	CLASSIFICATION	

**SECTION .0100 - GENERAL CONSIDERATIONS** 

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### 15A NCAC 02L .0101 **AUTHORIZATION PURPOSE**

(a) N.C. General Statute 143-214.1 directs that the Commission develop and adopt after proper study a series of classifications and standards which will be appropriate for the purpose of classifying each of the waters of the state in such a way as to promote the policy and purposes of the act. Pursuant to this statute, the rules in this This Subchapter establishes a series of classifications and water quality standards applicable to the groundwaters of the state. (b) These-The rules Rules in this Subchapter are applicable to all activities or actions, intentional or accidental, which contribute to the degradation of groundwater quality, regardless of any permit issued by a governmental agency authorizing such action or activity except an innocent landowner who is a bona fide purchaser of property which

contains a source of groundwater contamination, who purchased such property without knowledge or a reasonable basis for knowing that groundwater contamination had occurred, or a person whose interest or ownership in the

property is based or derived from a security interest in the property, shall not be considered a responsible party.

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17 History Note:

Authority G.S. 143-214.1; 143-214.2; 143-215.3(a)(1); 143B-282;

Eff. June 10, 1979;

Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983.

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### **DEFINITIONS** 15A NCAC 02L .0102

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

- "Active remediation" means corrective action that includes active physical, biological, or chemical manipulation of groundwater, or of the rock or soil media for the purpose of reducing the amount of contamination or minimizing the spread of contamination.
- "Anthropogenic" means of, relating to, or resulting from the influence of human beings on nature. (2)
- "Background threshold values" mean statistically derived values of the naturally occurring (3) concentrations of constituents in environmental media for use as a basis for compliance with the Rules in this Subchapter and corrective action.
- "Bedrock" means any consolidated rock encountered in the place in which it was formed or (1)(4)deposited and which cannot be readily excavated without the use of explosives or power equipment.
- "Commission" means the Environmental Management Commission as organized under G.S. 143B. (2)
- "Chief administrative Officer" shall be, for the purposes of this rule, the Mayor, Chairman of the (3)(5)County Commissioners, the County Manager, the City Manager, or other individual of equal or similar position, as appropriate.
- "Compliance boundary" means a boundary around a waste disposal system at and beyond which (6)groundwater quality standards may not be exceeded and only applies to facilities which have received a permit issued under the authority of G.S. 143-215.1 or G.S. 130A.

1	(7)	"Compliance zone" means the area within the compliance boundary.
2	(8)	"Constituent of interest" means any constituent that is manmade or naturally occurring that the
3		Director deems is of interest to public health and the environment; due to its presence that may be
4		associated with site activities.
5	<del>(4)</del> (9)	"Contaminant" means any substance occurring that occurs in groundwater as a result of
6		anthropogenic sources or activities in concentrations which exceed the groundwater quality
7		standards specified in Rule .0202 of this Subchapter.standards.
8	(10)	"Control" means the ability to direct, restrain, or influence sources of contamination and
9		contaminant distribution.
10	<del>(5)</del> (11)	"Corrective action plan" means a plan for controlling or eliminating sources of groundwater
11		contamination or for improving or restoring groundwater quality. achieving groundwater quality
12		restoration or both.
13	<del>(6)</del> (12)	"Director" means Director of the Division of Environmental Management Water Resources or
14		Waste Management or their delegate.
15	<del>(7)</del> (13)	"Division" means the Division of Environmental Management. Water Resources or Waste
16		Management.
17	<del>(8)</del> (14)	"Exposure pathway" means a course taken by a contaminant by way of a transport medium after its
18		release to the environment.
19	<del>(9)</del> (15)	"Free product" means a non-aqueous phase liquid which may be present within the saturated zone
20		or in surface water.
21	<del>(10)</del> (16)	"Fresh groundwaters" means those groundwaters having a chloride concentration equal to or less
22		than 250 milligrams per liter.
23	<del>(11)</del> <u>(17)</u>	"Groundwaters" means those waters occurring in the subsurface under saturated conditions.
24	<del>(12)</del> (18)	"Hazardous substance" means any substance as defined by Section 101(14) of the Comprehensive
25		Environmental Response, Compensation and Liability Act of 1980 (CERCLA).
26	<del>(13)</del> (19)	"Licensed geologist" means a person who has been duly licensed as a geologist in accordance with
27		the requirements of G.S. 89E.
28	(20)	"Licensed soil scientist" means a person who has been duly licensed as a soil scientist in accordance
29		with the requirements of G.S. 89F.
30	(21)	"Lower Limit of Quantitation" means the lowest acceptable concentration used in the daily
31		calibration curve.
32	(22)	"Method Detection Limit" means the minimum measured concentration of a substance that can be
33		$\underline{reported\ with\ 99\%\ confidence\ that\ the\ measured\ concentration\ is\ distinguishable\ from\ method\ blank}$
34		results.
35	<del>(14)</del> (23)	"Natural remediation" attenuation" means those natural processes acting to restore groundwater
36		quality, including dilution, filtration, sorption, ion-exchange, chemical transformation
37		transformation, and biodegradation.

1,	(24) "Natural conditions or naturally occurring" means the physical, biological, chemical and
2	radiological conditions which occur naturally and are not a result of anthropogenic sources or
3	activities.
4	(25) "Potable waters" means those waters suitable for drinking by humans.
5	(15)(26) "Practical Quantitation Limit" means the lowest concentration of a given material that can be
6	reliably achieved among laboratories within specified limits of precision and accuracy by a given
7	analytical method during routine laboratory analysis.
8	(16) "Natural conditions" means the physical, biological, chemical and radiological conditions which
9	occur naturally.
10	(17) "Potable waters" means those waters suitable for drinking by humans.
11	(18)(27) "Professional Engineer" means a person who has been duly registered and licensed as a professional
12	engineer in accordance with the requirements of G.S. 89C.
13	(19)(28) "Receptor" means any human, plant, animal, or structure structure, or waters of the State, which is,
14	or has the potential to be, adversely effected by the release or migration of contaminants. Any well
15	constructed for the purpose of monitoring groundwater and contaminant concentrations shall not be
16	considered a receptor.
17	(20)(29) "Review boundary" means a boundary around a permitted disposal facility, midway between a waste
18	boundary and a compliance boundary at which groundwater monitoring is may be required.
19	(21) "Saline groundwaters" means those groundwaters having a chloride concentration of more than 250
20	mg/l.
21	(22)(30) "Saturated zone" means that part of the subsurface below the water table in which all the
22	interconnected voids are filled with water under pressure at or greater than atmospheric. It does not
23	include the capillary fringe.
24	(31) "Secretary" means the Secretary of the Department of Environmental Quality or the Secretary's
25	delegate.
26	(23)(32) "Standards" "Standard" or "Standards" means groundwater quality standards as specified in Rule
27	.0202 of this Subchapter-Subchapter and any interim maximum allowable concentrations
28	established by the Director.
29	(24)(33) "Suitable for drinking" means a quality of water which does not contain substances in concentrations
30	which, either singularly or in combination if ingested into the human body, may cause death, disease,
31	behavioral abnormalities, congenital defects, genetic mutations, or result in an incremental lifetime
32	cancer risk in excess of 1x10-6, or render the water unacceptable due to aesthetic qualities, including
33	taste, odor or appearance.
34	(25)(34) "Time of travel" means the time required for contaminants in groundwater to move a unit distance.
35	(26)(35) "Waste boundary" means the perimeter of the permitted waste disposal area.

1 (36) "Waste Disposal System" means, for the purpose of this rule, a disposal system permitted under authority
2 of G.S 143-215.1 or G.S 130A, whose primary purpose is for the disposal of waste to or below the
3 ground surface in accordance with the terms and conditions of the permit.

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

History Note: Authority G.S. 143-214.1; 143-215; 143B-282; Eff. June 10, 1979.

