

1 15A NCAC 02L .0106 is amended with changes as published in 29:24 NCR 2790-2794 as follows:

2
3 **15A NCAC 02L .0106 CORRECTIVE ACTION**

4 (a) Where groundwater quality has been degraded, the goal of any required corrective action shall be restoration to the
5 level of the standards, or as closely thereto as is economically and technologically feasible **as determined by the Department**
6 **in accordance with this Rule.** In all cases involving requests to the ~~Director~~ Secretary, as defined in 15A NCAC 02C
7 .0102, for approval of corrective action plans, or termination of corrective action, the responsibility for providing all
8 information required by this Rule lies with the person(s) making the request.

9 (b) Any person conducting or controlling an activity ~~which that~~ results in the discharge of a waste or hazardous substance
10 or oil to the groundwaters of the State, or in proximity thereto, shall take **immediate** action **upon discovery** to terminate
11 and control the discharge, mitigate any hazards resulting from exposure to the pollutants and notify the ~~Division~~
12 Department, as defined in 15A NCAC 02C .0102, of the discharge.

13 (c) Any person conducting or controlling an activity ~~which that~~ has not been permitted by the ~~Division~~ Department and
14 ~~which that~~ results in an increase in the concentration of a substance in excess of the standard, other than agricultural
15 operations, shall:

- 16 (1) ~~immediately~~ within 24 hours of discovery of the violation, notify the ~~Division~~ Department of the activity
17 that has resulted in the increase and the contaminant concentration levels;
- 18 (2) ~~take immediate action to eliminate the source or sources of contamination;~~
- 19 (2) respond in accordance with Paragraph (f) of this Rule;
- 20 (3) submit a report to the ~~Director~~ Secretary assessing the cause, ~~significance~~ **significance**, and extent of the
21 violation; and
- 22 (4) implement an approved corrective action plan for restoration of groundwater quality in accordance with
23 a schedule established by the ~~Director, or his designee~~ Secretary. In establishing a ~~schedule~~ **schedule**,
24 the ~~Director, or his designee~~ Secretary shall consider **any reasonable a** schedule proposed by the person
25 submitting the plan. A report shall be made to the Health Director of the county or counties in which
26 the contamination occurs in accordance with the requirements of Rule .0114(a) in this Section.

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

29 (d) Any person conducting or controlling an activity ~~which that~~ is conducted under the authority of a permit initially issued
30 by the ~~Division~~ Department on or after December 30, 1983 pursuant to G.S. 143-215.1 or G.S. 130A-294 and ~~which that~~
31 results in an increase in concentration of a substance in excess of the standards:

- 32 (1) at or beyond a review ~~boundary;~~ **boundary: the person** shall demonstrate, through predictive calculations
33 or modeling, that natural site conditions, facility design and operational controls will prevent a violation
34 of standards at the compliance ~~boundary;~~ **boundary.** ~~Alternately, the person may or~~ submit a plan for
35 alteration of existing site conditions, facility ~~design~~ **design**, or operational controls that will prevent a
36 violation at the compliance boundary, and implement that plan upon its approval by the ~~Director, or his~~
37 ~~designee.~~ Secretary.

1 (2) at or beyond a compliance ~~boundary~~, boundary: the person shall respond in accordance with Paragraph
2 (f) of this Rule, assess the cause, significance and extent of the violation of standards and submit the
3 results of the investigation, and a plan and proposed schedule for corrective action to the ~~Director, or his~~
4 ~~designee, Secretary~~. The permittee shall implement the plan as approved by and in accordance with a
5 schedule established by the ~~Director, or his designee~~ Secretary. In establishing a schedule the ~~Director,~~
6 ~~or his designee~~ Secretary shall consider any reasonable schedule proposed by the ~~permittee,~~ permittee,
7 the scope of the project, the extent of contamination, and the corrective action being proposed.

