202~~  
17 ~~of this Subchapter;~~
- 18 (3) ~~Actions taken and intended to mitigate threats to human health;~~
- 19 (4) ~~The location of any wells installed for the purpose of monitoring the contaminant plume and the~~  
20 ~~frequency of sampling.~~

21 ~~The report described in this Rule shall be submitted no later than five working days after submittal of the completed~~  
22 ~~copy of the site assessment report assessing the cause, significance and extent of the violation as required by Rule~~  
23 ~~.0106(e). .0111(b) of this Section.~~

24 (b) Any person who submits a request under Rule ~~.0106(k), (l), or (m)~~ .0106(g) or (h) of this Section shall notify the  
25 local ~~Health Director~~ health director and the chief administrative officer of the ~~political~~ jurisdictions in which the  
26 contaminant plume occurs, and all property owners and occupants within or contiguous to the area underlain by the  
27 contaminant plume, and under the areas where it is predicted or expected to migrate, ~~of the nature~~ a summary of the  
28 request and reasons supporting it. Notification shall be made by certified mail concurrent with the submittal of the  
29 request to the Director. A final decision by the Director shall be postponed for a period of 30 days following receipt  
30 of the request so that the Director may consider comments submitted by individuals interested in the request.

31 (c) Any person whose request under Rule ~~.0106(k), (l), or (m)~~ .0106(g) or (h) of this Section is granted by the Director  
32 shall notify parties specified in Paragraph (b) of this Rule of the Director's ~~decision.~~ decision and a summary of the  
33 actions to be taken. Notification shall be made by certified mail within 30 days of receipt of the Director's decision.

34  
35 *History Note:* Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-282(2)b;  
36 Eff. October 1, 1993.

1 **15A NCAC 02L .0115 RISK-BASED ASSESSMENT AND CORRECTIVE ACTION FOR PETROLEUM**  
2 **UNDERGROUND STORAGE TANKS**

3

4 *History Note: Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.94A; 143-215.94E; 143-215.94T; 143-*  
5 *215.94V; 143B-282; 1995 (Reg. Sess. 1996) c. 648, s. 1;*  
6 *Temporary Adoption Eff. January 2, 1998;*  
7 *Eff. October 29, 1998;*  
8 *Recodified to 15A NCAC 02L .0400 Eff. December 1, 2005.*

**ATTACHMENT B – OSBM APPROVED REGULATORY IMPACT ANALYSES**

## **Regulatory Impact Analysis**

**Rule Citation:** 15A NCAC 02L .0101 - .0104, .0106 - .0114

**Rule Topic:** Re-adoption of 02L Rules: Groundwater Classifications and Standards: General Considerations

**DEQ Divisions:** Division of Water Resources (DWR)

**Staff Contact:** Rick Bolich, Groundwater Resources Section Chief, DWR  
[rick.bolich@ncdenr.gov](mailto:rick.bolich@ncdenr.gov)  
(919) 707-3671

Eric G. Smith, Environmental Program Consultant, DWR  
[eric.g.smith@ncdenr.gov](mailto:eric.g.smith@ncdenr.gov)  
(919) 707-3669

Steven Lanter, Hydrogeologist, DWR  
[steven.lanter@ncdenr.gov](mailto:steven.lanter@ncdenr.gov)  
(919) 707-3667

**Impact Summary:**

State government:	No
NCDOT:	No
Local government:	No
Private entities:	No
Environment:	No
Substantial Impact:	No

### **1. Necessity for Rule Change**

N.C. Gen. Stat. §150B-21.3A requires state agencies to review existing rules every 10 years, determine which rules are still necessary, and either re-adopt or repeal each rule as appropriate. The proposed rulemaking satisfies these requirements for 15A NCAC 02L .0100. All 13 rules in the proposed rulemaking are considered necessary and are therefore proposed for re-adoption.

The Division prepared draft rules and solicited input on the proposed actions from internal and external stakeholders. After a final internal draft of the rules was created, it was sent out to over 200 external stakeholders in November 2020 to review and provide comments. The rules were placed on the NC Department of Environmental Quality's (DEQ) website. A press release was also created and sent to an additional 652 people. Several external stakeholders provided feedback that the Division considered in creating a draft of the rules for pre-review by counsel to the Rules Review Commission (RRC). The RRC counsel pre-review was completed in February 2021; changes in response to those comments were incorporated into the draft rules.

### **2. Purpose of Rules**

In accordance with Rule 15A NCAC 02L .0103(a), the purpose of the rules established in Subchapter 15A NCAC 02L is to “maintain and preserve the quality of the groundwaters,



prevent and abate pollution and contamination of the waters of the State, protect public health and permit management of the groundwaters for their best usage by the citizens of North Carolina.” Historically, the North Carolina Environmental Management Commission (EMC) has considered the best usage of groundwaters of the State to be as a source of drinking water.

The rules in 15A NCAC 02L .0100 address the requirements for site assessment and corrective action to restore groundwater quality to the standards. These are foundational rules used by Division of Waste Management (DWM) regulatory programs including Brownfields, Underground Storage Tanks, Superfund (includes Inactive Hazardous Sites and Dry-cleaning Solvent Cleanup), Solid Waste, and Hazardous Waste as well as DWR regulatory programs such as Non-Discharge and Groundwater Protection. Each of these regulatory programs have their own rules and statutes that impose additional requirements that are specific to the particular DWM program. Many of these additional requirements are based on the chemical and physical properties of the specific type of wastes that are regulated by the program. For example, the DWM Underground Storage Tank rules (15A NCAC 02N) contain sections on tank integrity testing and spill control measures requirements that go beyond those of the subject rules.

### **3. Regulatory Baseline**

As part of the permanent rulemaking process, [North Carolina General Statute 150B-19.1](#) requires agencies to quantify to the “greatest extent possible” the costs and benefits to affected parties of a proposed rule. To understand what the costs and benefits of the proposed rule changes would be to affected parties, it is necessary to establish a regulatory baseline for comparison. For the purpose of this analysis, the following items are considered to comprise the baseline:

- the current version of rules in 15A NCAC 02L .0100 General Considerations (effective dates range from August 1, 1989 through July 1, 2016); and
- North Carolina General Statutes with specific provisions relating to groundwater corrective action:
  - G.S. 130A-310.65 Risk-Based Environmental Remediation of Sites  
- G.S. 130A-310.77
  - G.S. 143-214.1 Water; water quality standards and classifications; duties of Commission.
  - G.S. 143-279.10 Recordation of contaminated sites.

### **4. Cost-Benefit Analysis**

#### **4.1 Proposed rule amendments**

The proposed rule amendments and associated economic and environmental impacts are summarized in the following table:

**Section .0100 – General Considerations**

<b>Rule</b>	<b>Proposed Change</b>	<b>Economic Impact</b>	<b>Environment Impact</b>
15A NCAC 02L .0101 Purpose	Minor technical changes for consistency and clarity.	None	None
15A NCAC 02L .0102 Definitions	Add definitions to provide clarity for terms used in the 02L rules:  Delete definitions that are duplicative of statute or are unused in the 02L rules.  Clarify that “waters of the State” are considered a type of “receptor” that can be adversely affected by contaminants.	None	None
15A NCAC 02L .0103 Policy	Minor technical changes.	None	None
15A NCAC 02L .0104 Restricted Designation	Clarify what information is required on applications for RS designation.  Identify the process for recording a Restricted designation or “RS” per G.S. 143B-279.10. Recordation of contaminated sites is already required by G.S. 143-279.10.  Identify the process for removing an RS designation per G.S. 143-214.1.  Minor technical changes.  Reorganize and streamline for clarity.	None	None
15A NCAC 02L .0105 Adoption by Reference	Repealed Eff. Aug 1, 1989.	None	None
15A NCAC 02L .0106 Initial Response, Site Assessment, and Corrective Action	Update rule to reference risk-based remediation option as allowed in G.S. 130A Article 9 Part 8 (G.S. 130A-310.65 thru G.S. 130A-310.77; enacted in 2011; amended in 2015).  Add cross references to other 02L .0100 rules for clarity.  Reorganize and streamline for clarity.	None	None

15A NCAC 02L .0107 Compliance Boundary	Add cross references to other 02L .0100 rules for clarity.  Reorganize and streamline for clarity.  Rewording and updating terminology for clarity.	None	None
15A NCAC 02L .0108 Review Boundary	Minor technical changes.	None	None
15A NCAC 02L .0109 Delegation	Minor technical changes.	None	None
15A NCAC 02L .0110 Monitoring	Make it optional, rather than mandatory, for the Director to require a responsible party to implement a monitoring program.	Unlikely to result in additional cost savings to regulated community beyond ongoing rule implementation.	None
	Reorganize and streamline for clarity.	None	None
15A NCAC 02L .0111 Reports	Moved selected content to other rules in Section 02L .0100 for clarity.  Clarify what information is required in site assessment reports.	None	None
15A NCAC 02L .0112 Analytical Procedures	Delete obsolete test method reference.	None	None
	Minor technical changes.		
15A NCAC 02L .0113 Variance	Minor technical changes.	None	None
15A NCAC 02L .0114 Notification Requirements	Streamline process for submitting a site assessment report.	Likely negligible cost savings to regulated community	None
	Minor technical changes.	None	None
15A NCAC 02L .0115 Risk-Based Assessment and Corrective Action for Petroleum Underground Storage Tanks	Recodified to 15A NCAC 02L .0400 Eff. Dec 1, 2005	None	None

## 4.2 Costs and Benefits to the Regulated Community

Most of the proposed amendments to the subject rules are technical in nature for the purpose of providing clarity, consistency with North Carolina General Statutes, and updating references. This should make the rules easier to understand, which should translate into less time spent by the regulated community on the application, monitoring, and reporting processes. The amount of time saved will be negligible and

will not provide a significant financial benefit; however, it is noted here for completeness.

An amendment to **15A NCAC 02L .0102(29)** adds “waters of the State” to the definition of a “receptor.” As used in these rules, a “receptor” is a term that applies broadly to anything in the environment (human, plant, animal) as well as structures that have the potential to be adversely affected by groundwater contamination. The clarification that “waters of the State” can be a receptor and can be adversely affected by groundwater contamination makes it clear that an assessment of impacts to waters of the State is expected for Comprehensive Site Assessments and Corrective Action Plans, as appropriate. As stated in Section 2 of this document, the purpose of the 15A NCAC 02L rules includes the prevention and abatement of pollution and contamination of the waters of the State. When considered as a whole, the subject rules are already being implemented such that waters of the State are protected as a potential receptor of contamination. It follows that the addition of “waters of the State” to the definition of “receptor” will not result in any changes to the implementation of the 15A NCAC 02L rules. As such, the change will not result in any new costs or benefits to the regulated community.

An amendment to **15A NCAC 02L .0104(f)** lists the information that must be included on an application for Restricted Designation (RS) of a groundwater source. This information is already required by the RS designation process and will not result in additional burdens on the regulated community.

An amendment to **15A NCAC 02L .0110(a)** makes it optional, rather than mandatory, for the Director to require a responsible party to implement a monitoring program. This change will bring the rule in line with DWR’s ongoing practice of determining on a case-by-case basis whether the risk to public health and the environment justify the expense of this type of monitoring program. Groundwater monitoring programs are required for the many of the sites that are subject to this Rule, and that is not expected to change as a result of the proposed amendment. Small-scale waste application operations such as single-family systems are the most likely to be excluded from monitoring requirements depending on the nature and amount of their waste application. The proposed rule amendment is not expected to change the types of operations that are already excluded from monitoring requirements; as such, the amendment is unlikely to result in additional cost savings or expense.

An amendment to **15A NCAC 02L .0111(b)** lists the information that must be included in a site assessment report. This information is already required as part of the corrective action reporting process and will not result in additional burdens to the regulated community.

An amendment to **15A NCAC 02L .0114(a)** streamlines the requirement for reporting a groundwater contamination event. The amendment replaces the requirement for a responsible party to create an entirely new report, instead allowing the responsible party to use the site assessment report required by Rule 15A NCAC 02L .0111(b) to satisfy this reporting requirement. This will reduce the time spent by responsible parties on extracting and repackaging information into a different format. The amount of time

saved will be negligible and will not provide a significant financial benefit; however, it is noted here for completeness.

#### **4.3 Costs and Benefits to State and Local Government**

None of the proposed changes will require DEQ or local governments to revise their existing procedures or to procure additional staff; as such, there should be no economic cost to state agencies or local governments. Changes are technical in nature for the purpose of providing clarity to the regulated community thereby making the rules easier to understand. This should translate into less time spent by DEQ regulatory staff providing technical assistance. The amount of time saved will be negligible and will not provide a significant financial benefit; however, it is noted here for completeness.

The proposed changes will not affect environmental permitting of NC Department of Transportation (NCDOT); as such, there should be no economic impact to NCDOT.

#### **4.4 Environmental Impact**

As measured from the baseline conditions, the proposed changes will maintain existing environmental protections at an equivalent level with no cost or benefit to the environment.

### **5. Summary**

As measured from the baseline conditions, there are no economic costs associated with the proposed rules re-adoption. Some of the language removed or added has the intent to improve clarity and reduce administrative burden to the regulated community; some of the language has the intent to be in accordance with current General Statutes. While some of these revisions could have a positive economic impact to a small portion of the regulated community, any potential impact is expected to be negligible. No new environmental costs or benefits are anticipated to result from the proposed rules re-adoption.

1                                   **SUBCHAPTER 2L - GROUNDWATER CLASSIFICATION AND STANDARDS**

2  
3                                   **SECTION .0100 - GENERAL CONSIDERATIONS**

4  
5 **15A NCAC 02L .0101    AUTHORIZATION/PURPOSE**

6 (a) N.C. General Statute 143-214.1 directs that the Commission develop and adopt after proper study a series of  
7 classifications and standards which will be appropriate for the purpose of classifying each of the waters of the ~~state~~  
8 State in such a way as to promote the policy and purposes of the act. Pursuant to this statute, the ~~rules~~ Rules in Sections  
9 .0200 and .0300 of this Subchapter establish a series of classifications and water quality standards applicable to the  
10 groundwaters of the ~~state~~ State.

