

CHAPTER 05 - MINING: MINERAL RESOURCES

SUBCHAPTER 05C - GEOPHYSICAL EXPLORATION

15A NCAC 05C .0101 DEFINITIONS

(a) ~~“Explorations” Explorations. Whenever the word “explorations” is referred to in these rules, it shall mean~~ means geological, geophysical and other surveys and investigations, including seismic methods for the discovery and location of oil, gas or other mineral prospects, and which may or may not involve the use of explosives.

(b) ~~Seismic Explorations: “Seismic Explorations” The word “seismic explorations” shall mean~~ means any geophysical exploration method ~~which involves~~ involving the use of explosives ~~explosives~~ and shall include the seismic vibrator method.

(c) ~~Shot: “Shot” The word “shot” as used in these rules shall mean~~ means the use and detonation of TNT, powder, dynamite, ~~nitroglycerin~~ nitroglycerin, each use of the seismic vibrator method, or other explosives.

(d) ~~Department: “Department” Whenever the word “department” is referred to in these rules, it shall mean~~ means the North Carolina Department of ~~Environment, Health, and Natural Resources~~ Environmental Quality in Raleigh, North Carolina.

(?) ~~“Party chief” means the leader of the on-site crew conducting the exploration work for a company that is permitted to conduct such work under these rules.~~

(?) ~~“Secretary” means Secretary of the Department of Environmental Quality.~~

(?) ~~“Seismic Agent” means a North Carolina Department of Environmental Quality representative who shall be responsible for observing and monitoring compliance with the rules and regulations of the Department and the issued permit for geophysical operations.~~

(?) ~~“Seismic vibrator method” means a vibrator device used as an energy source to generate a controlled acoustic wave train.~~

(?) ~~“Shooting component” means one explosive charge.~~

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Amended Eff. January 31, 1979;  
Readopted Eff. August 1, 1982;  
Amended Eff. April 1, 1990.

15A NCAC 05C .0103 CORRESPONDENCE

Reports and correspondence by all parties in connection with these rules shall be addressed to "North Carolina Department of ~~Environment, Health, and Natural Resources~~ Environmental Quality" in Raleigh, N.C." unless ~~from time to time~~ parties subject to these rules shall be notified in writing by the ~~department~~ Department to direct communications to a specified division or a specified representative of the ~~department~~ Department.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Amended Eff. January 31, 1979;  
Readopted Eff. August 1, 1982;  
Amended Eff. April 1, 1990.

15A NCAC 05C .0104 SITE REGULATION

The Secretary of the Department of ~~Environmental Quality~~ Environmental, Health, and Natural Resources (and in areas in which wildlife resources will be appreciably affected, with the advice and approval of the Director of the N.C. Wildlife Resources Commission and representatives of the U.S. Fish and Wildlife Service) will ~~shall~~ designate the extent of when, where, and how much exploration work may shall be conducted under these Rules ~~rules~~.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Amended Eff. January 31, 1979;  
Readopted Eff. August 1, 1982;  
Amended Eff. April 1, 1990.

**Commented [A1]:** DEQ staff reformatted the definitions to match other rules within the Department's authority. Staff note that definitions will need to be put into alphabetical order once final revisions are decided.

**Commented [A2]:** Chair Lister noted that "involves" should be singular and recommended a proposed revision as follows:

(b) Seismic Exploration. The phrase "seismic exploration" shall mean geophysical methods involving the use of explosives and shall also include vibroseis which is the method involving a vibrator truck used as an energy source to generate a controlled acoustic wavetrain.

DEQ staff agree with the incorporation of the vibroseis method but prefer to use a generic term for "vibroseis." DEQ staff added a separate definition for that method and revised this definition accordingly. If utilizing Chair Lister's phrasing, staff recommend defining "vibroseis."

**Commented [A3]:** Commissioner Droz recommended the addition of "TNT" to the definition of shot.

DEQ staff recommend adding "each use of the seismic vibrator method" to be inclusive of all kinds of "shots" utilized.

**Commented [A4]:** DEQ staff added a definition of "party chief" to clarify later rules where the phrase is used.

**Commented [A5]:** DEQ staff recommend revisions for clarity.

**Commented [A6]:** Chair Lister revisions are incorporated.

### 15A NCAC 05C .0105 PERMIT REQUIRED

A permit from the ~~Department~~department is required for all seismic exploration work in the area to which these rules are ~~applicable~~-applicable. No such seismic work shall be started without a permit and all such work ~~must shall~~ be carried out in such manner as may be approved by the ~~Department~~said secretary.