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

# 15A NCAC 02L .0103 POLICY

- (a) The <u>rules\_Rules\_established</u> in this Subchapter are intended 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\_<u>usage by the citizens of North Carolina.usage.</u> It is the policy of the Commission that the best usage of the groundwaters of the state is as a source of drinking water. These groundwaters generally are a potable source of drinking water without the necessity of significant treatment. It is the intent of <u>these-the</u> Rules <u>in this Subchapter</u> to protect the overall high quality of North Carolina's groundwaters to the level established by the standards and to enhance and restore the quality of degraded groundwaters where feasible and necessary to protect human health and the environment, or to ensure their suitability as a future source of drinking water.
- (b) It is the intention of the Commission to protect all groundwaters to a level of quality at least as high as that required under the standards established in Rule .0202 of this Subchapterstandards. In keeping with the policy of the Commission to protect, maintain, and enhance groundwater quality within the State of North Carolina, the Commission will not approve any waste disposal system subject to the provisions of G.S. 143-215.1 which would result in: in any of the following:
  - (1) the The significant degradation of groundwaters which have existing quality that is better than the assigned standard, unless such degradation is found to be in the best interests of the citizens of North Carolinapublic based upon the projected economic benefits of the facility and a determination that public health will be protected, or protected.
  - (2) a-A violation of a groundwater quality standard beyond a designated compliance boundary, orboundary as a result of the permitted activities.
  - (3) the <u>The</u> impairment of existing groundwater uses or increased risk to the <u>public</u> health or safety of the <u>public</u> due to the operation of a waste disposal system.
- (c) Violations of <u>the</u> standards resulting from groundwater withdrawals which are in compliance with water use permits issued pursuant to G.S. 143-215.15, shall not be subject to the corrective action requirements of Rule .0106 of this Subchapter.

- 1 (d) No person shall conduct or cause to be conducted, any activity which causes causes, either directly or indirectly,
- 2 the concentration of any substance to exceed that specified in Rule .0202 of this Subchapter, the Standards, except as
- 3 authorized by the rules of this Subchapter.
- 4 (e) Work that is within the scope of the practice of geology and engineering, performed pursuant to the requirements
- of this Subchapter, which involves site assessment, the interpretation of subsurface geologic conditions, preparation
- 6 of conceptual corrective action plans plans, or any work requiring detailed technical knowledge of site conditions
- which is submitted to the Director, shall be performed by persons, firms firms, or professional corporations who are
- 8 duly licensed to offer geological or engineering services by the appropriate occupational licensing board or are
- 9 exempted from such licensing by G.S. 89E-6. Work which involves design of remedial systems or specialized
- construction techniques shall be performed by persons, firms firms, or professional corporations who are duly licensed
- to offer engineering services. Corporations that are authorized by law to perform engineering or geological services
- and are exempt from the Professional Corporation Act, G.S. 55B, may perform these services.

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14 History Note: Authority G.S. 143-214; 143-214.1; 143-214.2; 143-215.3(e); 143-215.3(a)(1);
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15 *143B-282*;

16 Eff. June 10, 1979;

Amended Eff. August 1, 1989; July 1, 1988; September 1, 1984; December 30, 1983;

RRC Objection Eff. September 17, 1993, due to lack of necessity for Paragraph (e);

Amended Eff. November 4, 1993.

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

- (a) The RS designation Restricted designation (RS) is a land-use restriction that serves as a warning that groundwater
- so designated may not be suitable for use as a drinking water supply without treatment. The designation is temporary
- 24 and will be removed by the Director upon a determination that the quality of the groundwater so designated has been
- 25 restored to the level of the applicable standards or when the groundwaters have been reclassified by the Commission.
- 26 The Director is authorized to designate GA or GSA groundwaters as RS under any of the following circumstances:
- 27 (1) Where, as a result of man's activities, groundwaters have been contaminated and the Director has approved
- 28 a corrective action plan, or termination of corrective action, that will not result in the immediate restoration of such
- 29 groundwaters to the standards established under this Subchapter.
  - (2) Where a statutory variance has been granted as provided in Rule .0113 of this Subchapter.
- 31 (b) The Director is authorized to apply the RS to GA or GSA groundwaters under any of the following circumstances:
- 32 (1) For sites undergoing risk-based remediation per Rule .0106(h) of this Subchapter or areas of 33 remaining contamination where the Secretary has approved the termination of an approved
- corrective action per Rule .0106(i) of this Subchapter.
- 35 (2) Where a variance has been granted by the Commission as provided in Rule .0113 of this Subchapter.
- 36 (b)(c) Groundwaters occurring within an area defined by a compliance boundary in a waste disposal permit are
- deemed to be designated RS.

1	(e)(d) The boundary of a designated RS the RS area may be approximated in the absence of analytical data sufficient
2	to define the dimension of the area. The boundary shall be located at least 250 feet or greater away from the predicted
3	edgeboundary of the contaminant plume, plume and shall include any areas into which the contamination is expected
4	to migrate. Predictive modeling may be used to supplement site-specific sample data in characterizing the current and
5	predicted future extent of the plume if approved by the Division.
6	(d) In areas designated RS, the person responsible for groundwater contamination shall establish and implement a
7	groundwater monitoring system sufficient to detect changes in groundwater quality within the RS designated area.
8	Monitoring shall be quarterly for the first year and may be reduced to semi-annually thereafter until the applicable
9	standards have been achieved. If during the monitoring period, contaminant concentrations increase, additional
10	remedial action or monitoring pursuant to these Rules may be required.
11	(e) The applicant for an RS designation shall also provide written verification that all property owners within and
12	adjacent to the proposed RS area have been notified of the requested RS designation.
13	(e) Where the RS area crosses, intercepts, or adjoins surface waters, the RS shall not give the applicant the right to
14	cause or contribute to an exceedance of the surface water standards established under 15A NCAC 02B .0200.
15	(f) Application for RS. The applicant requesting a RS must provide to the Director a plan that includes the following:
16	(1) The responsible party's name, address, phone number.
17	(2) The physical location of the of facility.
18	(3) A copy of the Secretary's approval for termination of corrective action or a variance granted by the
19	Commission as provided in Rule .0113 of this Subchapter.
20	(4) A summary of the site assessment and corrective actions including the results of any predictive modeling
21	that estimates the time to return compliance for the RS area.
22	(5) Detailed maps showing the current horizontal and vertical extent of any contamination and the areas
23	where the contamination is predicted or expected to migrate including the current and predicted
24	quantities of any contaminants and all current and potential future receptors within 1,500 feet of
25	contamination.
26	(6) A map showing the proposed RS area including the county title number, county tax identification number,
27	or the property tax book and page identifiers of the properties included within the proposed RS area.
28	(7) A plan for monitoring the groundwater quality within the RS area that includes the current or proposed
29	wells to be monitored, the frequency of the monitoring, and the constituents to be monitored.
30	(8) If the proposed RS area extends beyond the source property's boundary, a signed statement from each
31	property owner agreeing to the proposed RS area on their property if required by programmatic
32	statute.
33	(9) If the proposed RS area crosses, intercepts, or adjoins surface waters, a plan to ensure the surface water
34	standards established under 15A NCAC 02B .0200 are not violated.
35	(10) A demonstration of financial responsibility and resources in the form of performance bonds, trust funds,
36	surety bonds, letters of credit, financial tests, insurance or corporate guarantees, or other forms of
37	financial assurances allowed by the regulatory oversight program at the site and approved by the