11 (b) ~~These~~ The rules ~~Rules in Section .0100 of this Subchapter are shall applicable~~ apply to all permitted and  
12 unpermitted activities or actions, intentional or accidental, ~~which~~ that contribute to the degradation of groundwater  
13 quality, regardless of any permit issued by a governmental agency authorizing such action or ~~activity~~ activity, ~~except~~  
14 ~~an~~ An innocent landowner who is a bona fide purchaser of property which contains a source of groundwater  
15 contamination, who purchased such property without knowledge or a reasonable basis for knowing that groundwater  
16 contamination had occurred, or a person whose interest or ownership in the property is based or derived from a security  
17 interest in the property, shall not be considered a responsible party.

18  
19 *History Note:*     *Authority G.S. 143-214.1; 143-214.2; 143-215.3(a)(1); 143B-282;*  
20                                   *Eff. June 10, 1979;*  
21                                   *Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983.*

22  
23 **15A NCAC 02L .0102    DEFINITIONS**

24 The definition of any word or phrase used in ~~these~~ the Rules in this Subchapter shall be the same as given in G.S.  
25 143-212 and G.S. 143-213 except that the following words and phrases shall have the following meanings:

26                                   (1) "Active remediation" means corrective action that includes active physical, biological, or chemical  
27                                   manipulation of groundwater or of the rock or soil media for the purpose of reducing the amount of  
28                                   contamination or minimizing the spread of contamination.

29                                   (2) "Anthropogenic" means of, relating to, or resulting from the influence of human beings on nature.

30                                   (3) "Background threshold values" mean statistically derived values of the concentrations of substances  
31                                   in environmental media not affected by site conditions, actions, or activities for use as a basis for  
32                                   compliance with the Rules in this Subchapter.

33                                   ~~(1)~~(4) "Bedrock" means any consolidated rock encountered in the place in which it was formed or  
34                                   deposited and which cannot be readily excavated without the use of explosives or power equipment.

35                                   ~~(2)~~ "Commission" means the Environmental Management Commission as organized under G.S. 143B.

36                                   ~~(3)~~(5) "Chief administrative officer" shall be, for the purposes of this Rule, the mayor, chairman of the  
37                                   county commissioners, the county manager, or the city manager who is responsible for  
38                                   environmental issues in their jurisdiction.

- 1 ~~(6)~~ "Compliance boundary" means a boundary around ~~the a~~ waste disposal area of a disposal system at  
2 and beyond which ~~groundwater quality~~ standards may not be exceeded and ~~only~~ applies to facilities  
3 which have received ~~a an individual~~ permit issued under the authority of G.S. ~~143 215.1 or G.S.~~  
4 ~~130A, 143 215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A.~~
- 5 ~~(7)~~ "Compliance zone" means the area encompassed within the compliance boundary.
- 6 ~~(8)~~ "Constituent of interest" means any substance that is manmade or naturally occurring that is or may  
7 be associated with or influenced by site activities or actions and that is of interest to the protection  
8 of public health and the environment.
- 9 ~~(4)(9)~~ "Contaminant" means any substance ~~occurring that occurs~~ in groundwater as a result of  
10 anthropogenic sources or activities in concentrations which exceed the ~~groundwater quality~~  
11 ~~standards specified in Rule .0202 of this Subchapter.~~ standards.
- 12 ~~(10)~~ "Control" means the ability to direct, restrain, or influence sources of contamination and  
13 contaminant distribution.
- 14 ~~(5)(11)~~ "Corrective action plan" means a plan for controlling or eliminating sources of groundwater  
15 contamination or for restoring groundwater quality. ~~achieving groundwater quality restoration or~~  
16 ~~both.~~
- 17 ~~(6)(12)~~ "Director" means Director of the Division of ~~Environmental Management~~ Water Resources or  
18 Waste Management or their delegate.
- 19 ~~(7)(13)~~ "Division" means the Division of ~~Environmental Management~~ Water Resources or Waste  
20 Management.
- 21 ~~(8)(14)~~ "Exposure pathway" means a course taken by a contaminant by way of a transport medium after its  
22 release to the environment.
- 23 ~~(9)(15)~~ "Free product" means a non-aqueous phase liquid which may be present within the saturated zone  
24 or in surface water.
- 25 ~~(10)(16)~~ "Fresh ~~groundwaters~~ waters" means those groundwaters having a chloride concentration equal to  
26 or less than 250 milligrams per liter.
- 27 ~~(11)(17)~~ "Groundwaters" means ~~those~~ waters occurring in the subsurface under saturated conditions.
- 28 ~~(12)(18)~~ "Hazardous substance" means any substance as defined by ~~Section 101(14) of the Comprehensive~~  
29 ~~Environmental Response, Compensation and Liability Act of 1980 (CERCLA).~~ 42 U.S.C. 9601(14).
- 30 ~~(13)(19)~~ "Licensed geologist" means a person who has been ~~duly~~ licensed as a geologist in accordance with  
31 the requirements of G.S. 89E.
- 32 ~~(20)~~ "Licensed soil scientist" means a person who has been licensed as a soil scientist in accordance with  
33 the requirements of G.S. 89F.
- 34 ~~(21)~~ "Lower Limit of Quantitation" means the lowest acceptable concentration used in the daily  
35 calibration curve.

1 (22) "Method Detection Limit" means the minimum measured concentration of a substance that can be  
2 reported with 99% confidence that the measured concentration is distinguishable from method blank  
3 results.

4 ~~(14)~~(23) "Natural ~~remediation~~attenuation" means those natural processes acting to restore groundwater  
5 quality, including dilution, filtration, sorption, ion-exchange, chemical ~~transformation~~  
6 transformation, and biodegradation.

7 (24) "Natural conditions or naturally occurring" means the physical, biological, chemical and  
8 radiological conditions which occur naturally and are not a result of anthropogenic sources or  
9 activities.

10 (25) "Person" shall be as defined in G.S. 130A-290(22).

11 (26) "Potable waters" means those waters suitable for drinking by humans.

12 ~~(15)~~(27) "Practical Quantitation Limit" means the lowest concentration of a given material that can be  
13 reliably achieved ~~among laboratories~~ within specified limits of precision and accuracy by a given  
14 analytical method during routine laboratory analysis.

15 ~~(16) "Natural conditions" means the physical, biological, chemical and radiological conditions which~~  
16 ~~occur naturally.~~

17 ~~(17) "Potable waters" means those waters suitable for drinking by humans.~~

18 ~~(18)~~(28) "Professional Engineer" means a person who has been ~~duly~~ registered and licensed as a professional  
19 engineer in accordance with the requirements of G.S. 89C.

20 ~~(19)~~(29) "Receptor" ~~means any human, plant, animal, or structure which is, or has the potential to be,~~  
21 ~~adversely effected by the release or migration of contaminants. Any well constructed for the~~  
22 ~~purpose of monitoring groundwater and contaminant concentrations shall not be considered a~~  
23 ~~receptor.~~ is as defined in G.S. 130A-309.201 and, for the purposes of this Rule, shall also include  
24 waters of the State as defined in G.S. 143-212(6).

25 ~~(20)~~(30) "Review boundary" means a boundary around a permitted waste disposal ~~facility~~area midway  
26 between a waste boundary and a compliance boundary at which groundwater monitoring ~~is~~may be  
27 required.

28 ~~(21) "Saline groundwaters" means those groundwaters having a chloride concentration of more than 250~~  
29 ~~mg/l.~~

30 ~~(22)~~(31) "Saturated zone" means that part of the subsurface below the water table in which all the  
31 interconnected voids are filled with water under pressure at or greater than atmospheric. It does not  
32 include the capillary fringe.

33 (32) "Secretary" means the Secretary of the Department of Environmental Quality or their delegate.

34 ~~(23)~~(33) "Standards" "Standard" or "standards" means groundwater quality standards as specified in Rule  
35 .0202 of this Subchapter. Subchapter and any interim maximum allowable concentrations  
36 established by the Director per Rule .0202(c) of this Subchapter.



1 ~~(24)~~(34) "Suitable for drinking" means a quality of water which does not contain substances in concentrations  
2 which, either singularly or in combination if ingested into the human body, may cause death, disease,  
3 behavioral abnormalities, congenital defects, genetic mutations, or result in an incremental lifetime  
4 cancer risk in excess of  $1 \times 10^{-6}$ , or render the water unacceptable due to aesthetic qualities, including  
5 taste, ~~odor~~odor, or appearance.

6 ~~(25)~~(35) "Time of travel" means the time required for contaminants in groundwater to move a unit distance.

7 ~~(26)~~(36) "Waste boundary" means the perimeter of the permitted waste disposal area.

8 ~~(37)~~ "Waste disposal area" means that portion of a disposal system permitted under authority of G.S. 143-  
9 215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A whose purpose is the temporary or  
10 permanent disposal of waste.

11 ~~(27)~~(38) "Water table" means the surface of the saturated zone below which all interconnected voids are  
12 filled with water and at which the pressure is atmospheric.

13  
14 *History Note:* Authority G.S. 143-214.1; 143-215; 143B-282;

15 *Eff. June 10, 1979.*

16 *Amended Eff. October 1, 1993; August 1, 1989; July 1, 1988; March 1, 1985.*

17  
18 **15A NCAC 02L .0103 POLICY**

19 (a) The rules established in this Subchapter are intended to maintain and preserve the quality of the groundwaters,  
20 prevent and abate pollution and contamination of the waters of the state, protect public health, and permit management  
21 of the groundwaters for their best usage by the citizens of North Carolina. It is the policy of the Commission that the  
22 best usage of the groundwaters of the state is as a source of drinking water. These groundwaters generally are a  
23 potable source of drinking water without the necessity of significant treatment. It is the intent of these Rules to protect  
24 the overall high quality of North Carolina's groundwaters to the level established by the standards and to enhance and  
25 restore the quality of degraded groundwaters where feasible and necessary to protect human health and the  
26 environment, or to ensure their suitability as a future source of drinking water.

27 (b) ~~It is the intention of the Commission to protect all groundwaters to a level of quality at least as high as that required~~  
28 ~~under the standards established in Rule .0202 of this Subchapter. In keeping with the policy of the Commission to~~  
29 ~~protect, maintain, and enhance groundwater quality within the State of North Carolina, the~~ The Commission will  
30 shall not approve any disposal system subject to the provisions of G.S. 143-215.1 which would result ~~in~~in any of the  
31 following:

32 (1) ~~the~~The significant degradation of groundwaters which have existing quality that is better than the  
33 assigned standard, unless such degradation is found to be in the best interests of the ~~citizens of North~~  
34 ~~Carolinapublic~~ public based upon the projected economic benefits of the facility and ~~a determination~~ that  
35 public health will be ~~protected, or~~protected.

36 (2) ~~a~~A violation of a ~~groundwater quality~~ standard beyond a designated compliance ~~boundary,~~  
37 ~~or~~boundary as a result of the permitted activities.

1 (3) ~~the~~The impairment of existing groundwater uses or increased risk to ~~the public health or safety of~~  
2 ~~the public~~ due to the operation of a ~~waste~~ disposal system.

3 (c) Violations of ~~the~~ standards resulting from groundwater withdrawals which are in compliance with water use  
4 permits issued pursuant to G.S. 143-215.15, shall not be subject to the corrective action requirements of Rule .0106  
5 of this ~~Subchapter~~Section.

6 (d) No person shall conduct or cause to be conducted, any activity which causes the concentration of any substance  
7 to exceed ~~that specified in Rule .0202 of this Subchapter~~the standards, except as authorized by the rules of this  
8 Subchapter.

9 (e) Work that is within the scope of the practice of geology and engineering, performed pursuant to the requirements  
10 of this Subchapter, ~~which that~~ involves site assessment, the interpretation of ~~subsurface~~ geologic conditions,  
11 preparation of ~~conceptual~~ corrective action ~~plans~~plans, or any work requiring detailed technical knowledge of site  
12 conditions which is submitted to the Director, shall be performed by persons, ~~firms~~firms, or professional corporations  
13 who are ~~duly~~ licensed to offer geological or engineering services by the appropriate occupational licensing board or  
14 are exempted from such licensing by G.S. 89E-6. Work which involves design of remedial systems or specialized  
15 construction techniques shall be performed by persons, ~~firms~~firms, or professional corporations who are ~~duly~~ licensed  
16 to offer engineering services. Corporations that are authorized by law to perform engineering or geological services  
17 and are exempt from the Professional Corporation Act, G.S. 55B, may perform these services.

18  
19 *History Note:* Authority G.S. ~~143-214~~; 143-214.1; 143-214.2; ~~143-215.3(e)~~; 143-215.3(a)(1);  
20 143B-282;  
21 *Eff. June 10, 1979;*  
22 *Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983;*  
23 *RRC Objection Eff. September 17, 1993, due to lack of necessity for Paragraph (e);*  
24 *Amended Eff. November 4, 1993.*

25  
26 **15A NCAC 02L .0104 RESTRICTED DESIGNATION ~~(RS)~~**

27 (a) The ~~RS designation~~restricted designation (RS) ~~serves as a warning means~~ that groundwater ~~so designated~~ may not  
28 be suitable for use as a drinking water supply without treatment. ~~The designation is temporary and will be removed~~  
29 ~~by the Director upon a determination that the quality of the groundwater so designated has been restored to the level~~  
30 ~~of the applicable standards or when the groundwaters have been reclassified by the Commission. The Director is~~  
31 ~~authorized to designate GA or GSA groundwaters as RS under any of the following circumstances:~~

32 (1) ~~Where, as a result of man's activities, groundwaters have been contaminated and the Director has approved~~  
33 ~~a corrective action plan, or termination of corrective action, that will not result in the immediate restoration of such~~  
34 ~~groundwaters to the standards established under this Subchapter.~~

35 (2) ~~Where a statutory variance has been granted as provided in Rule .0113 of this Subchapter.~~

36 (b) The Director is authorized to apply the RS to GA or GSA groundwaters, as defined under Rule .0201 of this  
37 Subchapter, under any of the following circumstances:

38 (1) For sites undergoing risk-based remediation per Rule .0106(i) of this Section.