8 (e) ~~For the purposes of Paragraphs (c) and (d) of this Rule, an activity conducted under the authority of a permit issued by~~
9 ~~the Division, and subject to Paragraph (d) of this Rule, is one for which:~~

- 10 (1) ~~_____ a permit has been issued pursuant to G.S. 143-215.1;~~
- 11 (2) ~~_____ the permit was originally issued after December 30, 1983;~~
- 12 (3) ~~_____ the substance for which a standard has been exceeded outside the compliance boundary has been released~~
13 ~~to groundwater as a result of the permitted activity;~~
- 14 (4) ~~_____ all other activities shall for the purpose of this Rule be deemed not permitted by the Division and subject~~
15 ~~to the provisions of Paragraph (e) of this Rule.~~

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

- 20 (1) within 24 hours of discovery of the violation, notify the Department of the activity that has resulted in
21 the increase and the contaminant concentration levels;
- 22 (2) respond in accordance with Paragraph (f) of this Rule;
- 23 (3) submit a report to the Secretary assessing the cause, significance and extent of the violation; and
- 24 (4) implement an approved corrective action plan for restoration of groundwater quality at or beyond the
25 compliance boundary, in accordance with a schedule established by the Secretary. In establishing a
26 schedule the Secretary shall consider any [reasonable] schedule proposed by the person submitting the
27 plan. A report shall be made to the Health Director of the county or counties [in which] where the
28 contamination occurs in accordance with the requirements of Rule .0114(a) in this Section.

29 (f) ~~Corrective action~~ Initial response required following discovery of the unauthorized release of a contaminant to the
30 surface or subsurface of the land, and to be conducted prior to or concurrent with the assessment required in Paragraphs

31 ~~(e) and (d) (c), (d), or (e) of this Rule, Rule shall include, but is not limited to: include:~~

- 32 (1) Prevention of fire, ~~explosion~~ explosion, or the spread of noxious fumes;
- 33 (2) Abatement, ~~containment~~ containment, or control of the migration of contaminants;
- 34 (3) Removal, ~~or treatment~~ treatment, or ~~and~~ control of any primary pollution source such as buried waste,
35 waste ~~stockpiles~~ stockpiles, or surficial accumulations of free products;
- 36 (4) Removal, ~~treatment [or]~~ treatment, or control of secondary pollution sources which that would be
37 potential continuing sources of pollutants to the ~~groundwaters~~ groundwaters, such as contaminated soils

1 and non-aqueous phase liquids. Contaminated soils ~~which that~~ threaten the quality of groundwaters ~~must~~
2 ~~shall~~ be treated, ~~contained contained,~~ or disposed of in accordance with ~~applicable rules,~~ rules in this
3 Chapter and in Chapter 13 of this Title applicable to such activities. The treatment or disposal of
4 contaminated soils shall be conducted in a manner that will not result in a violation of standards or North
5 Carolina Hazardous Waste Management rules.

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

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

15 Reports of site assessments shall be submitted to the ~~Division~~ Department as soon as practicable or in accordance with a
16 schedule established by the ~~Director, or his designee,~~ Secretary. In establishing a schedule the ~~Director, or his designee~~
17 Secretary shall consider any reasonable ~~a~~ proposal by the person submitting the report.

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

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

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

31 (j) A corrective action plan prepared pursuant to Paragraph ~~(e) or (d)~~ (c), (d), or (e) of this Rule ~~must shall~~
32 using a remedial technology demonstrated to provide the most effective means, taking into consideration geological and
33 hydrogeological conditions at the contaminated site, ~~the best available technology~~ for restoration of groundwater quality
34 to the level of the ~~standards,~~ standards. Corrective action plans prepared pursuant to Paragraphs (c) or (e) of this Rule may
35 request an exception ~~except~~ as provided in Paragraphs (k), (l), (m), ~~(r)~~ (r), and (s) of this Rule.