1		Director as equivalent to ensure that the groundwater quality will be restored to the standards			
2		through monitoring, active remediation, natural attenuation, or other corrective actions required by			
3	the Director.				
4	(g) The Director shall review the proposed plan for consistency with the minimum requirements set forth in Paragraph				
5	(f) of this Rule an	nd whether the proposed plan is protective of public health and the environment for receptors within			
6	the RS area and a	areas and receptors outside the RS area and otherwise complies with requirements of this Rule.			
7	(f)(h) Prior to ap	proving the proposed plan in Paragraph (h) of this Rule, The the Division shall provide public notice			
8	of the intent to de	esignate any groundwater with RS in accordance with the following requirements: as follows:			
9	(1)	Notice shall be published Publish notice at least 30 days prior to any proposed final action in			
10		accordance with G.S. 143-215.4. In addition, notice shall be provided to all property owners			
11		identified pursuant to Paragraph (e) of this Rule and to the local County Health Director and the			
12		chief administrative officer of the political jurisdiction(s) in which the contamination occurs.			
13	(2)	To all property owners identified pursuant to Paragraph (g)(8) of this Rule, to the local County			
14		Health Director, and the chief administrative officer of the political jurisdiction(s) in which the			
15		contamination occurs.			
16	(2)(3)	The notice shall contain the following information:			
17		(A) name, Name, address, and phone number of the agency issuing the public notice;			
18		(B) A copy of the completed plan in Paragraph (g) of this Rule.			
19		(B) the location and extent of the designated area;			
20		(C) the county title number, county tax identification number, or the property tax book and			
21		page identifiers;			
22		(D) a brief description of the action or actions which resulted in the degradation of groundwater			
23		in the area;			
24		(E) actions or intended actions taken to restore groundwater quality;			
25		(F) the significance of the RS designation;			
26		(G)(C) conditions applicable to removal of the RS designation; and			
27		(H)(D) address Address and phone number of a Division contact from whom interested parties			
28		may obtain further information.			
29	<del>(3)</del> (4)	The Director shall consider all requests for a public hearing, and if $\frac{\text{he-they}}{\text{determines}}$			
30		that there is significant public interest he they shall issue public notice and hold a public hearing in			
31		accordance with G.S 143-215.4(b) and Rule .0113(e) of this Section.			
32	<del>(4)</del> (5)	These requirements shall not apply to groundwaters defined in Paragraph (b)(c) of this Rule.			
33	(i) The Director	shall disapprove the plan unless it is determined that the proposal complies with requirements of this			
34	Rule. Upon making a determination, the Director shall provide specific findings to support their decision to approve				
35	or disapprove a	proposed plan and may require a person who proposes a plan to supply any additional information			
36	necessary to make their determination.				

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(i) The process for recordation, application, and removal of an approved RS area shall be in accordance with G.S.
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       143B-279.10. The land use restriction shall be that groundwater within the RS may not be suitable for drinking
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       without treatment.
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       (k) The RS shall may also be removed if the groundwater is reclassified by the Commission per G.S. 143-214.1.
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       History Note:
                        Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-282(2); 143B-279.9; 143B-279.10;
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                        Eff. June 10, 1979;
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                        Amended Eff. October 1, 1993; December 1, 1989; August 1, 1989; December 30, 1983.
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                                 ADOPTION BY REFERENCE
       15A NCAC 02L .0105
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                        Authority G.S. 143-214.1;
      History Note:
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                        Eff. December 30, 1983;
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                        Repealed Eff. August 1, 1989.
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                                 INITIAL RESPONSE, SITE ASSESSMENT, AND CORRECTIVE ACTION
       15A NCAC 02L .0106
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       (a) Where groundwater quality has been degraded, the goal of any required corrective action shall be restoration to
       the level of the standards, or as closely thereto as is economically and technologically feasible as determined by the
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       Department in accordance with this Rule. The corrective action processes addressed in this Rule can be through either
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       active remediation in Paragraph (f) or natural attenuation in Paragraph (g). Risk-based remediation is addressed under
       General Statute 130A Article 9 Part 8. In all cases involving requests to the Secretary, as defined in 15A NCAC 02C
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       .0102, Secretary for approval of corrective action plans, plans or termination of corrective action, the responsibility for
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       providing all information required by this Rule lies with the person(s) making the request.
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       (b) Any person conducting or controlling an activity activity, permitted or unpermitted, that results in the discharge
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       of a waste or hazardous substance or oil to the groundwaters of the State, or in proximity thereto, shall take action
       upon discovery to terminate and control the discharge, mitigate any hazards resulting from exposure to the pollutants
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       contaminants, and notify the Department, as defined in 15A NCAC 02C .0102, of the discharge act according to
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       Paragraph (c) or (d) of this Rule.
       (c) Any person conducting or controlling an activity that has not been permitted by the Department <u>pursuant to G.S.</u>
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       143-215.1 or G.S. 130A-294and that results in an increase in the concentration of a substance in excess of the standard,
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       other than agricultural operations, operations (defined under G.S. 106-581.1), shall:
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                        within Within 24 hours of discovery of the violation, notify the Department of the activity that has
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                        resulted in the increase and the contaminant concentration levels; levels, if known.
                        respond Respond in accordance with Paragraph (f)(e) of this Rule; Rule.
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               (2)
                        submit a report to the Secretary assessing the cause, significance, and extent of the violation; and
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                        implement an approved corrective action plan for restoration of groundwater quality in accordance
                        with a schedule established by the Secretary. In establishing a schedule, the Secretary shall consider
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                        a schedule proposed by the person submitting the plan. A report shall be made to the Health Director
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1		of the country of counties in which the contamination occurs in accordance with the requirements of
2		Rule .0114(a) in this Section.
3	(3)	Implement a monitoring program in accordance with Rule .0110 of this Subchapter.
4	(4)	Submit a site assessment report to the Director in accordance with Rule .0111 of this Subchapter.
5	(5)	Submit a notification in accordance with the requirements of Rule .0114(a) of this Subchapter.
6	(6)	Submit a corrective action plan to the Director in accordance with Rule .0111 of this Subchapter for
7		a specific corrective action under Paragraphs (f) or (g) of this Rule or pursue risk-based remediation
8		per Paragraph (h) of this Rule.
9	(7)	Submit a notification in accordance with the requirements of Rule .0114(b) of this Subchapter.
10	(8)	Implement an approved corrective action plan in accordance with a schedule established by the
11		Secretary.
12	(9)	Submit a notification in accordance with the requirements of Rule .0114(c) of this Subchapter.
13	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
14	not permitted by	the Department and subject to the provisions of this Paragraph.
15	(d) Any person	conducting or controlling an activity that is conducted under the authority of a permit initially issued
16	by the Departme	nt on or after December 30, 1983 pursuant to G.S. 143-215.1 or G.S. 130A-294 and that results in an
17	increase in conce	entration of a substance in excess of the standards:
18	(1)	at or beyond a review boundary: the Director may require that the person shall demonstrate, through
19		predictive calculations or modeling, that natural site conditions, facility design design, and
20		operational controls will prevent a violation of standards at the compliance boundary. $ \underline{\textbf{Alternately,}}\underline{\textbf{If}} $
21		an exceedance of the standards is predicted at or beyond the compliance boundary, the person may
22		submit a plan for alteration of existing site conditions, facility design, or operational controls that
23		will prevent a violation at the compliance boundary, and implement that plan upon its approval by
24		the Secretary.
25	(2)	at or beyond a compliance boundary: boundary or within the compliance zone as specified by Rule
26		.0107(q) of this Subchapter: the person shall respond in accordance with Paragraph (f) of this Rule,
27		assess the cause, significance and extent of the violation of standards and submit the results of the
28		investigation, and a plan and proposed schedule for corrective action to the Secretary. The permittee
29		shall implement the plan as approved by and in accordance with a schedule established by the
30		Secretary. In establishing a schedule the Secretary shall consider any schedule proposed by the
31		permittee, the scope of the project, the extent of contamination, and the corrective action being
32		<del>proposed.</del>
33		(A) Within 24 hours of discovery of the initial violation, notify the Department of the activity that
34		has resulted in the increase, the contaminants that are in exceedance, and the contaminant
35		concentration levels.
36		(B) Respond in accordance with Paragraph (e) of this Rule.
37		(C) Implement a monitoring program in accordance with Rule .0110 of this Subchapter.