1 (2) Areas of remaining contamination where the Secretary has approved the termination of an approved  
2 corrective action per Rule .0106(j) of this Section.

3 (3) Where a variance has been granted by the Commission as provided in Rule .0113 of this Section.

4 ~~(b)(c)~~ Groundwaters occurring within an area defined by a compliance boundary in a waste disposal permit are  
5 deemed ~~to be designated~~ RS.

6 ~~(c)(d)~~ The boundary of ~~a designated RS~~ the RS area ~~may be approximated in the absence of analytical data sufficient~~  
7 ~~to define the dimension of the area. The boundary shall be located at least 250 feet or greater away from the predicted~~  
8 ~~edge boundary~~ of the contaminant ~~plume, plume~~ and shall include any areas into which the contamination is expected  
9 to migrate. Predictive modeling may be used to supplement site-specific sample data in characterizing the current and  
10 predicted future extent of the plume.

11 ~~(d) In areas designated RS, the person responsible for groundwater contamination shall establish and implement a~~  
12 ~~groundwater monitoring system sufficient to detect changes in groundwater quality within the RS designated area.~~  
13 ~~Monitoring shall be quarterly for the first year and may be reduced to semi-annually thereafter until the applicable~~  
14 ~~standards have been achieved. If during the monitoring period, contaminant concentrations increase, additional~~  
15 ~~remedial action or monitoring pursuant to these Rules may be required.~~

16 ~~(e) The applicant for an RS designation shall also provide written verification that all property owners within and~~  
17 ~~adjacent to the proposed RS area have been notified of the requested RS designation.~~

18 (e) Where the RS area crosses, intercepts, or adjoins surface waters, the RS shall not give the right to cause or  
19 contribute to an exceedance of the surface water standards established under 15A NCAC 02B .0200.

20 (f) Application for RS. The person requesting a RS shall provide to the Director a plan that includes the following:

21 (1) The person's name, address, phone number.

22 (2) The physical location of the of facility or site where the contamination originated.

23 (3) If applicable, a copy of the Secretary's approval for termination of corrective action or a variance granted  
24 by the Commission as provided in Rule .0113 of this Section.

25 (4) A summary of the site assessment and corrective actions including the results of any predictive modeling  
26 that estimates the time to return compliance for the RS area.

27 (5) Maps showing the current horizontal and vertical extent of any contamination and the areas where the  
28 contamination is predicted or expected to migrate including the current and predicted quantities of  
29 any contaminants and all current and potential future receptors within 1,500 feet of contamination.

30 (6) A map showing the proposed RS area including the county title number, county tax identification number,  
31 or the property tax book and page identifiers of the properties included within the proposed RS area.

32 (7) A plan for monitoring the groundwater quality within the RS area that includes the current or proposed  
33 wells to be monitored, the frequency of the monitoring, and the constituents of interest to be  
34 monitored.

35 (8) If the proposed RS area extends beyond the source property's boundary, a signed statement from each  
36 property owner agreeing to the proposed RS area on their property if required by programmatic  
37 statute.

1 (9) If the proposed RS area crosses, intercepts, or adjoins surface waters, a plan to ensure the surface water  
2 standards established under 15A NCAC 02B .0200 are not violated.

3 (g) The Director shall review the proposed plan and whether the proposed plan is protective of public health and the  
4 environment for receptors within the RS and otherwise complies with requirements of this Rule.

5 ~~(f)(h)~~ Prior to approving the proposed plan in Paragraph (f) of this Rule, The the Division shall provide public notice  
6 of the intent to designate any groundwater with RS in accordance with the following requirements:as follows:

7 (1) ~~Notice shall be published~~Publish notice at least 30 days prior to any proposed final action in  
8 accordance with ~~G.S. 143-215.4. G.S. 143-215.4~~ In addition, notice shall be provided to all property  
9 owners identified pursuant to Paragraph (e) of this Rule and to the local County Health Director and  
10 the chief administrative officer of the political jurisdiction(s) in which the contamination occurs.  
11 and provide such notice to all property owners with signed statements per Paragraph (f)(8) of this  
12 Rule, to the local County Health Director, and the chief administrative officer of the jurisdiction(s)  
13 in which the contamination occurs.

14 (2) The notice shall contain the following information:

15 (A) ~~name,Name,~~ name,Name, address, and phone number of the agency issuing the public notice;

16 (B) ~~A copy of the plan in Paragraph (f) of this Rule or where the plan can be obtained.~~

17 ~~(B) the location and extent of the designated area;~~

18 ~~(C) the county title number, county tax identification number, or the property tax book and~~  
19 ~~page identifiers;~~

20 ~~(D) a brief description of the action or actions which resulted in the degradation of groundwater~~  
21 ~~in the area;~~

22 ~~(E) actions or intended actions taken to restore groundwater quality;~~

23 ~~(F) the significance of the RS designation;~~

24 ~~(G)(C) conditions~~Conditions applicable to removal of the RS designation; and

25 ~~(H)(D) address~~Address and phone number of a Division contact from whom interested parties  
26 may obtain further information.

27 (3) The Director shall consider all requests for a public hearing, and if ~~he they determines~~determine  
28 that there is significant public ~~interest he interest,~~ he or she shall issue public notice and hold a  
29 public hearing in accordance with G.S 143-215.4(b) and Rule ~~.0113(e).~~0113(e)(2) of this Section.

30 (4) ~~These~~The requirements of this Paragraph shall not apply to groundwaters defined in Paragraph  
31 ~~(b)(c)~~ of this Rule.

32 (i) The Director shall approve the plan if the proposal complies with requirements of this Rule. Upon making a  
33 determination, the Director shall provide specific findings to support their decision to approve or disapprove a  
34 proposed plan and may require a person who proposes a plan to supply any additional information not provided in  
35 Paragraph (f) of this Rule necessary to make their determination.

1 (j) The process for recordation, application, and removal of an approved RS area shall be in accordance with G.S.  
2 143B-279.10. The land use restriction shall be that groundwater within the RS may not be suitable for drinking  
3 without treatment.

4 (k) The RS shall be removed if the groundwater within the RS is reclassified by the Commission per G.S. 143-214.1.

5  
6 *History Note:* Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-282(2); 143B-279.9; 143B-279.10;  
7 Eff. June 10, 1979;  
8 Amended Eff. October 1, 1993; December 1, 1989; August 1, 1989; December 30, 1983.

9  
10 **15A NCAC 02L .0105 ADOPTION BY REFERENCE**

11  
12 *History Note:* Authority G.S. 143-214.1;  
13 Eff. December 30, 1983;  
14 Repealed Eff. August 1, 1989.

15  
16 **15A NCAC 02L .0106 INITIAL RESPONSE, SITE ASSESSMENT, AND CORRECTIVE ACTION**

17 (a) Where groundwater quality has been degraded, the ~~goal of any~~ required corrective action shall be restoration to  
18 the level of the standards, or as closely thereto as is economically and technologically feasible ~~as determined by the~~  
19 ~~Department~~ in accordance with this Rule. The corrective action strategies addressed in this Rule can be through either  
20 active remediation in Paragraph (g), natural attenuation in Paragraph (h), or risk-based remediation in Paragraph (i).  
21 In all cases involving requests to the ~~Secretary, as defined in 15A NCAC 02C .0102,~~ Secretary for approval of  
22 corrective action ~~plans,~~ plans or termination of corrective action, the responsibility for providing all information  
23 required by this Rule lies with the person(s) making the request.

24 (b) Any person conducting or controlling an ~~activity~~ activity, permitted or unpermitted, that results in the discharge  
25 of a waste or hazardous substance or oil to the ground surface, vadose zone, or groundwaters of the ~~State, or in~~  
26 ~~proximity thereto,~~ State shall take action upon discovery to terminate and control the discharge, mitigate any hazards  
27 resulting from exposure to the ~~pollutants-contaminants,~~ and ~~notify the Department, as defined in 15A NCAC 02C~~  
28 ~~.0102, of the discharge; follow the steps in Paragraphs (c), (d), or (e) of this Rule.~~

29 (c) Any person conducting or controlling an activity that has not been permitted by the Department pursuant to G.S.  
30 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A ~~and~~ that results in an increase in the concentration of a  
31 substance in excess of the standard, other than agricultural ~~operations,~~ operations defined under G.S. 106-581.1,  
32 ~~shall;~~ shall take the following steps:

- 33 (1) ~~within~~ Within 24 hours of discovery of the violation, notify the Department of the activity that has  
34 resulted in the increase and the contaminant concentration ~~levels;~~ levels, if known.
- 35 (2) ~~respond~~ Respond in accordance with Paragraph (f) of this ~~Rule;~~ Rule.
- 36 (3) ~~submit a report to the Secretary assessing the cause, significance, and extent of the violation; and~~
- 37 (4) ~~implement an approved corrective action plan for restoration of groundwater quality in accordance~~  
38 ~~with a schedule established by the Secretary. In establishing a schedule, the Secretary shall consider~~

1 a schedule proposed by the person submitting the plan. A report shall be made to the Health Director  
2 of the county or counties in which the contamination occurs in accordance with the requirements of  
3 Rule .0114(a) in this Section.

4 (3) Implement a monitoring program in accordance with Rule .0110 of this Section.

5 (4) Submit a site assessment report to the Director in accordance with Rule .0111 of this Section.

6 (5) Submit a notification in accordance with the requirements of Rule .0114(a) of this Section.

7 (6) If required, submit a corrective action plan to the Director in accordance with Rule .0111 of this  
8 Section or pursue risk-based remediation per Paragraph (i) of this Rule. If a corrective action plan  
9 is submitted for active remediation or natural attenuation, then:

10 (A) Submit a notification in accordance with the requirements of Rule .0114(b) of this  
11 Section.

12 (B) Implement corrective action plan upon its approval by the Secretary.

13 (C) Submit a notification in accordance with the requirements of Rule .0114(c) of this  
14 Section.

15 ~~Any activity not permitted pursuant to G.S. 143-215.1 or G.S. 130A-294 shall, for the purpose of this Rule, be deemed~~  
16 ~~not permitted by the Department and subject to the provisions of this Paragraph.~~

17 (d) ~~For Any-any~~ person conducting or controlling an activity that is conducted under the authority of a permit ~~initially~~  
18 ~~issued by the Department on or after December 30, 1983~~ pursuant to G.S. ~~143-215.1~~143-215.1, Article 9 of G.S. 130A,  
19 ~~or Article 11 of G.S. 130A, or G.S. 130A-294 and~~ that results in an increase in concentration of a substance in excess  
20 of the ~~standards:~~standards at or beyond the review boundary:

21 (1) ~~at or beyond a review boundary:~~ The Director may require, based on information including data  
22 trends, geologic and hydrogeologic conditions, and spacing between the review and compliance  
23 boundaries, that the person shall demonstrate, through predictive calculations or modeling, that one  
24 or more of the following ~~natural site conditions, facility design and operational controls~~ will prevent  
25 a violation of standards at the compliance ~~boundary:~~boundary:

26 (A) ~~geologic or hydrogeologic conditions;~~

27 (B) ~~facility design; or~~

28 (C) ~~operational controls.~~

29 Alternately, the person may submit a plan for alteration of existing site conditions, facility design,  
30 or operational controls that will prevent a violation at the compliance boundary, and implement that  
31 plan upon its approval by the Secretary.