36 (k) Any person required to implement an approved corrective action plan for a ~~non-permitted site pursuant to~~ site subject
37 to Paragraph (c) or (e) of this Rule may request that the ~~Director~~ Secretary approve such a plan without requiring

1 groundwater remediation to the standards. A request submitted to the ~~Director~~ Secretary under this Paragraph shall include
2 a description of ~~site specific~~ site-specific conditions, including information on the availability of public water supplies for
3 the affected area; the technical basis for the request; and any other information requested by the ~~Director~~ Secretary to
4 ~~thoroughly~~ evaluate the ~~request.~~ request in accordance with Subparagraphs (1) through (7) of this Paragraph. The ~~In~~
5 addition, the person making the request ~~must shall demonstrate:~~ demonstrate to the satisfaction of the ~~Director:~~ [Secretary:]

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

22 (l) Any person required to implement an approved corrective action plan for a ~~non-permitted site pursuant to~~ site subject
23 to Paragraph (c) or (e) of this Rule may request that the ~~Director~~ Secretary approve such a plan based upon natural processes
24 of degradation and attenuation of contaminants. A request submitted to the ~~Director~~ Secretary under this Paragraph shall
25 include a description of ~~site specific~~ site-specific conditions, including written documentation of projected groundwater
26 use in the contaminated area based on current state or local government planning efforts; the technical basis for the request;
27 and any other information requested by the ~~Director~~ Secretary to ~~thoroughly~~ evaluate the ~~request.~~ request in accordance
28 with Subparagraphs (1) through (10) of this Paragraph. The ~~In~~ addition, the person making the request ~~must shall~~
29 demonstrate: demonstrate to the satisfaction of the ~~Director:~~ [Secretary:]

- 30 (1) that all sources of contamination and free product have been removed or controlled pursuant to Paragraph
31 (f) of this Rule;
- 32 (2) that the contaminant has the capacity to degrade or attenuate under the site-specific conditions;
- 33 (3) that the time and direction of contaminant travel can be predicted ~~with reasonable certainty;~~ based on
34 subsurface conditions and the contaminant's physical and chemical properties;
- 35 (4) that contaminant migration will not result in any violation of applicable groundwater standards at any
36 existing or foreseeable receptor;
- 37 (5) that contaminants have not and will not migrate onto adjacent properties, or that:

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

18 (m) The ~~Division~~ Department or any person required to implement an approved corrective action plan for a ~~non-permitted~~
19 ~~site pursuant to~~ site subject to Paragraph (c) or (e) of this Rule may request that the ~~Director~~ Secretary approve termination
20 of corrective action.

- 21 (1) A request submitted to the ~~Director~~ Secretary under this Paragraph shall include:
22 (A) a discussion of the duration of the corrective action, the total ~~project's~~ project cost, projected
23 annual cost for continuance and evaluation of the success of the corrective action;
24 (B) an evaluation of alternate treatment technologies ~~which that~~ could result in further reduction of
25 contaminant ~~levels~~ levels, projected ~~capital~~ capital, and annual operating costs for each
26 technology; ~~and~~
27 (C) ~~the~~ effects, including health and safety impacts, on groundwater users if contaminant levels
28 remain at levels existing at the time corrective action is ~~terminated; and terminated.~~
29 ~~(D) — any other information requested by the Director [Secretary] to thoroughly evaluate the request.~~
30 (2) In addition, the person making the request ~~must shall demonstrate demonstrate: to the satisfaction of the~~
31 ~~Director: Secretary:~~
32 (A) that continuation of corrective action would not result in a significant reduction in the
33 concentration of ~~contaminants~~ contaminants. ~~(At a minimum this demonstration must show the~~
34 ~~duration and degree of success of existing remedial efforts to attain standards and include a~~
35 ~~showing that the asymptotic slope of the contaminants curve of decontamination is less than a~~
36 ~~ratio of 1:40 over a term of one year based on quarterly sampling) This demonstration shall~~
37 ~~show the duration and degree of success of existing remedial efforts to attain standards. For~~

1 the purpose of this Part, a “significant reduction” is demonstrated by showing that the
2 asymptotic slope of the contaminants curve of decontamination is less than a ratio of 1:40 over
3 a term of one year based on quarterly sampling;