1		(D) Submit a site assessment report to the Director in accordance with Rule .0111 of this
2		Subchapter.
3		(E) Submit a notification in accordance with the requirements of Rule .0114(a) of this Subchapter.
4		(F) Submit a corrective action plan to the Director in accordance with Rule .0111 of this Subchapter
5		for a specific corrective action under Paragraphs (f) or (g) of this Rule or pursue risk-based
6		remediation per Paragraph (h) of this Rule. The corrective action plan may include
7		alteration of existing site conditions, facility design, or operational controls that will
8		prevent a violation at the compliance boundary.
9		(G) Submit a notification in accordance with the requirements of Rule .0114(b) of this Subchapter.
10		(H) Implement an approved corrective action plan in accordance with a schedule established by the
11		Secretary.
12		(I) Submit a notification in accordance with the requirements of Rule .0114(c) of this Subchapter.
13	(e) Any person	conducting or controlling an activity that is conducted under the authority of a permit initially issued
14	by the Departme	ent prior to December 30, 1983 pursuant to G.S. 143-215.1 or G.S. 130A-294, and that results in an
15	increase in conce	entration of a substance in excess of the standards at or beyond the compliance boundary specified in
16	the permit, shall	<del>:</del>
17	(1)	within 24 hours of discovery of the violation, notify the Department of the activity that has resulted
18		in the increase and the contaminant concentration levels;
19	(2)	respond in accordance with Paragraph (f) of this Rule;
20	(3)	submit a report to the Secretary assessing the cause, significance and extent of the violation; and
21	(4)	implement an approved corrective action plan for restoration of groundwater quality at or beyond
22		the compliance boundary, in accordance with a schedule established by the Secretary. In establishing
23		a schedule the Secretary shall consider any schedule proposed by the person submitting the plan. A
24		report shall be made to the Health Director of the county or counties where the contamination occurs
25		in accordance with the requirements of Rule .0114(a) in this Section.
26	(f)(e) Initial res	ponse required to be conducted prior to or concurrent with the assessment required in Paragraphs (e),
27	(d), or (e) (c) and	d (d) of this Rule shall include:
28	(1)	Prevention of fire, explosion, or the spread of noxious fumes; fumes.
29	(2)	Abatement, containment, or control of the migration of contaminants; contaminants.
30	(3)	Removal, treatment, or control of any primary pollution source such as buried waste, waste
31		stockpiles, or surficial accumulations of free products; products.
32	(4)	Removal, treatment, or control of secondary pollution sources that would be potential continuing
33		sources of pollutants to the groundwaters, such as contaminated soils and non-aqueous phase liquids.
34		Contaminated soils that threaten the quality of groundwaters shall be treated, contained, or disposed
35		of in accordance with rules in this Chapter and in 15A NCAC 13 applicable to such activities. The
36		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 other applicable 1 2 (g) The site assessment conducted pursuant to the requirements of Paragraphs (c), (d), or (e) of this Rule, shall include: 3 The source and cause of contamination; 4 Any imminent hazards to public health and safety, as defined in G.S. 130A-2, and any actions taken 5 to mitigate them in accordance with Paragraph (f) of this Rule; 6 7 All receptors and significant exposure pathways; The horizontal and vertical extent of soil and groundwater contamination and all significant factors 8 9 affecting contaminant transport; and Geological and hydrogeological features influencing the movement, chemical, and physical 10 character of the contaminants. 11 12 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 13 14 submitting the report. (h) Corrective action plans for restoration of groundwater quality, submitted pursuant to Paragraphs (c), (d), and (e) 15 of this Rule shall include: 16 A description of the proposed corrective action and reasons for its selection; 17 18 Specific plans, including engineering details where applicable, for restoring groundwater quality; A schedule for the implementation and operation of the proposed plan; and 19 20 A monitoring plan for evaluating the effectiveness of the proposed corrective action and the 21 movement of the contaminant plume. (i) In the evaluation of corrective action plans, the Secretary shall consider the extent of any violations, the extent of 22 23 any threat to human health or safety, the extent of damage or potential adverse impact to the environment, technology available to accomplish restoration, the potential for degradation of the contaminants in the environment, the time and 24 costs estimated to achieve groundwater quality restoration, and the public and economic benefits to be derived from 25 26 groundwater quality restoration. (i)(f) Corrective action using active remediation. A corrective action plan prepared pursuant to Paragraphs (c), (d), 27 or (e)(c) and (d) of this Rule shall be implemented using a remedial technology demonstrated to provide the most 28 29 effective means, taking into consideration geological and hydrogeological conditions at the contaminated site, for restoration of groundwater quality to the level of the standards. \_Corrective action plans prepared pursuant to 30 Paragraphs (c) or (e)(d) of this Rule may request an exception as provided in Paragraphs (k), (l), (m), (r), and (s) (i), 31 32 (k), and (l) of this Rule. 33 (k) Any person required to implement an approved corrective action plan for a site subject to Paragraphs (e) or (e) of 34 this Rule may request that the Secretary approve such a plan without requiring groundwater remediation to the standards. A request submitted to the Secretary under this Paragraph shall include a description of site-specific 35 conditions, including information on the availability of public water supplies for the affected area; the technical basis 36

Subparagraphs (1) through (7) of this Paragraph. The person making the request shall demonstrate: 2 that all sources of contamination and free product have been removed or controlled pursuant to 3 Paragraph (f) of this Rule: 4 that the time and direction of contaminant travel can be predicted with reasonable certainty; 5 (2)that contaminants have not and will not migrate onto adjacent properties, or that: 6 (A) such properties are served by an existing public water supply system dependent on surface 7 waters or hydraulically isolated groundwater; or 8 the owners of such properties have consented in writing to the request; 9 that the standards specified in Rule .0202 of this Subchapter will be met at a location no closer than 10 one year time of travel upgradient of an existing or foreseeable receptor, based on travel time and 11 the natural attenuation capacity of subsurface materials or on a physical barrier to groundwater 12 migration that exists or will be installed by the person making the request; 13 that, if the contaminant plume is expected to intercept surface waters, the groundwater discharge 14 will not possess contaminant concentrations that would result in violations of standards for surface 15 waters contained in 15A NCAC 02B .0200; 16 that public notice of the request has been provided in accordance with Rule .0114(b) of this Section; 17 18 that the proposed corrective action plan would be consistent with all other environmental laws. 19 (H)(g) Corrective action using natural attenuation. Any person required to implement an approved corrective action 20 plan for a site subject to Paragraphs (c) or (e)(d) of this Rule may request that the Secretary approve such a plan based 21 upon natural processes of degradation and attenuation of contaminants. A request submitted to the Secretary under 22 this Paragraph shall include a description of site-specific conditions, including written documentation of projected 23 groundwater use in the contaminated area based on current state or local government planning efforts; the technical 24 basis for the request; and any other information requested by the Secretary to evaluate the request in accordance with 25 Subparagraphs (1) through (10) of this Paragraph. The person making the request shall demonstrate: In addition to 26 the information required under Rule .0111(c) of this Subchapter, the corrective action plan shall also provide a 27 28 demonstration of the following: that all All sources of contamination and free product have been removed or controlled pursuant to 29 (1) 30 Paragraph (f)(e) of this Rule; Rule. that the The contaminant has the capacity to degrade or attenuate under the site-specific 31 (2)32 conditions; conditions. that the The time and direction of contaminant travel can be predicted based on subsurface conditions 33 (3)and the contaminant's physical and chemical properties; properties. 34 that contaminant Contaminant migration will not result in any violation of applicable groundwater 35 (4) standards at any existing or foreseeable potential receptor; receptor. 36 that contaminants Contaminants have not and will not migrate onto adjacent properties, or that: 37 (5)

for the request; and any other information requested by the Secretary to evaluate the request in accordance with