32 (2) ~~at or beyond a compliance boundary: the person shall respond in accordance with Paragraph (f) of~~  
33 ~~this Rule, assess the cause, significance and extent of the violation of standards and submit the~~  
34 ~~results of the investigation, and a plan and proposed schedule for corrective action to the Secretary.~~  
35 ~~The permittee shall implement the plan as approved by and in accordance with a schedule~~  
36 ~~established by the Secretary. In establishing a schedule the Secretary shall consider any schedule~~  
37 ~~proposed by the permittee, the scope of the project, the extent of contamination, and the corrective~~

1 ~~action being proposed. If an exceedance of the standards is predicted at or beyond the compliance~~  
2 ~~boundary, the person may submit a plan for alteration of existing site conditions, facility design, or~~  
3 ~~operational controls that will prevent a violation at the compliance boundary, and implement that~~  
4 ~~plan upon its approval by the Director. In approving the plan, the Director shall consider geologic~~  
5 ~~and hydrogeologic conditions, the nature and extent of the contamination, technical and economic~~  
6 ~~feasibility, and public health impacts on all potential receptors should the contaminated plume reach~~  
7 ~~them.~~

8 ~~(e) For any person conducting or controlling an activity that is conducted under the authority of a permit issued by~~  
9 ~~the Department pursuant to G.S. 143-215.1, Article 9 of G.S. 130A, or Article 11 of G.S. 130A that results in an~~  
10 ~~increase in concentration of a substance in excess of the standards beyond the compliance boundary or within the~~  
11 ~~compliance zone as specified by Rule .0107(q) of this Section, the person shall take the following steps:~~

12 ~~(1) Within 24 hours of discovery of the initial violation, notify the Department of the activity that has~~  
13 ~~resulted in the increase, the contaminants that are in exceedance, and the contaminant concentration~~  
14 ~~levels.~~

15 ~~(2) Respond in accordance with Paragraph (f) of this Rule.~~

16 ~~(3) Implement a monitoring program in accordance with Rule .0110 of this Section.~~

17 ~~(4) Submit a site assessment report to the Director in accordance with Rule .0111 of this Section.~~

18 ~~(5) Submit a notification in accordance with the requirements of Rule .0114(a) of this Section.~~

19 ~~(6) If required, submit a corrective action plan to the Director in accordance with Rule .0111 of this~~  
20 ~~Section or pursue risk-based remediation per Paragraph (i) of this Rule. The corrective action plan~~  
21 ~~may include alteration of existing site conditions, facility design, or operational controls that will~~  
22 ~~prevent a violation at the compliance boundary. If a corrective action plan is submitted for active~~  
23 ~~remediation or natural attenuation, then:~~

24 ~~(A) Submit a notification in accordance with the requirements of Rule .0114(b) of this Section.~~

25 ~~(B) Implement an approved corrective action upon its approval by the Secretary.~~

26 ~~(C) Submit a notification in accordance with the requirements of Rule .0114(c) of this Section.~~

27 ~~(e) Any person conducting or controlling an activity that is conducted under the authority of a permit initially issued~~  
28 ~~by the Department prior to December 30, 1983 pursuant to G.S. 143-215.1 or G.S. 130A-294, and that results in an~~  
29 ~~increase in concentration of a substance in excess of the standards at or beyond the compliance boundary specified in~~  
30 ~~the permit, shall:~~

31 ~~(1) within 24 hours of discovery of the violation, notify the Department of the activity that has resulted~~  
32 ~~in the increase and the contaminant concentration levels;~~

33 ~~(2) respond in accordance with Paragraph (f) of this Rule;~~

34 ~~(3) submit a report to the Secretary assessing the cause, significance and extent of the violation; and~~

35 ~~(4) implement an approved corrective action plan for restoration of groundwater quality at or beyond~~  
36 ~~the compliance boundary, in accordance with a schedule established by the Secretary. In establishing~~  
37 ~~a schedule the Secretary shall consider any schedule proposed by the person submitting the plan. A~~

~~report shall be made to the Health Director of the county or counties where the contamination occurs in accordance with the requirements of Rule .0114(a) in this Section.~~

(f) Initial response actions required to be conducted prior to or concurrent with the site assessment required in Paragraphs ~~(e), (d), or (e)(c)~~ and (e) of this Rule shall include:

- (1) Prevention of fire, explosion, or the spread of noxious ~~fumes;~~fumes.
- (2) Abatement, containment, or control of the migration of ~~contaminants;~~contaminants.
- (3) Removal, treatment, or control of any primary pollution source such as buried waste, waste stockpiles, or surficial accumulations of free ~~products;~~products.
- (4) Removal, treatment, or control of secondary pollution sources that would be potential continuing sources of pollutants to the groundwaters, such as contaminated soils and non-aqueous phase liquids. Contaminated soils that threaten the quality of groundwaters shall be treated, contained, or disposed of in accordance with ~~rules~~Rules in this ~~Chapter~~Subchapter and in 15A NCAC 13 applicable to such activities. The treatment or disposal of contaminated soils shall be conducted in a manner that will not result in a violation of ~~the standards or North Carolina Hazardous Waste Management rules.~~ standards or 15A NCAC 13 Rules.

The initial response actions shall be documented in the site assessment report required under Rule .0111(b) of this Section. The Director may request written documentation of the response actions in advance of the site assessment report if there is an immediate threat to human health.

~~(g) The site assessment conducted pursuant to the requirements of Paragraphs (e), (d), or (e) of this Rule, shall include:~~

- ~~(1) The source and cause of contamination;~~
- ~~(2) Any imminent hazards to public health and safety, as defined in G.S. 130A-2, and any actions taken to mitigate them in accordance with Paragraph (f) of this Rule;~~
- ~~(3) All receptors and significant exposure pathways;~~
- ~~(4) The horizontal and vertical extent of soil and groundwater contamination and all significant factors affecting contaminant transport; and~~
- ~~(5) Geological and hydrogeological features influencing the movement, chemical, and physical character of the contaminants.~~

~~Reports of site assessments shall be submitted to the Department as soon as practicable or in accordance with a schedule established by the Secretary. In establishing a schedule the Secretary shall consider a proposal by the person submitting the report.~~

~~(h) Corrective action plans for restoration of groundwater quality, submitted pursuant to Paragraphs (e), (d), and (e) of this Rule shall include:~~

- ~~(1) A description of the proposed corrective action and reasons for its selection;~~
- ~~(2) Specific plans, including engineering details where applicable, for restoring groundwater quality;~~
- ~~(3) A schedule for the implementation and operation of the proposed plan; and~~
- ~~(4) A monitoring plan for evaluating the effectiveness of the proposed corrective action and the movement of the contaminant plume.~~



1 ~~(i) In the evaluation of corrective action plans, the Secretary shall consider the extent of any violations, the extent of~~  
2 ~~any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology~~  
3 ~~available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and~~  
4 ~~costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from~~  
5 ~~groundwater quality restoration.~~

6 ~~(j)(g) Corrective action using active remediation.~~ A corrective action plan prepared pursuant to Paragraphs ~~(e), (d),~~  
7 ~~or (e)(c) or (e)~~ of this Rule shall be implemented using a remedial technology demonstrated to provide the most  
8 effective means, taking into consideration geological and hydrogeological conditions at the contaminated site, for  
9 restoration of groundwater quality to the level of the standards. ~~Corrective action plans prepared pursuant to~~  
10 ~~Paragraphs (e) or (e) of this Rule may request an exception as provided in Paragraphs (k), (l), (m), (r), and (s) of this~~  
11 ~~Rule. Corrective action plans for active remediation shall include the information in Rule .0111(c) of this Section.~~

12 ~~(k) Any person required to implement an approved corrective action plan for a site subject to Paragraphs (e) or (e) of~~  
13 ~~this Rule may request that the Secretary approve such a plan without requiring groundwater remediation to the~~  
14 ~~standards. A request submitted to the Secretary under this Paragraph shall include a description of site specific~~  
15 ~~conditions, including information on the availability of public water supplies for the affected area; the technical basis~~  
16 ~~for the request; and any other information requested by the Secretary to evaluate the request in accordance with~~  
17 ~~Subparagraphs (1) through (7) of this Paragraph. The person making the request shall demonstrate:~~

- 18 ~~(1) that all sources of contamination and free product have been removed or controlled pursuant to~~  
19 ~~Paragraph (f) of this Rule;~~
- 20 ~~(2) that the time and direction of contaminant travel can be predicted with reasonable certainty;~~
- 21 ~~(3) that contaminants have not and will not migrate onto adjacent properties, or that:~~
  - 22 ~~(A) such properties are served by an existing public water supply system dependent on surface~~  
23 ~~waters or hydraulically isolated groundwater; or~~
  - 24 ~~(B) the owners of such properties have consented in writing to the request;~~
- 25 ~~(4) that the standards specified in Rule .0202 of this Subchapter will be met at a location no closer than~~  
26 ~~one year time of travel upgradient of an existing or foreseeable receptor, based on travel time and~~  
27 ~~the natural attenuation capacity of subsurface materials or on a physical barrier to groundwater~~  
28 ~~migration that exists or will be installed by the person making the request;~~
- 29 ~~(5) that, if the contaminant plume is expected to intercept surface waters, the groundwater discharge~~  
30 ~~will not possess contaminant concentrations that would result in violations of standards for surface~~  
31 ~~waters contained in 15A NCAC 02B .0200;~~
- 32 ~~(6) that public notice of the request has been provided in accordance with Rule .0114(b) of this Section;~~  
33 ~~and~~
- 34 ~~(7) that the proposed corrective action plan would be consistent with all other environmental laws.~~

35 ~~(h) Corrective action using natural attenuation.~~ Any person required to implement an approved corrective action  
36 plan for a site subject to Paragraphs (c) or (e) of this Rule may request that the Secretary approve such a plan based  
37 upon natural processes of degradation and attenuation of contaminants. ~~Corrective action plans for natural attenuation~~

1 ~~shall make the demonstration and include the information in Rule .0111(d) of this Section.~~ A request submitted to the  
2 Secretary under this Paragraph shall include a description of site specific conditions, including written documentation  
3 of projected groundwater use in the contaminated area based on current state or local government planning efforts;  
4 the technical basis for the request; and any other information requested by the Secretary to evaluate the request in  
5 accordance with Subparagraphs (1) through (10) of this Paragraph. The person making the request shall demonstrate:

6 (1) ~~that all sources of contamination and free product have been removed or controlled pursuant to~~  
7 ~~Paragraph (f) of this Rule;~~

8 (2) ~~that the contaminant has the capacity to degrade or attenuate under the site specific conditions;~~

9 (3) ~~that the time and direction of contaminant travel can be predicted based on subsurface conditions~~  
10 ~~and the contaminant's physical and chemical properties;~~

11 (4) ~~that contaminant migration will not result in any violation of applicable groundwater standards at~~  
12 ~~any existing or foreseeable receptor;~~

13 (5) ~~that contaminants have not and will not migrate onto adjacent properties, or that:~~

14 (A) ~~such properties are served by an existing public water supply system dependent on surface~~  
15 ~~waters or hydraulically isolated groundwater; or~~

16 (B) ~~the owners of such properties have consented in writing to the request;~~

17 (6) ~~that, if the contaminant plume is expected to intercept surface waters, the groundwater discharge~~  
18 ~~will not possess contaminant concentrations that would result in violations of standards for surface~~  
19 ~~waters contained in 15A NCAC 02B .0200;~~

20 (7) ~~that the person making the request will put in place a groundwater monitoring program that, based~~  
21 ~~on subsurface conditions and the physical and chemical properties of the contaminant, will~~  
22 ~~accurately track the degradation and attenuation of contaminants and contaminant by products~~  
23 ~~within and down gradient of the plume and to detect contaminants and contaminant by products~~  
24 ~~prior to their reaching any existing or foreseeable receptor at least one year's time of travel~~  
25 ~~upgradient of the receptor and no greater than the distance the groundwater at the contaminated site~~  
26 ~~is predicted to travel in five years;~~

27 (8) ~~that all necessary access agreements needed to monitor groundwater quality pursuant to~~  
28 ~~Subparagraph (7) of this Paragraph have been or can be obtained;~~

29 (9) ~~that public notice of the request has been provided in accordance with Rule .0114(b) of this Section;~~  
30 ~~and~~

31 (10) ~~that the proposed corrective action plan would be consistent with all other environmental laws.~~

32 (i) Corrective action using risk-based remediation. A person choosing to use risk-based remediation shall comply  
33 with the requirements in G.S. 130A Article 9 Part 8.

34 ~~(m)~~(j) Termination of active remediation prior to achieving the standards. The Department or any Any person required  
35 to implement an approved corrective action plan for a site subject to Paragraphs (e) or (e) Paragraph (g) of this Rule  
36 may request that the Secretary approve termination of ~~corrective action~~ the active remediation. The owner and  
37 operator of an active remediation system shall demonstrate that, by terminating the active remediation and then

1 implementing an approved natural attenuation corrective action under Paragraph (h) of this Rule, all potential receptors  
2 will be protected.

3 (1) A request submitted to the Secretary under this Paragraph shall include:

4 (A) ~~a~~An discussion of the duration of the corrective action, the total project cost, projected  
5 annual cost for ~~continuance~~continuance, and evaluation of the success of the corrective  
6 ~~action;~~action.

7 (B) ~~an~~An evaluation of alternate treatment technologies that could potentially result in further  
8 reduction of contaminant levels, projected capital, and annual operating costs for each  
9 ~~technology;~~and technology.

10 (C) ~~the~~The effects, including public health ~~and safety~~ impacts, on groundwater users if  
11 contaminant levels remain at levels existing at the time corrective action is terminated.

12 (D) The proposed contaminant concentrations to actively remediate to in the source area and  
13 all predictive calculations and model runs demonstrating that the standards will be met at  
14 all existing or potential receptors, based on travel time and the natural attenuation capacity  
15 of subsurface materials or on a barrier to groundwater migration that exists or will be  
16 installed by the person making the request.

17 (E) A demonstration that continuation of active remediation would not result in a significant  
18 reduction in the concentration of contaminants. This demonstration shall show the duration  
19 and degree of success of existing remedial efforts to attain the standards. For the purpose  
20 of this Rule, a "significant reduction" is demonstrated by showing that the asymptotic slope  
21 of the contaminant concentrations over time is less than a ratio of 1:40 over a term of one  
22 year based on four consecutive quarters with sampling events spaced at least three months  
23 apart.

24 (F) A natural attenuation corrective action plan for the remaining contamination in accordance  
25 with Paragraph (h) of this Rule.

26 ~~(2) In addition, the person making the request shall demonstrate:~~

27 ~~(A) that continuation of corrective action would not result in a significant reduction in the~~  
28 ~~concentration of contaminants. This demonstration shall show the duration and degree of~~  
29 ~~success of existing remedial efforts to attain standards. For the purpose of this Part, a~~  
30 ~~"significant reduction" is demonstrated by showing that the asymptotic slope of the~~  
31 ~~contaminants curve of decontamination is less than a ratio of 1:40 over a term of one year~~  
32 ~~based on quarterly sampling;~~

33 ~~(B) that contaminants have not and will not migrate onto adjacent properties, or that:~~

34 ~~(i) such properties are served by an existing public water supply system dependent~~  
35 ~~on surface waters or hydraulically isolated groundwater; or~~

36 ~~(ii) the owners of such properties have consented in writing to the request;~~

1 ~~(C) — that, if the contaminant plumes are expected to intercept surface waters, the groundwater~~  
2 ~~discharge will not possess contaminant concentrations that would result in violations of~~  
3 ~~standards for surface waters contained in 15A NCAC 02B .0200;~~

4 ~~(D) — that public notice of the request has been provided in accordance with Rule .0114(b) of this~~  
5 ~~Section; and~~

6 ~~(E) — that the proposed termination would be consistent with all other environmental laws.~~

7 ~~(3)(2)~~ The Secretary shall not authorize termination of active remediation ~~corrective action~~ for any area  
8 that, at the time the request is made, has been identified by a state or local groundwater use planning  
9 process for resource development.