- 4 (B) that contaminants have not and will not migrate onto adjacent properties, or that:
- 5 (i) such properties are served by an existing public water supply system dependent on
6 surface waters or hydraulically isolated ~~groundwater~~, groundwater; or
 - 7 (ii) the owners of such properties have consented in writing to the request;
- 8 (C) that, if the contaminant plumes are expected to intercept surface waters, the groundwater
9 discharge will not possess contaminant concentrations that would result in violations of
10 standards for surface waters contained in 15A NCAC 02B .0200;
- 11 (D) that public notice of the request has been provided in accordance with Rule .0114(b) of this
12 Section; and
- 13 (E) that the proposed termination would be consistent with all other environmental laws.

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

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

29 (n) Upon a determination by the ~~Director~~ Secretary that continued corrective action would result in no significant reduction
30 in contaminant concentrations, and the contaminated groundwaters can be rendered potable by treatment using readily
31 available and economically reasonable technologies, technologies that are in use in other applications and shown to be
32 effective for removal of contaminants, the ~~Director~~ Secretary may designate the remaining area of degraded groundwater
33 RS. Where the remaining degraded groundwaters cannot be made potable by such treatment, the ~~Director~~ Secretary may
34 consider a request for reclassification of the groundwater to a GC classification as outlined in Rule .0201 of this Subchapter.

35 (o) If at any time the ~~Director~~ Secretary determines that a new technology is available that would remediate the
36 contaminated groundwater to the standards specified in Rule .0202 of this Subchapter, the ~~Director~~ Secretary may require
37 the responsible party to evaluate the economic and technological feasibility of implementing the new technology in an

1 active groundwater corrective action plan in accordance with a schedule established by the ~~Director~~ Secretary. The
2 ~~Director's~~ Secretary's determination to utilize new technology at any site or for any particular constituent shall include a
3 consideration of the factors in Paragraph (h) of this Rule.

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

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

13 (r) If a discharge or release is not governed by ~~15A NCAC 2L .0115~~ the rules in Section .0400 of this Subchapter and the
14 increase in the concentration of a substance in excess of the standard resulted in whole or in part from a release from a
15 commercial or noncommercial underground storage tank as defined in G.S. 143-215.94A, any person required to
16 implement an approved corrective action plan pursuant to this Rule and seeking reimbursement for the Commercial or
17 Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds shall implement a corrective action plan
18 meeting the requirements of Paragraph (k) or (l) of this Rule unless such a the person demonstrates to the ~~Director~~ Secretary
19 that:

- 20 (1) contamination resulting from the discharge cannot qualify for approval of a plan based on the
21 requirements of the Paragraphs; or
- 22 (2) the cost of making such a demonstration would exceed the cost of implementing a corrective action plan
23 submitted pursuant to Paragraph (c) of this Rule.

24 (s) If a discharge or release is not governed by ~~15A NCAC 2L .0115~~ the rules in Section .0400 of this Subchapter and the
25 increase in the concentration of a substance in excess of the standard resulted in whole or in part from a release from a
26 commercial or noncommercial underground storage tank as defined in G.S. 143-215.94A, the ~~Director~~ Secretary may
27 require any person implementing or operating a previously approved corrective action plan pursuant to this Rule to:

- 28 (1) develop and implement a corrective action plan meeting the requirements of Paragraphs (k) and (l) of
29 this Rule; or
- 30 (2) seek discontinuance of corrective action pursuant to Paragraph (m) of this Rule.

31
32 *History Note:* Authority G.S. 143-215.1; 143-215.2; ~~143-215.3(a)(1)~~; 143-215.3; 143-215.94A; 143-215.94T; 143-
33 215.94V; 143B-282;
34 1995 (Reg. Sess. 1996) c. 648, s. 1;
35 Eff. August 1, 1989;
36 Amended Eff. October 1, 1993; September 1, 1992;
37 Temporary Amendment Eff. January 2, 1998; January 2, 1996;