such properties are served by an existing public water supply system dependent on surface 1 (A) waters or hydraulically isolated groundwater; or 2 the owners of such properties have consented in writing to the request; request. 3 (B) that, if If the contaminant plume is expected to intercept surface waters, the groundwater discharge 4 (6) 5 will not possess contaminant concentrations that would result in violations of standards for the surface waters contained in water standards established under 15A NCAC 02B .0200; 0200. 6 7 that the The person making the request will put in place a groundwater monitoring program that, (7)based on subsurface conditions and the physical and chemical properties of the contaminant, will 8 accurately track the degradation and attenuation of contaminants and contaminant by-products 9 within and down gradient of the plume and to detect contaminants and contaminant by products 10 prior to their reaching any existing or foreseeable receptor at least one year's time of travel 11 upgradient of the receptor and no greater than the distance the groundwater at the contaminated site 12 is predicted to travel in five years; in conformance with Rule .0110 of this Subchapter. 13 that all All necessary access agreements needed to monitor groundwater quality pursuant to 14 (8)Subparagraph (7) of this Paragraph have been or can be obtained; obtained. 15 that public Public notice of the request has been provided in accordance with Rule .0114(b) of this 16 (9)17 Section; and Subchapter. that the The proposed corrective action plan would be consistent with all other environmental laws. 18 (10)19 (h) Corrective action using risk-based remediation. An applicant choosing to use risk-based remediation shall refer to General Statute 130A Article 9 Part 8 to determine if this remedial strategy is appropriate. 20 (m)(i) Termination of active remediation prior to achieving the standards. The Department or any person required to 21 22 implement an approved corrective action plan for a site subject to Paragraphs (e) or (e) Paragraph (f) of this Rule may request that the Secretary approve termination of corrective action the active remediation. The owner and operator of 23 24 an active remediation system shall demonstrate that, by terminating the active remediation and then implementing an 25 approved natural attenuation corrective action under Paragraph (g) of this Rule, all potential receptors will be 26 protected. 27 (1)A request submitted to the Secretary under this Paragraph shall include: a-A discussion of the duration of the corrective action, the total project cost, projected 28 (A) 29 annual cost for continuance continuance, and evaluation of the success of the corrective 30 action: action. an-An evaluation of alternate treatment technologies that could potentially result in further 31 (B) reduction of contaminant levels, projected capital, and annual operating costs for each 32 33 technology; and technology. the The effects, including public health and safety impacts, on groundwater users if 34 (C) 35 contaminant levels remain at levels existing at the time corrective action is terminated. (D) The proposed contaminant concentrations to actively remediate to in the source area and 36 all predictive calculations and model runs demonstrating that the standards will be met at 37

all existing or potential receptors, based on travel time and the natural attenuation capacity 1 2 of subsurface materials or on a barrier to groundwater migration that exists or will be installed by the person making the request. 3 A demonstration that continuation of active remediation would not result in a significant 4 (E) reduction in the concentration of contaminants. This demonstration shall show the duration 5 and degree of success of existing remedial efforts to attain the standards. For the purpose 6 of this Part, a "significant reduction" is demonstrated by showing that the asymptotic slope 7 of the contaminant concentrations over time is less than a ratio of 1:40 over a term of one 8 year based on quarterly sampling (four consecutive quarters with sampling events spaced 9 at least 3 months apart). 10 A natural attenuation corrective action plan for the remaining contamination in accordance (F) 11 12 with Paragraph (g) of this Rule. In addition, the person making the request shall demonstrate: 13 (2)that continuation of corrective action would not result in a significant reduction in the 14 15 concentration of contaminants. This demonstration shall show the duration and degree of success of existing remedial efforts to attain standards. For the purpose of this Part, a 16 "significant reduction" is demonstrated by showing that the asymptotic slope of the 17 contaminants curve of decontamination is less than a ratio of 1:40 over a term of one year 18 based on quarterly sampling; 19 that contaminants have not and will not migrate onto adjacent properties, or that: 20 (B) 21 (i) such properties are served by an existing public water supply system dependent 22 on surface waters or hydraulically isolated groundwater; or (ii) the owners of such properties have consented in writing to the request; 23 that, if the contaminant plumes are expected to intercept surface waters, the groundwater 24 <del>(C)</del> discharge will not possess contaminant concentrations that would result in violations of 25 standards for surface waters contained in 15A NCAC 02B .0200; 26 that public notice of the request has been provided in accordance with Rule .0114(b) of this 27 Section; and 28 that the proposed termination would be consistent with all other environmental laws. 29 The Secretary shall not authorize termination of active remediation corrective action for any area 30 (3)(2)that, at the time the request is made, has been identified by a state or local groundwater use planning 31 32 process for resource development. The Secretary may authorize the termination of active remediation, corrective action, or amend the 33 (4)(3)corrective action plan after considering all the information in the request. In making the 34 authorization, the Secretary shall consider site conditions, the nature and extent of the 35 36 contamination, cost, and public health and safety-impacts on all existing and foreseeable-potential receptors and the impacts the contaminated plume may have if it reaches them. The Secretary will 37

review the request for completeness and may request any additional information necessary to make their authorization. Upon termination of corrective action, the Secretary shall require implementation of a groundwater monitoring program that, based on subsurface conditions and the physical and chemical properties of the contaminants, will accurately track the degradation and attenuation of contaminants at a location of no less than one year's predicted time of travel upgradient of any existing or foreseeable receptor. The monitoring program shall remain in effect until there is sufficient evidence that the contaminant concentrations have been reduced to the level of the standards. For the purpose of this Part, "sufficient evidence" means that sampling and analyses demonstrate that contaminant concentrations have been reduced to the level of the standards on multiple sampling events.

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

(n)(k) Upon a determination by the Secretary that Where continued corrective action would result in no significant reduction in contaminant concentrations, as determined in Part (i)(1)(E) of this Rule and the contaminated groundwaters can be rendered potable by treatment using technologies that are in use in other applications and shown to be effective for removal of contaminants, the responsible party may request that the Secretary may designate the remaining area of degraded groundwater RS. Where the remaining degraded groundwaters cannot be made potable by such treatment, the The Secretary Commission may also consider a request for reclassification of the groundwater to a GC classification as outlined in Rule .0201.0319 of this Subchapter.

(e)(1) If at any time the Secretary determines that a new technology is available that would remediate the contaminated groundwater to the standards specified in Rule .0202 of this Subchapter, standards, the Secretary may require the responsible party to evaluate the economic and technological feasibility of implementing the new technology in an active groundwater remediation corrective action plan in accordance with a schedule established by the Secretary. The Secretary's determination to utilize new technology at any site or for any particular constituent shall include a consideration of the factors in Paragraph (h) of this Rule.Rule .0111(c) of this Subchapter.

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

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

- (r)(n) If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial or noncommercial underground storage tank as defined in G.S. 143-215.94A, any person required to implement an approved corrective action plan pursuant to this Rule and seeking reimbursement for the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds shall implement a corrective action plan meeting the requirements of Paragraph (k) or (l)(f) or (g) of this Rule unless the person demonstrates to the Secretary that:
  - (1) contamination resulting from the discharge cannot qualify for approval of a plan based on the requirements of the Paragraphs; or
  - (2) the cost of making such a demonstration would exceed the cost of implementing a corrective action plan submitted pursuant to Paragraph (c) of this Rule.Rule .0111(c) of this Subchapter.
- (s)(o) If a discharge or release is not governed by the rules in Section .0400 of this Subchapter and the increase in the concentration of a substance in excess of the standard resulted in whole or in part from a release from a commercial or noncommercial underground storage tank as defined in G.S. 143-215.94A, the Secretary may require any person implementing or operating a previously approved corrective action plan pursuant to this Rule to:
  - (1) develop and implement a corrective action plan meeting the requirements of Paragraphs (k) and (l)(f) and (g) of this Rule; or
  - (2) seek discontinuance of corrective action pursuant to Paragraph (m)(i) of this Rule.
- (p) The approval pursuant to this Rule of any corrective action plan, modification, or termination thereof, that permits the migration of a contaminant onto adjacent property, shall not affect any private right of action by any party that may be affected by that contaminant.