10 ~~(4)(3)~~ The Secretary may authorize the termination of active remediation, ~~corrective action~~, or amend the  
11 corrective action plan after considering all the information in the request. In making the  
12 authorization, the Secretary shall consider geologic and hydrogeologic conditions, the nature and  
13 extent of the contamination, technical and economic feasibility, and public health and safety impacts  
14 on all existing and foreseeable potential receptors should the contaminated plume reach  
15 them, receptors and the impacts the contaminated plume may have if it reaches them. The Secretary  
16 will review the request for completeness and may request any additional information necessary to  
17 make their authorization. ~~Upon termination of corrective action, the Secretary shall require~~  
18 ~~implementation of a groundwater monitoring program that, based on subsurface conditions and the~~  
19 ~~physical and chemical properties of the contaminants, will accurately track the degradation and~~  
20 ~~attenuation of contaminants at a location of no less than one year's predicted time of travel~~  
21 ~~upgradient of any existing or foreseeable receptor. The monitoring program shall remain in effect~~  
22 ~~until there is sufficient evidence that the contaminant concentrations have been reduced to the level~~  
23 ~~of the standards. For the purpose of this Part, "sufficient evidence" means that sampling and~~  
24 ~~analyses demonstrate that contaminant concentrations have been reduced to the level of the~~  
25 ~~standards on multiple sampling events.~~

26 (k) In the evaluation of active remediation or natural attenuation corrective action plans, the Secretary shall consider  
27 the extent of any violations, the extent of any threat to human health, the extent of damage or potential adverse impact  
28 to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants  
29 in the environment, geologic and hydrogeologic conditions, the time estimated to achieve groundwater quality  
30 restoration, technical and economic feasibility, and the public and economic benefits to be derived from groundwater  
31 quality restoration.

32 ~~(n)(l) Upon a determination by the Secretary that~~ Where continued corrective action would result in no significant  
33 reduction in contaminant ~~concentrations, concentrations as determined in Part (j)(1)(E) of this Rule, and the~~  
34 ~~contaminated groundwaters can be rendered potable by treatment using technologies that are in use in other~~  
35 ~~applications and shown to be effective for removal of contaminants,~~ the person may request that the Secretary may  
36 designate the ~~remaining~~ area of degraded groundwater RS. ~~Where the remaining degraded groundwaters cannot be~~

1 ~~made potable by such treatment, the~~ The Secretary-Commission may also consider a request for reclassification of  
2 the groundwater to a GC classification as outlined in Rule ~~.0204.0319~~ of this Subchapter.

3 ~~(m)~~ If at any time the Secretary determines that a new technology is available that would remediate the  
4 contaminated groundwater to the standards specified in Rule .0202 of this Subchapter, the Secretary may require the  
5 responsible party to evaluate the economic and technological feasibility of implementing the new technology in an  
6 active ~~groundwater remediation~~ corrective action ~~plan in accordance with a schedule established by the~~  
7 Secretary-plan. The Secretary's determination to utilize new technology at any site or for any particular contaminant  
8 or constituent of interest shall include a consideration of the factors in ~~Paragraph (h) of this Rule~~ Rule .0111(c) of this  
9 Section.

10 ~~(n)~~ Where the standards are exceeded as a result of the application of pesticides or other agricultural chemicals,  
11 the Secretary shall request the Pesticide Board or the Department of Agriculture and Consumer Services to assist the  
12 Department in determining the cause of the violation. If the violation is determined to have resulted from the use of  
13 pesticides, the Secretary shall request the Pesticide Board to take appropriate regulatory action to control the use of  
14 the chemical or chemicals responsible for, or contributing to, such violations, or to discontinue their use.

15 ~~(q) The approval pursuant to this Rule of any corrective action plan, or modification or termination thereof, that~~  
16 ~~permits the migration of a contaminant onto adjacent property, shall not affect any private right of action by any party~~  
17 ~~that may be affected by that contamination.~~

18 ~~(o)~~ If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the  
19 concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial  
20 or noncommercial underground storage tank as defined in G.S. 143-215.94A, any person required to implement an  
21 approved corrective action plan pursuant to this Rule and seeking reimbursement for the Commercial or  
22 Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds shall implement a corrective action  
23 plan meeting the requirements of Paragraph ~~(k) or (l)~~ (g) or (h) of this Rule unless the person demonstrates to the  
24 Secretary that:

- 25 (1) contamination resulting from the discharge cannot qualify for approval of a plan based on the  
26 requirements of the Paragraphs; or
- 27 (2) the cost of making such a demonstration would exceed the cost of implementing a corrective action  
28 plan submitted pursuant to ~~Paragraph (e) of this Rule~~ Rule .0111(c) of this Section.

29 ~~(p)~~ If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the  
30 concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial  
31 or noncommercial underground storage tank as defined in G.S. 143-215.94A, the Secretary may require any person  
32 implementing or operating a previously approved corrective action plan pursuant to this Rule to:

- 33 (1) develop and implement a corrective action plan meeting the requirements of Paragraphs ~~(k) and~~  
34 ~~(l)~~ (g) and (h) of this Rule; or
- 35 (2) seek discontinuance of corrective action pursuant to Paragraph ~~(m)~~ (j) of this Rule.

1 (q) Pursuant to this Rule, the approval of any corrective action plan, modification, or termination thereof, that permits  
2 the migration of a contaminant onto adjacent property, shall not affect any private right of action by any party that  
3 may be affected by that contaminant.

4  
5 *History Note: Authority G.S. 143-215.1; 143-215.3; ~~143-215.94A;~~143-215.94T; 143-215.94V; 143B-282;*  
6 *~~1995 (Reg. Sess. 1996) c. 648, s. 1;~~*  
7 *Eff. August 1, 1989;*  
8 *Amended Eff. October 1, 1993; September 1, 1992;*  
9 *Temporary Amendment Eff. January 2, 1998; January 2, 1996;*  
10 *Amended Eff. July 1, 2016; October 29, 1998.*

11  
12 **15A NCAC 02L .0107 COMPLIANCE BOUNDARY**

13 (a) For disposal systems individually permitted prior to December 30, 1983, the compliance boundary ~~is~~shall be  
14 established at a horizontal distance of 500 feet from the waste boundary or at the property boundary, whichever is  
15 closer to the source.

16 (b) For disposal systems individually permitted on or after December 30, 1983, a compliance boundary shall be  
17 established at a horizontal distance of 250 feet from the waste boundary, or 50 feet within the property boundary,  
18 whichever point is closer to the source.

19 (c) The compliance boundary shall be established ~~by the Director, or his designee~~ at the time of permit issuance.  
20 issuance and shall remain in place for the duration of the permit. Any sale or transfer of property which affects a  
21 compliance boundary shall be reported immediately to the Director, or his designee. For disposal systems which are  
22 not governed by Paragraphs (e) or (f) of this Rule, the compliance boundary affected by the sale or transfer of property  
23 will be re-established consistent with Paragraphs (a) or (b) of this Rule, whichever is applicable.

24 ~~(d) Except as provided in Paragraph (g) of this Rule, no water supply wells shall be constructed or operated within~~  
25 ~~the compliance boundary of a disposal system individually permitted or re-permitted after January 1, 1993.~~

26 (d) The compliance boundary and zone shall extend vertically from the surface through the water table to the  
27 maximum depth of saturation.

28 (e) The permitted activity shall not cause or contribute to an exceedance of the surface water standards established  
29 under 15A NCAC 02B .0200.

30 (f) Multiple contiguous properties under common ownership and permitted for use as a waste disposal area shall be  
31 treated as a single property with regard to determination of a compliance zone and setbacks to property lines as per  
32 Paragraphs (a) or (b) of this Rule.

33 (g) Where compliance zones for separately permitted waste disposal areas under the same ownership on the same  
34 property intersect, the Director shall combine the compliance zones into one single compliance zone with a single  
35 compliance boundary.

36 (h) The permittee shall establish a monitoring program within the compliance zone per the requirements in Rule .0110  
37 of this Section.

1 (i) Except as provided in Paragraph (m) of this Rule, no new water supply wells shall be constructed within the  
2 compliance zone of a disposal system individually permitted after January 1, 1993.

3 ~~(e)(j)~~ Except as provided in Paragraph ~~(g)(m)~~ of this Rule, a permittee shall not transfer land within an established  
4 compliance ~~boundary-zone~~ of a disposal system permitted ~~or re-permitted~~ after January 1, 1993 unless:

- 5 (1) ~~the~~The land transferred is serviced by a community water system as ~~defined in~~regulated under 15A  
6 NCAC 18C, the source of which is located outside the compliance boundary; and
- 7 (2) the deed transferring the property:
  - 8 (A) contains notice of the permit, including the permit number, a description of the type of  
9 permit, and the name, address and telephone number of the permitting agency; ~~and~~
  - 10 (B) contains a restrictive covenant running with the land and in favor of the permittee and the  
11 State, as a third party beneficiary, which prohibits the construction and operation of water  
12 supply wells within the compliance ~~boundary-zone~~; and
  - 13 (C) contains a restrictive covenant running with the land and in favor of the permittee and the  
14 State, as a third party beneficiary, which grants the right to the permittee and the State to  
15 enter on such property within the compliance ~~boundary-zone~~ for groundwater monitoring  
16 and remediation purposes.

17 ~~(f)(k)~~ Except as provided in Paragraph ~~(g)(m)~~ of this Rule, if at the time a permit is issued ~~or reissued~~ after- January  
18 1, 1993, the permittee is not the owner of the land within the compliance ~~boundary-zone~~, it shall be a condition of the  
19 permit issued or renewed that the landowner of the land within the compliance ~~boundary-zone~~, if other than the  
20 permittee, execute and file in the Register of Deeds in the county in which the land is located, an easement running  
21 with the land which:

- 22 (1) contains:
  - 23 (A) either a notice of the permit, including the permit number, a description of the type of  
24 permit, and the name, address and telephone number of the permitting agency; or
  - 25 (B) a reference to a notice of the permit with book and page number of its recordation if such  
26 notice is required to be filed by statute;
- 27 (2) prohibits the construction and operation of water supply wells within the compliance  
28 ~~boundary-zone~~; and
- 29 (3) reserves the right to the permittee and the State to enter on such property within the compliance  
30 ~~boundary-zone~~ for groundwater monitoring and remediation purposes. The Director shall, upon  
31 request by the landowner, file a document terminating the easement with the appropriate Register  
32 of Deeds. The easement may be terminated by the Director when its purpose has been fulfilled or  
33 the need for the easement no longer exists. ~~Under those conditions the Director shall, upon request~~  
34 ~~by the landowner, file a document terminating the easement with the appropriate Register of Deeds.~~

35 (l) Any sale or transfer of property which affects a compliance boundary shall be reported to the Director within one  
36 week of the final sale or transfer. For disposal systems which are not governed by Paragraphs (j) or (k) of this Rule,  
37 the compliance boundary affected by the sale or transfer of property shall be reestablished consistent with this Rule.

1 ~~(g)(m) The requirements of Paragraphs (d), (e) and (f) of this Rule are not applicable to~~For ground adsorption sewage  
2 treatment and disposal systems serving four or fewer single family dwellings or multiunit dwellings of four or fewer  
3 ~~units.~~units regulated under 15A NCAC 02T .0600, the requirements of Paragraphs (j) and (k) of this Rule shall not be  
4 applicable.

5 ~~(h) The boundary shall form a vertical plane extending from the water table to the maximum depth of saturation.~~

6 ~~(+)(n)~~ For ground absorption sewage treatment and disposal systems which are ~~permitted~~regulated under 15A NCAC  
7 02T .0600, 18A .1900, the compliance boundary shall be established at the property boundary.

8 ~~(+)(o)~~ Penalties authorized pursuant to G.S. 143-215.6A(a)(1) ~~will~~shall not be assessed for violations of the standards  
9 within a compliance boundary zone unless the violations are the result of violations of permit conditions or negligence  
10 in the management of the facility.

11 ~~(k) The Director shall require:~~

12 ~~(1) that permits for all activities governed by G.S. 143-215.1 be written to protect the quality of~~  
13 ~~groundwater established by applicable standards, at the compliance boundary;~~

14 ~~(2) that necessary groundwater quality monitoring shall be conducted within the compliance boundary;~~  
15 ~~and~~

16 ~~(3) that a violation of standards within the compliance boundary resulting from activities conducted by~~  
17 ~~the permitted facility be remedied through clean-up, recovery, containment, or other response when~~  
18 ~~any of the following conditions occur:~~

19 ~~(A) a violation of any standard in adjoining classified groundwaters occurs or can be reasonably~~  
20 ~~predicted to occur considering hydrogeologic conditions, modeling, or other available~~  
21 ~~evidence;~~

22 ~~(B) an imminent hazard or threat to the public health or safety exists; or~~

23 ~~(C) a violation of any standard in groundwater occurring in the bedrock other than limestones~~  
24 ~~found in the Coastal Plain sediments, unless it can be demonstrated that the violation will~~  
25 ~~not adversely affect, or have the potential to adversely affect a water supply well.~~

26 (p) The Director shall require that permits for all activities governed by G.S. 143-215.1 be written in such a way to  
27 protect groundwater at or beyond the compliance boundary.

28 (q) The Director shall require that exceedances of the standards resulting from activities conducted by the permitted  
29 facility within the compliance zone be remedied through clean-up, recovery, containment, facility design, or  
30 operational control if any of the following occur:

31 (1) A violation of the standards occurs or is predicted to occur through groundwater modeling in  
32 groundwater at or beyond the compliance boundary as a result of the permitted activities.