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

### 15A NCAC 05C .0106 PERMIT APPLICATION

Application for permits for such exploration work ~~must shall~~ be filed in ~~quadruplicate~~ with the ~~department~~ Department at least ~~40 days~~ 30 business days before issuance of permits and ~~must shall~~ be accompanied by a detailed map showing the exact area in which the geophysical operations are to be conducted, such area to be shown, where possible, by reference to established ~~east~~-objects or geodetic landmarks. ~~(The department may hereafter require applications to be filed on special forms to be provided by the department.)~~ Permittees ~~will shall~~ also obtain appropriate assent from the lessee if and where the area under investigation is leased, with exclusive exploration privilege, to other than the permittee. ~~If the applicant is not the owner of the land and owner of the mineral rights to be explored, the applicant shall include the owner's written consent for the applicant to submit an exploration application to conduct exploration activities.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

### 15A NCAC 05C .0107 PERMIT DURATION

Permits are limited to a period of six months from date of issue, but may be renewed for not more than two additional 90-day periods at the discretion of the ~~Department~~secretary. Applications for each renewal may be ~~submitted made~~ electronically, in letter form. After the expiration of a permit and any renewals thereof, work may continue or be resumed under any new permit issued or application made as provided in Rule ~~0006 .0106~~ of this Subchapter. Section.

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

### 15A NCAC 05C .0108 GEOGRAPHIC LIMITS ON WORK

~~No~~ A seismic exploration shall not be conducted outside of the permitted area. ~~erew shall work outside the area or areas as described in its permit or permits.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

### 15A NCAC 05C .0109 SEISMIC AGENTS

Each seismic exploration crew working under a permit issued pursuant to these rules ~~will shall~~ always be accompanied by a seismic agent, unless written exception has been granted by the ~~Department~~secretary. ~~When If a geophysical company crew employs more than one shooting component or more than one seismic vibration crew unit and the operations units are at such a distance apart that it is impossible for the seismic agent to travel from one to the other in time to observe the shots of each crew, it will be required that an agent shall be assigned to each geophysical shooting component of the crew-crew. The seismic agent shall be present for each shot and each use of the seismic vibrator method. will be constantly present during the shooting operations of the party to which he is assigned.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

### 15A NCAC 05C .0110 DAILY REPORT REQUIRED

**Commented [A7]:** Commissioner Droz pointed out that "Department" is inconsistency capitalized throughout the rules.

DEQ staff revised "Department" to be a capitalized term throughout these rules as requested by Commissioner Droz and to match the defined term.

**Commented [A8]:** Commissioner Droz recommended removal of double spaces after periods. DEQ staff attempted to revise the rules throughout 5C accordingly among other recommended revisions.

**Commented [A9]:** Chair Lister proposed to remove this line.

DEQ staff agree with this change. If the line is retained, staff would revise to be without parenthesis and phrased as follows: The Department may require applications to be filed electronically or on forms to be provided by the Department.

**Commented [A10]:** Chair Lister would retain the previous sentence: Permittees will shall also obtain appropriate assent from the lessee if and where the area under investigation is leased, with exclusive exploration privilege, to other than the permittee.

Commissioner Droz noted that "to other than the permittee" was unclear.

DEQ staff believe that rephrasing the previous line would be clearer and propose revision. Staff revision is incorporated into the rule for consideration.

**Commented [A11]:** DEQ staff recommend that applications be submitted to the Department electronically.

**Commented [A12]:** Chair Lister version: The seismic agent will be constantly present during the shooting operations or vibroseis operations of the crew to which he is assigned.

Commissioner Droz would further revise that sentence to be changing the "he" to "he or she."

DEQ staff believe that rephrasing would add clarity. Staff prefer the generic version of "vibroseis" in alignment with the definitions section. Staff revision is incorporated for consideration.

~~The permittee shall file a daily report. Daily reports on such exploration work shall be filed with the Department department by the seismic agent at the end of each working day period. A separate report must shall be made for each day whether or not data acquisition shooting is in progress. These reports must furnish complete information as indicated on the report form and must be signed by the party chief and by the seismic agent. The party chief will furnish only such information to the seismic agent as is required to fill out the daily reports. Should the department wish to secure any other information, it will furnish the party chief with a written request. The Department may request additional information.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

#### 15A NCAC 05C .0111 NOTIFICATION

~~Operators Permittees shall notify the Department department electronically with verifying receipt at least one week two weeks in advance of the beginning, and shall give notice of interruption, and of cessation of work in any area, area, and shall keep the department informed of name and address of party chief, and location and movements of the crew or quarter boat.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

#### 15A NCAC 05C .0112 SIZE OF EXPLOSIVE CHARGES

~~Charges in excess of 50 pounds of TNT or its equivalent shall not be used except pursuant to written authorization from the Department department. Requests shall be submitted with the permit application to the Department for the use Use of such charges must shall be made in writing, giving the reasons why such charges are needed, the size of charges to be used, and the depth at which they are to be suspended or buried. Such requests should be addressed to the department. Should multiple charges be used, the total amount of explosive should not exceed 50 pounds of TNT or its equivalent without special permission from the Department department.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