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    23 History Note: Authority G.S. 143-215.1; 143-215.3; 143-215.94A; 143-215.94T; 143-215.94V; 143B-282;
    24 1995 (Reg. Sess. 1996) c. 648, s. 1;
    25 Eff. August 1, 1989;
    26 Amended Eff. October 1, 1993; September 1, 1992;
    27 Temporary Amendment Eff. January 2, 1998; January 2, 1996;
    28 Amended Eff. July 1, 2016; October 29, 1998.
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# 15A NCAC 02L .0107 COMPLIANCE BOUNDARY

- (a) For <u>waste</u> disposal systems individually permitted prior to December 30, 1983, the compliance boundary is established at a horizontal distance of 500 feet from the waste boundary or at the property boundary, whichever is closer to the source.
- 34 (b) For <u>waste</u> disposal systems individually permitted on or after December 30, 1983, a compliance boundary shall 35 be established <u>at a horizontal distance of 250</u> feet from the waste boundary, or 50 feet within the property boundary,
- 36 whichever point is closer to the source.

- (c) The compliance boundary shall be established by the Director, or his designee at the time of permit issuance. 1
- remain in place for the duration of the permit. Any sale or transfer of property which affects a compliance boundary 2
- shall be reported immediately to the Director, or his designee. For disposal systems which are not governed by 3
- Paragraphs (e) or (f) of this Rule, the compliance boundary affected by the sale or transfer of property will be 4
- re-established consistent with Paragraphs (a) or (b) of this Rule, whichever is applicable. 5
- (d) Except as provided in Paragraph (g) of this Rule, no water supply wells shall be constructed or operated within 6
- the compliance boundary of a disposal system individually permitted or repermitted after January 1, 1993. 7
- (d) The compliance boundary and zone shall extend vertically from the surface through the water table to the 8
- 9 maximum depth of saturation.
- (e) Where the compliance zone crosses, intercepts, or adjoins surface waters, the permitted activity shall not cause or 10
- contribute to an exceedance of the surface water standards established under 15A NCAC 02B .0200. In this case, the 11
- term surface waters shall not include any portion of the permitted treatment works. 12
- (f) Multiple contiguous properties under common ownership and permitted for use as a waste disposal area shall be 13
- treated as a single property with regard to determination of a compliance zone and setbacks to property lines as per 14
- Paragraphs (a) or (b) of this Rule. 15
- (g) Where compliance zones for separately permitted waste disposal areas under the same owner on the same property 16
- intersect, the Director shall combine the compliance zones into one single compliance zone with a single compliance 17
- 18 boundary.
- (h) The permittee shall establish a monitoring program within the compliance zone per the requirements in Rule .0110 19
- 20 of this Subchapter.
- (i) Except as provided in Paragraph (m) of this Rule, no water supply wells shall be constructed within the compliance 21
- zone of a waste disposal system individually permitted after January 1, 1993. Water supply wells constructed within 22
- the compliance zone of a waste disposal system individually permitted prior to January 1, 1993, shall be monitored at 23
- a frequency determined by the Director to ensure that the aquifer being used for water supply is not impacted by the 24
- permitted activities. If the water supply well is or becomes impacted by the permitted activities, the well shall be 25
- equipped with a treatment system approved by the Director that is capable of treating the water to the level of the 26
- standards, or abandoned. 27
- (e)(j) Except as provided in Paragraph (g)(m) of this Rule, a permittee shall not transfer land within an established 28
- compliance boundary-zone of a waste disposal system permitted or repermitted after January 1, 1993 unless: 29
- the The land transferred is serviced by a community water system as defined in regulated under 15A 30 (1)
- NCAC 18C, the source of which is located outside the compliance boundary; and 31
- 32 (2) the deed transferring the property:
  - (A) contains notice of the permit, including the permit number, a description of the type of permit, and the name, address and telephone number of the permitting agency; and
- contains a restrictive covenant running with the land and in favor of the permittee and the (B) 35 State, as a third party beneficiary, which prohibits the construction and operation of water 36 supply wells within the compliance boundary; zone; and
- 37

contains a restrictive covenant running with the land and in favor of the permittee and the 1 (C) 2 State, as a third party beneficiary, which grants the right to the permittee and the State to 3 enter on such property within the compliance boundary zone for groundwater monitoring 4 and remediation purposes. (f)(k) Except as provided in Paragraph (g)(m) of this Rule, if at the time a permit is issued or reissued after-January 5 1, 1993, the permittee is not the owner of the land within the compliance boundary, zone, it shall be a condition of the 6 7 permit issued or renewed that the landowner of the land within the compliance boundary, zone, if other than the permittee, execute and file in the Register of Deeds in the county in which the land is located, an easement running 8 9 with the land which: 10 (1)contains: either a notice of the permit, including the permit number, a description of the type of 11 (A) permit, and the name, address and telephone number of the permitting agency; or 12 (B) a reference to a notice of the permit with book and page number of its recordation if such 13 14 notice is required to be filed by statute; prohibits the construction and operation of water supply wells within the compliance 15 (2)16 boundary; zone; and 17 (3) reserves the right to the permittee and the State to enter on such property within the compliance boundary zone for groundwater monitoring and remediation purposes. The easement may be 18 terminated by the Director when its purpose has been fulfilled or the need for the easement no longer 19 exists. Under those conditions the Director shall, upon request by the landowner, file a document 20 21 terminating the easement with the appropriate Register of Deeds. (1) Any sale or transfer of property which affects a compliance boundary shall be reported to the Director within one 22 week of the final sale or transfer. For waste disposal systems which are not governed by Paragraphs (j) or (k) of this 23 Rule, the compliance boundary affected by the sale or transfer of property will be reestablished consistent with this 24 25 Rule. (g)(m) The requirements of Paragraphs (d), (e) and (f) of this Rule are not applicable to For ground adsorption sewage 26 treatment and disposal systems serving four or fewer single family dwellings or multiunit dwellings of four or fewer 27 units-units regulated under 15A NCAC 02T .0600, the requirements of Paragraphs (j) and (k) of this Rule shall not be 28 29 applicable. (h) The boundary shall form a vertical plane extending from the water table to the maximum depth of saturation. 30 (i)(n) For ground absorption sewage treatment and disposal systems which are permitted regulated under 15A NCAC 31 32 02T .0600, 18A .1900, the compliance boundary shall be established at the property boundary. (i)(o) Penalties authorized pursuant to G.S. 143-215.6A(a)(1) will not be assessed for violations of the standards 33 34 within a compliance boundary zone unless the violations are the result of violations of permit conditions or negligence 35 in the management of the facility. 36 (k) The Director shall require:

1	(1)	that permits for all activities governed by G.S. 143-215.1 be written to protect the quality of	
2		groundwater established by applicable standards, at the compliance boundary;	
3	(2)	that necessary groundwater quality monitoring shall be conducted within the compliance boundary;	
4		and and	
5	(3)	that a violation of standards within the compliance boundary resulting from activities conducted by	
6		the permitted facility be remedied through clean-up, recovery, containment, or other response when	
7		any of the following conditions occur:	
8		(A) a violation of any standard in adjoining classified groundwaters occurs or can be reasonably	
9		predicted to occur considering hydrogeologic conditions, modeling, or other available	
10		evidence;	
11		(B) an imminent hazard or threat to the public health or safety exists; or	
12		(C) a violation of any standard in groundwater occurring in the bedrock other than limestones	
13		found in the Coastal Plain sediments, unless it can be demonstrated that the violation will	
14		not adversely affect, or have the potential to adversely affect a water supply well.	
15	(p) The Directo	r shall require that permits for all activities governed by G.S. 143-215.1 be written in such a way to	
16	protect the water	rs of the state.	
17	(q) The Directo	or may require that violations of the standards within the compliance zone be addressed per Rule	
18	.0106(d) of this	Subchapter if any of the following occur:	
19	(1)	A violation of the standards occurs or is predicted to occur in groundwater at or beyond the	
20		compliance boundary as a result of the permitted activities.	
21	(2)	A violation of the surface water standards established under 15A NCAC 02B .0200 occurs or is	
22		predicted to occur as a result of the permitted activities.	
23	(3)	An imminent hazard or threat to public health exists.	
24	(4)	A violation of the standards occurs in bedrock within the compliance boundary as a result of the	
25		permitted activities unless it can be demonstrated that the violation will not adversely affect any	
26		receptor.	
27			
28	History Note:	Authority G.S. <del>143-215.1(b);</del> <u>143-215.1;</u> 143-215.3(a)(1);-143B-282;	
29		Eff. August 1, 1989;	
30		Amended Eff. October 1, 1993; November 2, 1992.	
31			
32	15A NCAC 02I		
33		ary is established around any waste disposal system midway between the compliance boundary and	
34	the waste boundary. When the concentration of any substance equals or exceeds the standard at the review boundary		
35	as determined by monitoring, the permittee shall may be required to take action in accordance with the provisions of		
36	Rule <del>.0106(c)(2)</del>	<del>0(A)</del> .0106(d)(1) of this Subchapter.	
37 38	History Note:	Authority G.S. $143-215 \ 1(b)$ : $143-215 \ 3(a)(1)$ : $143B-282$ :	