33 (2) A violation of the surface water standards established under 15A NCAC 02B .0200 occurs or is  
34 predicted to occur through modeling as a result of the permitted activities.

35 (3) An imminent hazard as defined in G.S.130A-2 exists.



1 (4) An exceedance of the standards occurs in bedrock within the compliance boundary as a result of the  
2 permitted activities unless it can be demonstrated that the violation will not adversely affect any  
3 receptor.

4  
5 *History Note: Authority G.S. ~~143-215.1(b); 143-215.1~~; 143-215.3(a)(1); -143B-282;*  
6 *Eff. August 1, 1989;*  
7 *Amended Eff. October 1, 1993; November 2, 1992.*

8  
9 **15A NCAC 02L .0108 REVIEW BOUNDARY**

10 A review boundary is established around any waste disposal ~~system area~~ midway between the compliance boundary  
11 and the waste boundary. When the concentration of any substance equals or exceeds the standard at the review  
12 boundary as determined by monitoring, the permittee shall be required to take action in accordance with the provisions  
13 of Rule ~~.0106(e)(2)(A)~~, 0106(d) of this ~~Subchapter~~. Section.

14  
15 *History Note: Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143B-282;*  
16 *Eff. August 1, 1989.*

17  
18 **15A NCAC 02L .0109 DELEGATION**

19 (a) The Director is delegated the authority to enter into consent special orders under G.S. 143-215.2 for violations of  
20 the standards except when a public meeting is required as provided in 15A NCAC ~~2H02H~~ .1203.

21 (b) The Director is delegated the authority to prepare a proposed special order to be issued by the Commission without  
22 the consent of the person affected and to notify the affected person of that proposed order and of the procedure set out  
23 in G.S. 150B-23 to contest the proposed special order.

24 (c) The ~~Director, or his designee~~ Director shall give public notice of proposed consent special orders as specified in  
25 15A NCAC ~~2H02H~~ .1203.

26  
27 *History Note: Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.3(a)(4);*  
28 *Eff. August 1, 1989;*  
29 *Amended Eff. October 1, 1993; October 1, 1990.*

30  
31 **15A NCAC 02L .0110 MONITORING**

32 (a) Except where exempted by statute or this Subchapter, the Director may require any person who causes, ~~permits~~  
33 permits, or has control over any discharge of ~~waste, waste~~ or ~~groundwater~~ cleanup program, ~~shall install and to~~  
34 implement a monitoring program ~~system, at such locations, and~~ in such ~~detail, detail~~ as ~~the Director, or his designee~~  
35 may require ~~required~~ to evaluate the effects of the discharge upon the environment or waters of the ~~state, State,~~  
36 including the effect of any actions taken to restore groundwater quality, as well as the efficiency of any treatment  
37 facility. The Director shall consider information including the geologic and hydrogeologic conditions, potential  
38 receptors, and risks to public health and the environment in determining the nature and extent of any required  
39 monitoring program. The monitoring program plan shall be prepared under the ~~responsible~~ charge of a Professional

1 ~~professional Engineer-engineer or Licensed-licensed Geologist-geologist~~ and bear the seal of the ~~same-same if required~~  
2 ~~under G.S. 89C or G.S. 89E.~~

3 (b) Monitoring systems ~~within the monitoring program~~ shall be constructed ~~and operated~~ in a manner that will not  
4 result in the contamination of ~~adjacent groundwaters of a higher quality-waters of the State.~~

5 ~~(c) The Director may require modification of a monitoring program or system or require additional monitoring of a~~  
6 ~~contaminant or constituent of interest if it is determined to be in the best interest to public health and the environment.~~

7 ~~(d) Monitoring systems within the monitoring program shall be able to:~~

8 ~~(1) Track the migration, degradation, and attenuation of contaminants and contaminant by-products~~  
9 ~~within a source area and within and down gradient of a contaminant plume.~~

10 ~~(2) Detect contaminants and contaminant by-products prior to their reaching any potential receptor.~~

11 ~~(3) Detect if a groundwater contaminant plume is causing or contributing to exceedances of the surface~~  
12 ~~water standards established under 15A NCAC 02B .0200.~~

13 ~~(e) Monitoring shall be conducted and results reported in a manner and at a frequency specified by the Director,~~  
14 ~~or his designee-Director based on information including the geologic and hydrogeologic conditions, potential~~  
15 ~~receptors, and risks to public health and the environment.~~

16 ~~(f) Monitoring programs shall remain in effect until it is demonstrated that the contaminant concentrations resulting~~  
17 ~~from site activities or actions have been reduced to a level at or below the standards for a minimum of four consecutive~~  
18 ~~quarters with monitoring events spaced at least three months apart. The Director may require an extension of~~  
19 ~~monitoring if the Director determines that concentrations are fluctuating at or near the standards or the data trends~~  
20 ~~suggest that concentrations may be increasing. Once the Director is satisfied that the standards have been met or that~~  
21 ~~corrective action is no longer necessary to ensure compliance with the Rules of this Subchapter, the Director shall~~  
22 ~~furnish a letter stating that no further action is required. The Director shall also require a plan be submitted for~~  
23 ~~maintaining or abandoning the monitoring wells in accordance with 15A NCAC 02C .0100.~~

24  
25 *History Note: Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143-215.66; 143B-282;*  
26 *Eff. August 1, 1989;*  
27 *Amended Eff. October 1, 1993.*

## 28 29 **15A NCAC 02L .0111 REPORTS**

30 (a) Any person subject to the requirements ~~for corrective action specified in Rule .0106 of this Section-Subchapter~~  
31 ~~shall submit to the Director, in such detail as the Director may require, a written report that describes plans or reports~~  
32 ~~including those associated with initial response, site assessment, and corrective action. Reports shall be submitted in~~  
33 ~~accordance with a schedule established by the Director. In establishing a schedule, the Director shall consider a~~  
34 ~~proposal by the person submitting the plan or report.~~

35 ~~(1) the results of the investigation specified in Paragraphs (c) and (d) of Rule .0106 of this Section,~~  
36 ~~including but not limited to:~~

37 ~~(A) a description of the sampling procedures followed and methods of chemical analyses used;~~  
38 ~~and~~

- 1 ~~(B) — all technical data utilized in support of any conclusions drawn or determinations made.~~  
2 ~~(2) — the results of the predictive calculations or modeling, including a copy of the calculations or model~~  
3 ~~runs and all supporting technical data, used in the demonstration required in Paragraph (d) of Rule~~  
4 ~~.0106 of this Section; and~~  
5 ~~(3) — the proposed methodology and timetable associated with the corrective action for those situations~~  
6 ~~identified in Paragraphs (c) and (d) of Rule .0106 of this Section.~~

7 ~~(b) The report shall be prepared under the responsible charge of a Professional Engineer or Licensed Geologist and~~  
8 ~~bear the seal of the same as specified in Rule .0106(d) of this Section.~~

9 (b) A site assessment conducted pursuant to the requirements of Paragraphs (c) or (e) in Rule .0106 of this Section  
10 shall include:

- 11 (1) a description of the site including current and historical operations at the facility and all current and  
12 historical waste streams;  
13 (2) the source and cause of contamination;  
14 (3) any imminent hazards to public health and any actions taken to mitigate them;  
15 (4) a description of the initial response actions taken in accordance with Rule .0106(f) of this Section.  
16 (5) all potential receptors and expected exposure pathways;  
17 (6) the horizontal and vertical extent of soil and groundwater contamination and all significant factors  
18 affecting contaminant transport;  
19 (7) background threshold values for affected media;  
20 (8) geological and hydrogeological features influencing the movement, chemical, and physical  
21 character of the contaminants;  
22 (9) the nature and extent of any surface water or sediment contamination resulting from interactions  
23 with contaminated soil or groundwater;  
24 (10) a description of the sampling procedures followed, and methods of chemical analyses used;  
25 (11) all technical data utilized in support of any interpretations, conclusions, determinations, or  
26 evaluations made; and  
27 (12) the results of predictive calculations or modeling, including a copy of the calculations or model runs  
28 and all supporting technical data.

29 (c) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for active  
30 remediation shall include:

- 31 (1) a summary of the results of the site assessment submitted in accordance with Paragraph (b) of this  
32 Rule;  
33 (2) the technical basis for the requested corrective action;  
34 (3) an evaluation of risk to receptors within the contaminant plume and in areas where the plume is  
35 predicted to migrate through modeling;  
36 (4) an evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based  
37 on current State or local government planning efforts;

1 (5) a summary of the available technology that could feasibly be used as a potential remedial strategy  
2 based on the specific site conditions and nature and extent of the contamination that includes the  
3 predicted time to return to compliance with the standards and the estimated costs to implement each  
4 potential strategy;

5 (6) the proposed remedial technology that the person proposes to implement that includes:

6 (A) the rationale for selecting the proposed technology;

7 (B) plans and specifications, including engineering details;

8 (C) a schedule for implementation and operation of the technology;

9 (D) the predicted time to return to compliance with the standards;

10 (E) the estimated costs to implement and operate the technology;

11 (D) a monitoring plan that evaluates the effectiveness of the technology; and

12 (E) the results of any modeling that shows the projected movement of the contaminant plume  
13 until the predicted time to return to compliance with the standards;

14 (7) all technical data utilized in support of any interpretations, conclusions, determinations, or  
15 evaluations made; and

16 (8) the results of predictive calculations or modeling, including a copy of the calculations or model runs  
17 and all supporting technical data.

18 (d) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for natural  
19 attenuation shall include all of the information required in Paragraph (c) of this Rule and demonstrate that:

20 (1) all sources of contamination and free product have been removed or controlled pursuant to Rule  
21 .0106(f) of this Section;

22 (2) the contaminant has the capacity to degrade or attenuate under the site-specific conditions;

23 (3) the time and direction of contaminant travel can be predicted based on subsurface conditions and  
24 the contaminant's physical and chemical properties;

25 (4) contaminant migration will not result in any violation of applicable standards at any existing or  
26 potential receptor;

27 (5) contaminants have not and will not migrate onto adjacent properties, or that:

28 (A) such properties are served by an existing public water supply system dependent on surface  
29 waters or hydraulically isolated groundwater; or

30 (B) the owners of such properties have consented in writing to the request;

31 (6) if the contaminant plume is expected to intercept surface waters, the groundwater discharge will not  
32 possess contaminant concentrations that would result in violations of the surface water standards  
33 established under 15A NCAC 02B .0200;

34 (7) the person making the request will put in place a groundwater monitoring program in conformance  
35 with Rule .0110 of this Section;

36 (8) all necessary access agreements needed to monitor groundwater quality have been or can be  
37 obtained;

- 1 (9) public notice of the request has been provided in accordance with Rule .0114(b) of this Section; and  
2 (10) the proposed corrective action plan would be consistent with all other environmental laws.  
3 (e) All reports and plans shall be prepared under the charge of a professional engineer, licensed soil scientist, or  
4 licensed geologist if required under G.S. 89C, G.S. 89E, or G.S. 89F.

5  
6 *History Note: Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143B-282;*  
7 *Eff. August 1, 1989;*  
8 *Amended Eff. October 1, 1993.*

9  
10 **15A NCAC 02L .0112 ANALYTICAL PROCEDURES**

11 Tests or analytical procedures to determine compliance or noncompliance with the standards established in Rule .0202  
12 of this Subchapter ~~will shall~~ be in accordance ~~with:with~~ 15A NCAC 02H .0805(a)(1).

- 13 ~~(1) The most sensitive of the following methods or procedures for substances where the standard is at~~  
14 ~~or above the method detection limit value:~~  
15 ~~(a) The most recent version of Standard Methods for the Examination of Water and~~  
16 ~~Wastewater, published jointly by American Public Health Association, American Water~~  
17 ~~Works Association and Water Pollution Control Federation;~~  
18 ~~(b) Methods for Chemical Analysis of Water and Waste, 1979, U.S. Environmental Protection~~  
19 ~~Agency publication number EPA-600/4-79-020, as revised March 1983;~~  
20 ~~(c) Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, 3rd Edition, 1986,~~  
21 ~~U.S. Environmental Protection Agency publication number SW-846;~~  
22 ~~(d) Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Federal Register~~  
23 ~~Vol. 49, No. 209, 40 CFR Part 136, October 26, 1984;~~  
24 ~~(e) Methods or procedures approved by letter from the Director upon application by the~~  
25 ~~regulated source; or~~  
26 ~~(2) A method or procedure approved by the Director for substances where the standard is less than the~~  
27 ~~method detection limit value.~~

28  
29 *History Note: Authority G.S. 143-215.3(a)(1); 143B-282;*  
30 *Eff. August 1, 1989;*  
31 *Amended Eff. October 1, 1993.*

32  
33 **15A NCAC 02L .0113 VARIANCE**

- 34 (a) The Commission, on its own initiative or pursuant to a request under G.S. 143-215.3(e), may grant variances to  
35 the rules of this Subchapter.  
36 (b) Requests for variances are ~~filed by letter from submitted by~~ the applicant to the Environmental Management  
37 Commission. The application shall be ~~mailed submitted in writing~~ to the chairman of the Commission in care of the  
38 ~~Director, Division of Environmental Management, Post Office Box 29535, Raleigh, N.C. 27626-0535, Director.~~  
39 (c) The application shall contain the following information:

- 1 (1) Applications filed by counties or municipalities ~~must~~shall include a resolution of the County Board  
2 of Commissioners or the governing board of the municipality requesting the variance.
  - 3 (2) A description of the past, ~~existing-existing~~, or proposed activities or operations that have or would  
4 result in a discharge of contaminants to the groundwaters.
  - 5 (3) Description of the proposed area for which a variance is requested. A ~~detailed~~-location ~~map~~,map  
6 showing the orientation of the facility, potential for groundwater contaminant migration, as well as  
7 the area covered by the variance request, with reference to at least two geographic references  
8 ~~including (numbered)numbered~~ roads, named streams/rivers, ~~etc.)etc.~~ ~~must~~shall be included.
  - 9 (4) Supporting information to establish that the variance will not endanger the public ~~health-and~~  
10 ~~safety,health~~, including health and environmental effects from exposure to groundwater  
11 contaminants. (~~Location~~Location of wells and other water supply sources including details of well  
12 construction, ~~if known~~, within 1/2 mile of site ~~must~~shall be shown on a ~~map~~)-map.
  - 13 (5) Supporting information to establish that requirements of this Rule cannot be achieved by providing  
14 the best available technology economically reasonable. This information ~~must~~shall identify specific  
15 technology considered, ~~and~~the costs of implementing the ~~technology-technology~~, and the impact of  
16 the costs on the applicant.
  - 17 (6) Supporting information to establish that compliance would produce serious financial hardship on  
18 the applicant.
  - 19 (7) Supporting information that compliance would produce serious financial hardship without equal or  
20 greater public benefit.
  - 21 (8) A copy of any Special Order that was issued in connection with contaminants in the proposed area  
22 and supporting information that applicant has complied with the Special Order.
  - 23 (9) A list of the names and addresses of any property owners within the proposed area of the ~~variance~~  
24 variance, as well as ~~any~~-property owners adjacent to the site covered by the variance.
- 25 (d) Upon receipt of the application, the Director ~~will~~shall review it for completeness and request additional  
26 information if ~~necessary~~-incomplete. When the application is complete, the Director shall give public notice of the  
27 application and schedule the matter for a public hearing in accordance with G.S. 143-215.4(b) and the procedures set  
28 out in Paragraph (e) of this Rule.
- 29 (e) Notice of Public Hearing:
- 30 (1) Notice of public hearing on any variance application shall be circulated in the geographical areas of  
31 the proposed ~~variance-variance~~. ~~by the Director at~~At least ~~30-20~~ days prior to the date of the  
32 ~~hearing;hearing~~, the Director shall:
  - 33 (A) ~~by publishing~~publish the notice one time in a newspaper having general circulation in said  
34 county;
  - 35 (B) ~~by mailings~~submit the notice to the North Carolina Department of ~~Environment, Health,~~  
36 ~~and Natural Resources,Health and Human Services, Division of~~ Environmental Health  
37 Section and appropriate local ~~health agency;health director~~;

- 1 (C) ~~by mailings~~submit the notice to any other federal, state or local agency upon request;
- 2 (D) ~~by mailings~~submit the notice to the local governmental unit or units having jurisdiction over
- 3 the geographic area covered by the variance;
- 4 (E) ~~by mailings~~submit the notice to any property owner within the proposed area of the
- 5 variance, as well as any property owners adjacent to the site covered by the ~~variance;~~
- 6 ~~and variance;~~
- 7 (F) ~~by mailings~~submit the notice to any person or group upon ~~request; request; and~~
- 8 ~~(G) \_\_\_\_\_~~ post the notice on the Department website.

9 (2) The contents of public notice of any hearing shall include ~~at least~~ the following:

- 10 (A) ~~name, name,~~ address, and phone number of agency holding the public hearing;
- 11 (B) ~~name - name~~ and address of each applicant whose application will be considered at the
- 12 meeting;
- 13 (C) a brief summary of the variance request;
- 14 (D) a geographic description of a proposed area for which a variance is requested;
- 15 (E) a brief description of activities or operations which have or will result in the discharge of
- 16 contaminants to the ~~groundwaters-~~waters of the State described in the variance application;
- 17 (F) a brief reference to the public notice issued for each variance application;
- 18 (G) information regarding the time and location for the hearing;
- 19 (H) the purpose of the hearing;
- 20 (I) the address and phone number of premises at which interested persons may obtain further
- 21 information, request a copy of each application, and inspect and copy forms and related
- 22 documents; and
- 23 (J) a brief description of the nature of the hearing including the rules and procedures to be
- 24 followed. The notice shall also state that additional information is on file with the Director
- 25 and may be inspected at any time during normal working hours. Copies of the information
- 26 on file will be made available upon request and payment of cost or reproduction.

27 (f) All comments received within 30 days following the date of ~~the public hearing~~publication in the newspaper in Part

28 (e)(1)(a) of this Rule shall be made part of the application file and shall be considered by the Commission prior to

29 taking final action on the application.

30 (g) In determining whether to grant a variance, the Commission shall consider whether the applicant has complied

31 with any Special ~~Order, Order~~ or Special Order by Consent issued under G.S. 143-215.2.

32 (h) If the Commission's final decision is unacceptable, the applicant may file a petition for a contested case in

33 accordance with Chapter 150B of the General Statutes. If the petition is not filed within 60 days, the decision on the

34 variance shall be final and binding.

35 (i) A variance shall not operate as a defense to an action at law based upon a public or private nuisance theory or any

36 other cause of action.

37 *History Note: Authority G.S. 143-215.3(a)(1); 143-215.3(a)(3); 143-215.3(a)(4); 143-215.3(e); 143-215.4;*

1                   *Eff. August 1, 1989;*  
2                   *Amended Eff. October 1, 1993.*

3  
4   **15A NCAC 02L .0114   NOTIFICATION REQUIREMENTS**

5 (a) Any person subject to the requirements of Rule .0106(c) or (e) of this Section shall submit to the local ~~Health~~  
6 ~~health Director,director~~ and the chief administrative officer of the ~~political~~-jurisdictions in which the groundwater  
7 contamination has occurred, a ~~report that describes:~~

8 ~~(1) — The area extent of the contaminant plume;~~

9 ~~(2) — The chemical constituents in the groundwater which exceed the standards described in Rule .0202 of this~~  
10 ~~Subchapter;~~

11 ~~(3) — Actions taken and intended to mitigate threats to human health;~~

12 ~~(4) — The location of any wells installed for the purpose of monitoring the contaminant plume and the frequency~~  
13 ~~of sampling.~~

14 ~~The report described in this Rule shall be submitted no later than five working days after submittal of the completed~~  
15 ~~copy of the site assessment report assessing the cause, significance and extent of the violation as required by Rule~~  
16 ~~.0106(e)-.0111(b) of this Section.~~

17 (b) Any person who submits a request under Rule ~~.0106(k), (l), or (m).~~0106(g) or (h) of this Section shall notify the  
18 local ~~Health Director~~health director and the chief administrative officer of the ~~political~~-jurisdictions in which the  
19 contaminant plume occurs, and all property owners and occupants within or contiguous to the area underlain by the  
20 contaminant plume, and under the areas where it is expected to migrate, ~~of the nature~~a summary of the request and  
21 reasons supporting it. Notification shall be made by certified mail concurrent with the submittal of the request to the  
22 Director. A final decision by the Director shall be postponed for a period of 30 days following receipt of the request  
23 so that the Director may consider comments submitted by individuals interested in the request.

24 (c) Any person whose request under Rule ~~.0106(k), (l), or (m).~~0106(g) or (h) of this Section is granted by the Director  
25 shall notify parties specified in Paragraph (b) of this Rule of the Director's ~~decision.~~decision and a summary of the  
26 actions to be taken. Notification shall be made by certified mail within 30 days of receipt of the Director's decision.

27  
28 *History Note:    Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-282(2)b;*  
29                   *Eff. October 1, 1993.*

30  
31   **15A NCAC 02L .0115   RISK-BASED ASSESSMENT AND CORRECTIVE ACTION FOR PETROLEUM**  
32                   **UNDERGROUND STORAGE TANKS**

33  
34 *History Note:    Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.94A; 143-215.94E; 143-215.94T; 143-*  
35 *215.94V; 143B-282; 1995 (Reg. Sess. 1996) c. 648,s. 1;*  
36 *Temporary Adoption Eff. January 2, 1998;*  
37 *Eff. October 29, 1998;*  
38 *Recodified to 15A NCAC 02L .0400 Eff. December 1, 2005.*



## ATTACHMENT C – PUBLIC HEARING ANNOUNCEMENT

DEQ Website: <https://deq.nc.gov/news/events/groundwater-resources-public-hearing-permanent-rules-15a-ncac-021-0100>

### **Groundwater Resources: Public Hearing on Permanent Rules 15A NCAC 02L .0100**

PUBLIC NOTICE is hereby given that, on September 9, 2021, the North Carolina Environmental Management Commission (EMC) approved the Division of Water Resources (DWR) to amend the permanent rules 15A NCAC 02L .0100 – General Considerations.

A public hearing will be conducted to consider public comments on proposed amendments to rule 15A NCAC 02L .0100 – General Considerations. The purpose of the rule-making is to incorporate changes required by Session Law 2018-114 Sections 19.(a)–(e) and 19.1(a)-(e) and Session Law 2020-74 Section 17.1(a)-(e). The last significant changes to these rules occurred in 1993 and 1998. Based on the Regulatory Impact Analysis, the current proposed changes will not have any significant fiscal impacts on the State or regulated community.

The public is hereby notified that DWR will hold a public hearing at 6 p.m. on Wednesday, November 3, 2021 via an online WebEx meeting event detailed below. The purpose of this public hearing is to allow interested persons to submit oral comments regarding the DWR’s proposed amendments to Permanent Rules 15A NCAC 02L .0100.

If you wish to attend or speak at the hearing, you must register before 5 p.m. on Wednesday, November 3, 2021. You may register to attend and/or speak at this hearing using the following registration form: <https://forms.office.com/g/favjce1WYv>

#### **A virtual public hearing will be held by webinar as follows:**

<https://ncdenrits.webex.com/ncdenrits/j.php?MTID=me8e9760d90fbb373c01c9b5790727440>

Wednesday, Nov 3, 2021 6 p.m. | 2 hours | (UTC-04:00) Eastern Time (US & Canada)

Event number: 2429 916 8947

Event password: NCDEQ

Join by phone: +1-415-655-0003 US TOLL

Access code: 242 991 68947

The public is also invited to comment in writing on the application. Written comments must be received by DWR no later than 5:00 p.m. on December 14, 2021. Please email written comments to [groundwater.comments@ncdenr.gov](mailto:groundwater.comments@ncdenr.gov). Please include “2L Rules” in the email’s subject line. Comments may also be submitted in writing to: Eric Smith, Division of Water Resources, 1636 Mail Service Center, Raleigh, NC 27699-1636.

## ATTACHMENT D – HEARING OFFICER’S REMARKS

Hearing Officer's Statement  
November 3, 2021, 6:00 p.m.  
15A NCAC 02L Section .0100

Good evening, my name is Morella Sanchez King and I am the supervisor of the Division of Water Resources Regional Operations Section at the DEQ Wilmington Regional Office. My role as hearing officer is to receive comments on the proposed rule actions and the regulatory impact analysis; and report those comments and recommend actions to the Environmental Management Commission.

During this virtual public hearing tonight, we will be receiving oral comments from those individuals who requested to speak when they pre-registered for this event. If you are having technical difficulties with WebEx, you can use the chat feature in WebEx to ask questions or seek assistance. You can also visit the Department of Environmental Quality’s website using the link in the public notice for this hearing for instructions on various ways to connect to WebEx.

We will now open the hearing on the proposed re-adoption of 15A NCAC 02L Section .0100 titled “General Considerations”.

A regulatory impact analysis was drafted for these rule changes, and the final version was approved for publication by the NC Office of State Budget and Management pursuant to G.S. 150B-21.4 on May 20, 2021. The Office of State Budget and Management determined that no fiscal note is necessary because the proposed rule changes do not have state or local government impacts, or substantial economic impacts to the regulated community.

The public notice for this hearing was published in Volume 36, Issue 8 of the *North Carolina Register* on **October 15, 2021**, and the public notice and regulatory impact analysis were posted on the Department of Environmental Quality’s website. The public notice was also emailed to those on the Division of Water Resources rules development email distribution list. We will add the public notice, regulatory impact analysis, and the proposed rule changes into the hearing record without reading them at this time.

Rick Bolich from the Division of Water Resources will now give a brief overview of the amendments to these rules.

### PRESENTATION

We will now take comments on re-adoption and amendments to 15A NCAC 02L Section .0100 “General Considerations”. (Use option 1 or 2 below, as appropriate)

To do this, I would have called the names of each of the pre-registered speakers in order, but no one has registered to speak at this hearing, so instead the WebEx Host will unmute each of the

attendees and ask them if they would still like to provide a comment even though they did not register. Each person will be given 3 minutes to give their comments.

Please do not start speaking until the WebEx Host has indicated that your microphone has been unmuted. It would also be helpful if any person speaking tonight would also submit a written statement for inclusion into the hearing record.

If we call your name, but cannot hear you after you have been unmuted, please check to see if you are still muted on the WebEx screen on your computer, or on your phone. If you are having audio issues, try a different method of audio connection within WebEx or use the “Call Me” feature to have WebEx call your personal telephone line. If we still cannot hear you, we will proceed to the next registered speaker, but will call your name again at the end of the hearing.

If you did not register to speak, but still want to provide comments on the proposed rulemaking, remember there are several other ways to provide comments until the end of the comment period, which is December 14, 2021:

To provide written comments, you have two options:

- You can email them to [groundwater.comments@ncdenr.gov](mailto:groundwater.comments@ncdenr.gov) with “2L Rules” in the subject line.
- You can also mail written comments to the address listed in the public notice.

Thank you all for your participation in this virtual public hearing and your interest in the public hearing process. This hearing is adjourned.

THANK YOU!

**ATTACHMENT E – PUBLIC HEARING DIVISION OF WATER RESOURCES STAFF  
PRESENTATION**

# *Digital Public Hearing - Readoption and Amendments to Rules in 15A NCAC 02L Section .0100 “General Considerations”*

Thank you for joining the WebEx public hearing for:

## **Readoption and Amendments to Rules in 15A NCAC 02L Section .0100 “General Considerations”**

The hearing will begin at 6:00 p.m.

Please be patient as our WebEx Host identifies attendees and speakers.

### **Important notes:**

You will be muted upon entry to hearing. The host will unmute you when it is your turn to speak.

This public hearing will be recorded. The recording (audio, video, and chat record) will be made a part of the public record for the facility.

If you are experiencing technical difficulties, please try leaving the meeting and rejoining or contact us through the chat feature.

If you use the chat feature to contact us, please send message to “All Attendees”.

**You may also submit written comments by December 14, 2021 via e-mail to:**

[groundwater.comments@ncdenr.gov](mailto:groundwater.comments@ncdenr.gov) (Please type “2L Rules” in the subject line)





# Proposed Amendments to 15A NCAC 02L .0100

Rick Bolich  
November 3, 2021



# Re-Adoption

- Re-Adoption required by SL-2013-413 and G.S. 150B-21.3A.
- Re-Adoption of 15A NCAC 02L Section .0100 – General Considerations only at this time.



# Overview

- No Major Changes are Currently Proposed.
- Revisions are mostly reorganization and clarifications.
- No significant impacts noted (for both regulated community and State).





# Actions to Date

- Preliminary external review by interested parties completed (December 2020)
- Rule Review Commission pre-review completed (February 2021)
- Regulatory Impact Analysis Approved (May 2021)
- Approval from Environmental Management Commission to proceed to public hearing (September 2021)



# 02L .0101 Summary

- 2L .0101 Authorization
  - Changed title to “Purpose” for consistency with other rules.
  - No significant changes.



# 02L .0102 Summary

- 2L .0102 Definitions

- Added definitions for the following words for clarification:

Active remediation, Anthropogenic, Background threshold values, Chief Administrative Officer, Compliance zone, Constituent of interest, Control, Licensed soil scientist, Lower limit of quantitation, Method detection limit, Person, Secretary (to include their designee), and Waste disposal system

- .0102(29) – Added “waters of the State,” as defined in G.S. 143-212(6), to the definition for receptor.



# 02L .0103 Summary

- 2L .0103 Policy
  - No significant changes.



# 02L .0104 Summary

- 2L .0104 Restricted Designation

- .0104(a) – Clarified that the RS is a *land use restriction* rather than a groundwater classification. Only the Environmental Management Commission can designate groundwater classifications.
- .0104(b) – Clarified that the designation is only for certain corrective action methods.
  - Risk-based
  - Areas of remaining contamination after approved termination of active corrective action
  - Where a variance has been granted



# 02L .0105 Summary

- 2L .0105 Adoption by Reference
  - Repealed August 1, 1989
  - No change



# 02L .0106 Summary

- 2L .0106 Corrective Action
  - Re-organized this section, but no substantial changes.
  - Retitled to “Initial Response, Site Assessment, And Corrective Action” for clarification.
  - Proposed language reads more like a step-by-step process.
  - Moved monitoring and reporting parts to rules to .0110 and .0111.



# 02L .0106 Summary

- 2L .0106 Corrective Action (cont.)
  - .0106(d) – Stated that the Director **may** require groundwater modeling to determine if there will be a violation of groundwater standards at the compliance boundary.
    - Decision to be based on data trends, geologic and hydrogeologic conditions, and spacing between review and compliance boundaries.
  - .0106(i) – Clarified that the person may also choose to pursue Risk Based remediation per G.S. 130A, Article 9, Part 8 (if applicable).





# 02L .0106 Summary

- 2L .0106 Corrective Action (cont.)
  - .0106(j) – Clarified that, if a person requests to terminate active remediation prior to achieving the standards, they must demonstrate that natural attenuation will result in a return to the standards.



# 02L .0107 Summary

- 2L .0107 Compliance Boundary

- Definitions - Introduced the concept of *compliance zone* (the area between the compliance boundary and the waste boundary). Helps define that area without having to make references to the “area within the compliance boundary” as the rules currently do.
- .0107(c) - Added that the compliance boundary shall remain in place for the duration of the permit. Currently, there is no specified timeframe for the termination of the compliance boundary. When the permit is rescinded or revoked, the compliance boundary no longer exists.



# 02L .0107 Summary

- 2L .0107 Compliance Boundary (cont.)
  - .0107(f) - Allowed multiple contiguous properties to be treated as a single property. Applied from General Statute 143-215.1(i).
  - .0107(j) – Reworded the language to clarify that DEQ is not prohibiting the transfer of land within a compliance boundary for permitted facilities.
    - Instead, the rule states what is required if the land is to be transferred, which is essentially a deed modification.



# 02L .0107 Summary

- 2L .0107 Compliance Boundary (cont.)
  - .0107(j) – Deleted the prohibition of construction of new wells within the compliance boundary as this is already in the rules [.0107(i)].
  - .0107(j) – Deleted the rule that grants the right of the permittee and State to enter property as this authority is already granted in G.S. 143-215.3(a)(2).



# 02L .0107 Summary

- 2L .0107 Compliance Boundary (cont.)
  - .0107(k) – Similar changes as in .0107(j).
    - Added clarification as to what is required for the termination of the easement. Current rule states only that it may be terminated “once its purpose has been fulfilled.”
  - .0107(l) – Added a timetable to report sales or transfers of property that affect the compliance boundary to the Director.
    - Current rule says immediately.
    - Revised rule specifies reporting to Director within 7 (calendar) days of final sale or transfer.



# 02L .0107 Summary

- 2L .0107 Compliance Boundary (cont.)
  - .0107(q)(4) - For potential violations within the compliance boundary, we deleted the exception for limestones within the Coastal Plain so that it applies to all bedrock.



# 02L .0108 Summary

- 2L .0108 Review Boundary

- Specified that if there is an exceedance of a Standard at the review boundary, the person shall be required to take action per .0106(d).
- .0106(d) – Provided specific items that the Director may consider for requiring groundwater modeling. Considerations include:
  - Geological or hydrogeological conditions
  - Data trends (i.e. if the standards are exceeded by a very small margin, concentrations are trending downward, or for one-time exceedances)
  - Spacing between compliance boundary and review boundary



# 02L .0109 Summary

- 2L .0109 Delegation
  - No significant changes.





# 02L .0110 Summary

- 2L .0110 Monitoring
  - Moved the monitoring requirements previously in .0106 to this rule.
  - .0110(c) – Clarified that the Director may require additional monitoring of any constituent of interest (COI).
    - For example, monitoring for a COI that could result from a geochemical change (change in pH, etc.) in the groundwater due to the presence of the waste system.



# 02L .0110 Summary

- 2L .0110 Monitoring

- .0110(d)(2) – Deleted requirement for placing wells “one year’s time of travel up gradient” of a potential receptor and “no greater than the distance the groundwater at the contaminated site is predicted to travel in five years”.
  - Groundwater can travel as little as a few centimeters per year.

Instead, we stated that the wells have to be able to detect contaminants **prior** to reaching a receptor (.0110(d)(3)).



# 02L .0110 Summary

- 2L .0110 Monitoring (cont.)
  - .0110(d)(4) – Added monitoring systems (i.e. wells, seepage meters, etc.) shall be able to detect if a groundwater contaminant plume is causing or contributing to surface water standard exceedances.
    - A system such as this would not be required unless it is determined that contaminated groundwater is discharging into a surface water body.
  - .0110(f) – Clarified the timeframe for the termination of monitoring programs.
    - If concentrations are at or below the standards for four consecutive quarters, the Director may issue a “No Further Action” letter depending on data trends.



# 02L .0111 Summary

- 2L .0111 Reports
  - Moved the reporting requirements previously in .0106 to this rule.
  - .0111(b), (c), and (d) – Added some specific items to what is required in site assessment reports and corrective action plans.
    - These are items that are deemed necessary for complete and thorough reports.
    - Allow for easier evaluation by DWR staff.
  - *The items proposed to be required in these reports are generally provided by consultants although they are not currently specified in the Rule.*



# 02L .0112 Summary

- 2L .0112 Analytical Procedures
  - Referred directly to 15A NCAC 02H .0805(a)(1) which is the rule for laboratory procedures, analytical methods, sample preservation, sample containers, and sample holding times.



# 02L .0113-.0115 Summary

- 2L .0113 through .0115
  - No significant changes.



# Re-Adoption Timeline

<u>Action item</u>	<u>Dates</u>
Public Comment Period Opens	October 15, 2021
Public Hearing	November 3, 2021
Public Comment Period Closes	December 14, 2021
Compile Hearing Officers Report (HOR)	December 2021 - February 2022
EMC Adopts Rules	March 2022
RRC Review and Approval	April 2022
Effective Date for Rules	May 2022



- Written comments can be submitted through **December 14, 2021**
- Via email: [groundwater.comments@ncdenr.gov](mailto:groundwater.comments@ncdenr.gov)
- Via mail: 2L .0100 Comments  
1636 Mail Service Center  
Raleigh, NC 27699-1636





# Contact Information

Rick Bolich  
Groundwater Resources Section  
NCDEQ Division of Water  
Resources  
(919) 707-3671  
[rick.bolich@ncdenr.gov](mailto:rick.bolich@ncdenr.gov)



## **ATTACHMENT F – PUBLIC HEARING REGISTERED ATTENDEES**

- 1) Amanda Strawderman
- 2) Call-in User (704) ###-####
- 3) Dan Curry
- 4) Elizabeth Kountis

No affiliations were given.

## **ATTACHMENT G – PUBLIC HEARING SPEAKERS**

None of the attendees registered to speak and none chose to speak at the end.

## ATTACHMENT H - WRITTEN COMMENTS RECEIVED

### DWR Suggested Revisions to 2L .0100 Rules (12/14/21)

#### .0104 Restricted Designation

(d) add “predicted or” in front of expected for consistency.

#### .0103 Policy

(a) – delete “citizens of North Carolina” to be consistent.

#### .0106 Initial Response, Site Assessment, and Corrective Action

(b) – replace the word “steps” with “requirements” as a better word choice.

(c)(6)(A) – add “for natural attenuation corrective action” for clarification.

(c)(6)(B) – add the word “the” before corrective action plan for grammar.

(c)(6)(C) - add “for natural attenuation corrective action” for clarification.

(d)(2) – don’t delete the (2) as this was an oversight.

(e)(6)(A) – add “for natural attenuation corrective action” for clarification.

(e)(6)(B) – make the same as (c)(6)(B) for consistency.

(e)(6)(C) - add “for natural attenuation corrective action” for clarification.

(j) – add “prior to achieving the standards” at the end of the second sentence for clarification.

(j)(1) – combine with (j) as this should all be one rule.

(j)(2) – make this the new (k) as this should be a separate rule.

(j)(3) – make this the new (l) as this should be a separate rule.

(l) – fix the reference from (j)(1)(E) to (j)(5) after the (j)(1) is combined with (j).

(p)(2) – add a reference to the new (l) which would have been (j)(3).

#### .0111 Reports

(c)(6)(F) – instead of the words “that evaluates”, use “to evaluate” instead for grammar.

(c)(6)(G) – add “or predictive calculations” after modeling for clarification and consistency.

(c)(8) – change wording to “a copy of the calculations or model runs and all supporting technical data; and”. This is because of adding the predictive calculations to (c)(6)(G).

Add the following for consistency with the current 02L Rule [Note: this is in the current 02L Rule but was inadvertently left out of the proposed rule]:

(c)(9) *a demonstration that:*

(A) *all necessary access agreements needed to monitor groundwater quality have been or can be obtained; and*

(B) *the proposed corrective action plan would be consistent with all other environmental laws.*

Rearrange (d) to the following to be consistent with the current 2L Rule and to provide additional clarification [Note: this does not change the intent of the original 02L Rule and is essentially just a reorganization of the proposed Rule (d) with no new requirements]:

*(d) Corrective action plans submitted pursuant to Paragraphs (c) or (e) in Rule .0106 of this Section for natural attenuation shall include:*

- (1) a summary of the results of the site assessment submitted in accordance with Paragraph (b) of this Rule;*
- (2) the technical basis for the requested corrective action;*
- (3) an evaluation of risk to receptors within the contaminant plume and in areas where the plume is predicted to migrate through modeling;*
- (4) an evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based on current State or local government planning efforts;*
- (5) the predicted time to return to compliance with the standards;*
- (6) the results of any modeling or predictive calculations that show the projected movement of the contaminant plume until the predicted time to return to compliance with the standards;*
- (7) all technical data utilized in support of any interpretations, conclusions, determinations, or evaluations made;*
- (8) a copy of the calculations or model runs and all supporting technical data;*
- (9) a monitoring plan to evaluate the effectiveness of the natural attenuation; and*
- (10) a demonstration that:*
  - (A) all sources of contamination and free product have been removed or controlled pursuant to Rule .0106(f) of this Section;*
  - (B) the contaminant has the capacity to degrade or attenuate under the site-specific conditions;*
  - (C) the time and direction of contaminant travel can be predicted based on subsurface conditions and the contaminant's physical and chemical properties;*
  - (D) contaminant migration will not result in any violation of applicable standards at any existing or potential receptor;*
  - (E) contaminants have not and will not migrate onto adjacent properties, or that:*
    - (i) such properties are served by an existing public water supply system dependent on surface waters or hydraulically isolated groundwater; or*
    - (ii) the owners of such properties have consented in writing to the request;*
  - (F) if the contaminant plume is predicted or expected to intercept surface waters, the groundwater discharge will not possess contaminant concentrations that would result in violations of the surface water standards established under 15A NCAC 02B .0200;*
  - (G) all necessary access agreements needed to monitor groundwater quality have been or can be obtained;*

- (H) public notice of the request has been provided in accordance with Rule .0114(b) and (c) of this Section; and*
- (I) the proposed corrective action plan would be consistent with all other environmental laws.*

.0113 Variance

- (b) – delete the words “Environmental Management” in front of the word “Commission” as they are unnecessary.

.0114 Notification Requirements

- (b) – add “predicted or” in front of expected for consistency.