Eff. August 1, 1989. 1 2 3 15A NCAC 02L .0109 DELEGATION (a) The Director is delegated the authority to enter into consent special orders under G.S. 143-215.2 for violations of 4 5 the standards except when a public meeting is required as provided in 15A NCAC 02H .1203. (b) The Director is delegated the authority to prepare a proposed special order to be issued by the Commission without 6 the consent of the person affected and to notify the affected person of that proposed order and of the procedure set out 7 8 in G.S. 150B-23 to contest the proposed special order. 9 (c) The Director, or his designee Director shall give public notice of proposed consent special orders as specified in 10 15A NCAC 2H .1203. 11 12 Authority G.S. 143-215.2; 143-215.3(a)(1); 143-215.3(a)(4); History Note: 13 Eff. August 1, 1989; Amended Eff. October 1, 1993; October 1, 1990. 14 15 15A NCAC 02L .0110 **MONITORING** 16 (a) Except where exempted by statute or this Subchapter, the Director may require any person who causes, permits 17 permits, or has control over any discharge of waste, or groundwater cleanup program, shall install and to implement 18 19 a monitoring program system, at such locations, and in such detail, detail as the Director, or his designee may require required to evaluate the effects of the discharge upon the environment or waters of the state, including the effect of 20 21 any actions taken to restore groundwater quality, as well as the efficiency of any treatment facility. The monitoring plan shall be prepared under the responsible charge of a Professional Engineer or Licensed Geologist and bear the seal 22 23 of the same. 24 (b) Monitoring systems shall be constructed and operated in a manner that will not result in the contamination of adjacent groundwaters of a higher quality. groundwaters or surface waters. 25 (c) The Director may require modification of a monitoring program or system or require additional monitoring of a 26 27 contaminant or constituent of interest if it is determined to be in the best interest to public health and the environment. (d) Monitoring systems shall be able to: 28 Track the migration, degradation, and attenuation of contaminants and contaminant by-products 29 (1)from a source area or within and down gradient of a contaminant plume. 30 Detect contaminants and contaminant by-products prior to their reaching any existing or potential 31 (2)32 receptor. Detect if a groundwater contaminant plume is causing or contributing to exceedances of the surface 33 34 water standards established under 15A NCAC 02B .0200. (e)(e) Monitoring shall be conducted and results reported in a manner and at a frequency specified by the Director, 35 36 or his designee. Director. (f) Monitoring programs shall remain in effect until it is demonstrated that the contaminant concentrations resulting 37 from site activities have been reduced to a level at or below the standards for a minimum of four consecutive quarters 38

with monitoring events spaced at least 3 months apart. The Director may require an extension of monitoring if the 1 Director determines that concentrations are fluctuating at or near the standards or the data trends suggest that 2 concentrations may be increasing. Once the Director is satisfied that the standards have been met and that corrective 3 action is no longer necessary to ensure compliance with the Rules of this Subchapter, the Director shall furnish a letter 4 5 to the responsible party stating that no further action is required. 6 7 History Note: Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143-215.66; 143B-282; 8 Eff. August 1, 1989; 9 Amended Eff. October 1, 1993. 10 15A NCAC 02L .0111 **REPORTS** 11 (a) Any person subject to the requirements for corrective action specified in Rule .0106 of this Section Subchapter 12 13 shall submit to the Director, in such detail as the Director may require, a-written report that describes:plans or reports including those associated with initial response, site assessment, and corrective action. Reports shall be submitted as 14 soon as practicable or in accordance with a schedule established by the Director. In establishing a schedule, the 15 16 Director shall consider a proposal by the person submitting the plan or report. the results of the investigation specified in Paragraphs (c) and (d) of Rule .0106 of this Section, 17 18 including but not limited to: (A) a description of the sampling procedures followed and methods of chemical analyses used; 19 20 and all technical data utilized in support of any conclusions drawn or determinations made. 21 the results of the predictive calculations or modeling, including a copy of the calculations or model 22 runs and all supporting technical data, used in the demonstration required in Paragraph (d) of Rule 23 .0106 of this Section; and 24 the proposed methodology and timetable associated with the corrective action for those situations 25 identified in Paragraphs (c) and (d) of Rule .0106 of this Section. 26 (b) A site assessment conducted pursuant to the requirements of Paragraphs (c) or (d) in Rule .0106 of this Subchapter 27 28 shall include: A description of the site including current and historical operations at the facility and all current and 29 (1)historical waste streams. 30 31 (2)The source and cause of contamination. Any imminent hazards to public health and any actions taken to mitigate them. 32 (3) 33 All potential receptors and expected exposure pathways. (4) The horizontal and vertical extent of soil contamination. 34 (5) The current horizontal and vertical extent of groundwater contamination and all significant factors 35 (6)36 affecting contaminant transport. Background threshold values for all contaminants and constituents of interest. Background 37 (7)38 threshold values shall:

1		(A) Be established using a statistical methodology approved by the Director.
2		(B) Be used as standards in accordance with Rule .0202 of this Subchapter where applicable.
3		(C) Be reviewed on a schedule determined by the Director.
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, or determinations made.
10	(12)	The results of predictive calculations or modeling, including a copy of the calculations or model
11		runs and all supporting technical data.
12	(c) Corrective ac	ction plans submitted pursuant to Paragraphs (c) and (d) in Rule .0106 of this Subchapter shall include:
13	(1)	A summary of the results of the site assessment submitted in accordance with Paragraph (b) of this
14		Rule.
15	(2)	The technical basis for the requested corrective action.
16	(3)	An evaluation of risk to receptors.
17	(4)	An evaluation of projected groundwater use within 1,500 feet of the predicted impacted area based
18		on current state or local government planning efforts.
19	(5)	An evaluation of potential remedial strategies that includes:
20		(A) A summary of the available technology that could be used as a potential remedial strategy
21		based on the specific site conditions and nature and extent of the contamination.
22		(B) For each potential remedial strategy, the predicted time to return to compliance with the
23		standards including the results of predictive calculations or modeling, including a copy of
24		the calculations or model runs and all supporting technical data.
25		(C) The estimated costs to implement each strategy.
26	(6)	For the remedial strategy that the responsible party proposes to implement,
27		(A) The rationale for selecting the proposed corrective action.
28		(B) Plans and specifications, including engineering details.
29		(C) A schedule for the implementation and operation.
30		(D) A monitoring plan that evaluates the effectiveness of the remedial strategy that includes
31		the predicted movement of the contaminant plume.
32	(7)	A demonstration of financial responsibility and resources in the form of performance bonds, trust
33		funds, surety bonds, letters of credit, financial tests, insurance or corporate guarantees, or other
34		forms of financial assurances allowed by the regulatory oversight program at the site and approved
35		by the Director as equivalent to ensure that the groundwater quality will be restored to the standards
36		through monitoring, active remediation, natural attenuation, or other corrective actions required by
37		the Director.

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(b)(d) The report All reports and plans shall be prepared under the responsible charge of a Professional Engineer,
 1
      Licensed Soil Scientist, or Licensed Geologist and bear the seal of the same as specified in Rule .0106(d) of this
 2
      Section.same under the purview of their specific discipline as required under G.S. 89C, G.S. 89E, or G.S. 89F.
 3
 4
                       Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143B-282;
 5
      History Note:
 6
                       Eff. August 1, 1989;
                       Amended Eff. October 1, 1993.
 7
 8
 9
      15A NCAC 02L .0112
                                ANALYTICAL PROCEDURES
      (a) Tests or analytical procedures to determine compliance or noncompliance with the standards established in Rule
10
11
      .0202 of this Subchapter will be in accordance with:
12
                       The most sensitive of the following methods or procedures for substances where the standard is at
               (1)
                       or above the method detection limit or lower limit of quantitation value:
13
                               The most recent version of Standard Methods for the Examination of Water and
14
15
                                Wastewater, published jointly by American Public Health Association, American Water
                                Works Association and Water Pollution Control Federation;
16
                                Methods for Chemical Analysis of Water and Waste, 1979, U.S. Environmental Protection
17
                                Agency publication number EPA-600/4-79-020, as revised March 1983;
18
                                Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, 3rd Edition, 1986,
19
                       (c)(A)
                                U.S. Environmental Protection Agency publication number SW-846;
20
                                Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Federal Register
21
                        (d)(B)
                                Vol. 49,82, No. 209,165, 40 CFR Part 136, October 26, 1984; August 28, 2017, et. Seq.;
22
                                Methods or procedures approved by letter from the Director Commission upon application
23
                        <del>(e)</del>(C)
                                by the regulated source; or
24
                        (D)
                                Where a method does not exist from the sources listed in (A) through (C), the most recent
25
                                version of the Standard Methods for the Examination of Water and Wastewater, published
26
                                jointly by the American Public Health Association, the American Water Works
27
                                Association and the Water Pollution Control Federation.
28
                        A method or procedure approved by the Director Commission for substances where the standard is
29
               (2)
30
                        less than the method detection limit value.
       (b) The procedures and methods listed in this Paragraph (a) of this rule are incorporated by reference, including
31
32
      subsequent amendments and editions.
33
34
       History Note:
                        Authority G.S. 143-215.3(a)(1); 143B-282;
                        Eff. August 1, 1989;
35
                        Amended Eff. October 1, 1993.
36
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### 15A NCAC 02L .0113 VARIANCE

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

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- 4 (b) Requests for variances are filed by letter from the applicant to the Environmental Management Commission. The
- 5 application shall be mailed to the chairman of the Commission in care of the Director, Division of Environmental
- 6 Management, Post Office Box 29535, Raleigh, N.C. 27626-0535. Director at 1617 Mail Service Center, Raleigh,
- 7 North Carolina 27699-1611.
- 8 (c) The application shall contain the following information:
  - (1) Applications filed by counties or municipalities must include a resolution of the County Board of Commissioners or the governing board of the municipality requesting the variance.
  - (2) A description of the past, existing existing, or proposed activities or operations that have or would result in a discharge of contaminants to the groundwaters.
  - (3) Description of the proposed area for which a variance is requested. A detailed location map, map showing the orientation of the facility, potential for groundwater contaminant migration, as well as the area covered by the variance request, with reference to at least two geographic references (numbered roads, named streams/rivers, etc.) must shall be included.
  - (4) Supporting information to establish that the variance will not endanger the public health and safety, health, including health and environmental effects from exposure to groundwater contaminants. (Location of wells and other water supply sources including details of well construction within 1/2 mile of site must-shall be shown on a map).
  - (5) Supporting information to establish that requirements of this Rule cannot be achieved by providing the best available technology economically reasonable. This information must identify specific technology considered, and the costs of implementing the technology technology, and the impact of the costs on the applicant.
  - (6) Supporting information to establish that compliance would produce serious—financial hardship on the applicant.
  - (7) Supporting information that compliance would produce serious-financial hardship without equal or greater public benefit.
  - (8) A copy of any Special Order that was issued in connection with contaminants in the proposed area and supporting information that applicant has complied with the Special Order.
  - (9) A list of the names and addresses of any property owners within the proposed area of the variance variance, as well as any property owners adjacent to the site covered by the variance.
  - (d) Upon receipt of the application, the Director will review it for completeness and request additional information if necessary. When the application is complete, the Director shall give public notice of the application and schedule the matter for a public hearing in accordance with G.S. 143-215.4(b) and the procedures set out in Paragraph (e) of this Rule.
  - (e) Notice of Public Hearing:

1	(1)	Notice	of public hearing on any variance application shall be circulated in the geographical areas of
2		the pro	posed variance variance. by the Director at At least 30 days prior to the date of the
3		hearing	e:hearing, the Director shall:
4		(A)	by publishing Publish the notice one time in a newspaper having general circulation in said
5			county;county.
6		(B)	by mailing Mail the notice to the North Carolina Department of Environment, Health, and
7			Natural Resources, Health and Human Services, Division of Environmental Health Section
8			and appropriate local health agency; Health Director.
9		(C)	by mailing Mail the notice to any other federal, state or local agency upon request;
10		(D)	by mailingMail the notice to the local governmental unit or units having jurisdiction over
11			the geographic area covered by the variance; variance.
12		(E)	by mailing Mail the notice to any property owner within the proposed area of the variance,
13			as well as any property owners adjacent to the site covered by the variance; and variance.
14		(F)	by mailingMail the notice to any person or group upon request.
15		<u>(G)</u>	Post the notice on the Department website.
16	(2)	The co	ntents of public notice of any hearing shall include at least the following:
17		(A)	name, Name, address, and phone number of agency holding the public hearing; hearing.
18		(B)	name-Name and address of each applicant whose application will be considered at the
19			meeting; meeting.
20		(C)	A brief summary of the variance request; request.
21		(D)	A geographic description of a proposed area for which a variance is requested; requested.
22		(E)	A brief description of activities or operations which have or will result in the discharge of
23			contaminants to the groundwaters described in the variance application; application.
24		(F)	a-A brief reference to the public notice issued for each variance application; application.
25		(G)	information Information regarding the time and location for the hearing; hearing.
26		(H)	the The purpose of the hearing; hearing.
27		(I)	The address and phone number of premises at which interested persons may obtain further
28			information, request a copy of each application, and inspect and copy forms and related
29			documents; and documents.
30		(J)	a-A brief description of the nature of the hearing including the rules and procedures to be
31			followed. The notice shall also state that additional information is on file with the Director
32			and may be inspected at any time during normal working hours. Copies of the information
33			on file will be made available upon request and payment of cost or reproduction.
34	(f) All comment	ts receive	ed within 30 days following the date of the public hearing shall be made part of the application
35	file and shall be	consider	red by the Commission prior to taking final action on the application.

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

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

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

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- 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.

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## 15A NCAC 02L .0114 NOTIFICATION REQUIREMENTS

- 12 (a) Any person subject to the requirements of Rule .0106(c) or (d) of this Section-Subchapter shall submit to the local
- Health Director, Director and the chief administrative officer of the political jurisdictions in which the groundwater
- 14 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 of this
- 17 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 frequency
- 20 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(c). .0111(b) of this Subchapter.
- 24 (b) Any person who submits a request under Rule .0106(k), (1), or (m).0106(f) or (g) of this Section Subchapter shall
- 25 notify the local 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
- contaminant plume, and under the areas where it is expected to migrate, of the nature a summary of the request and
- 28 reasons supporting it. Notification shall be made by certified mail concurrent with the submittal of the request to the
- 29 Director. A final decision by the Director shall be postponed for a period of 30 days following receipt of the request
- 30 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(f) or (g) of this Section Subchapter is granted by
- 32 the Director shall notify parties specified in Paragraph (b) of this Rule of the Director's decision and a
- 33 summary of the actions to be taken. Notification shall be made by certified mail within 30 days of receipt of the
- 34 Director's decision.

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- 36 History Note: Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-282(2)b;
- 37 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:	$Authority \;\; G.S. \;\; 143-215.2; \;\; 143-215.3(a)(1); \;\; 143-215.94A; \;\; 143-215.94E; \;\; 143-215.94T; \;\; 143-2$
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.
9		