#### 15A NCAC 05C .0113 PLACING OF CHARGES

~~The placing of explosive charges on the bottoms of the water at any area covered by a permit issued pursuant to these rules is prohibited prohibited. No undetonated charges shall be left. No such charges should be detonated that are less than five feet to the bottom, nearer to the bottom or water bed than five feet. No undetonated charges shall be left following the work day.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

#### 15A NCAC 05C .0115 REMOVAL

~~All pipe used in geophysical operations must shall be removed by the party permittee using such pipe to at least six feet below the bottom or water bed (and and in charted navigable channels, at least eight feet below charted dredge depth) depth before finally leaving the shot point location where the pipe is placed.~~

*History Note:* Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

#### 15A NCAC 05C .0116 IDENTIFICATION

~~All parties permittees using pipe must shall have clearly stamped at each end of each joint the name or abbreviation of the name of the company using the pipe permittee.~~

**Commented [A13]:** Chair Lister recommended the phrase "data acquisition" in lieu of "shooting" in the phrase "whether or not shooting is in progress."

**Commissioner Droz** noted that there is no indication of what a "report form" is.

**DEQ staff** agree with the Chair's proposed revision and recommend that references to a report form be removed from rule to provide flexibility to permittees on meeting the reporting requirements. Staff further recommend revisions for clarity. Staff revisions are incorporated for consideration.

**Commented [A14]:** DEQ staff recommend clarifying how notice would be given to the Department of the work and recommend changing the time period for notice to two weeks to allow for the Department to arrange for the seismic agent to be present at the site.

**Commented [A15]:** Chair Lister left the sentence (struck per DEQ staff revisions) but removed "or quarter boat."

**DEQ staff** recommend removing this part of the sentence as unnecessary. DEQ staff version incorporated for consideration.

**Commented [A16]:** Commissioner Droz asked whether weight is an appropriate measure for dynamite as well as nitroglycerin and asked whether that weight is an appropriate amount for dynamite as well as nitroglycerin.

**DEQ staff** recommend revising the phrasing in this rule to "of TNT or its equivalent" for clarity. Staff revisions are incorporated for consideration.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**15A NCAC 05C .0117 PIPES AND BUOYS**

All pipes, buoys, and other markers used in connection with seismic work shall be properly flagged in the daytime and lighted at night according to the navigation rules of the U.S. Army Corps Engineers and the U.S. Coast Guard.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**15A NCAC 05C .0118 EXPLOSIVES**

No explosives shall be discharged within 1,000 feet of a fishing boat operating in the waters, water without notice being given to such boat so that it may move from the area. ~~Before any shot is discharged the exploration party shall employ methods approved by the industry to frighten or drive away the fish and/or marine life which may be in the area where the shot is to be discharged. If there is a school or schools of fish in the area to be shot, operations must be suspended in that particular area until said school or schools of fish have been driven away.~~

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**15A NCAC 05C .0119 SHOOTING**

- (a) No shooting will be allowed except in daylight hours, hours so that the seismic agent may observe the results of each shot, except that, in the discretion of the department and on written request stating the reasons therefor special written permission may be granted for night shooting.
- (b) No shooting will shall be allowed in heavy fog, fog due to danger to boats in close proximity.
- (c) The permittee shall stop Persistent gas and water spouts caused by drilling or shooting operations of seismic crews within 24 hours will be stopped by permittee as soon as possible after they occur.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**15A NCAC 05C .0120 MINIMUM DEPTHS**

- (a) Minimum required depths of charges detonated in holes below the bottom ~~or bed of the inland or offshore waters~~ water within the jurisdiction of this ~~state~~State shall be as follows:
- |     |   |                           |
|-----|---|---------------------------|
| (1) | five pounds or less of TNT or its equivalent; | 20 feet below the bottom, |
| (2) | up to 20 pounds of TNT or its equivalent;     | 40 feet below the bottom, |
| (3) | up to 30 pounds of TNT or its equivalent;     | 50 feet below the bottom, |
| (4) | up to 40 pounds of TNT or its equivalent;     | 60 feet below the bottom, |
| (5) | up to 50 pounds of TNT or its equivalent;     | 70 feet below the bottom. |
- (b) ~~No part of the charge shall be above the minimum required depth.~~ Irrespective of the minimum depths specified in Paragraph (a) of this Rule, all charges shall be detonated at sufficient depths to prevent cratering.
- (c) These minimum required depths shall not apply to trial charges and charges for determining condition of the weathering layer; provided that such charges are not over five pounds and not fired without permission of the seismic agent, ~~and then no more often than absolutely necessary.~~

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**15A NCAC 05C .0121 DETAILED PROVISIONS**

**Commented [A17]:** Chair Lister proposed repeal and states that this rule is unnecessary because it refers to Currituck operations.

**DEQ staff** recommend retaining the rule for clarity in the event that seismic work occurs offshore, but recommend revising for clarity. Staff revisions are incorporated for consideration.

**Commented [A18]:** Chair Lister proposed repeal of this rule.

**DEQ staff** recommend retaining the rule for clarity in the event that seismic work occurs offshore, but recommend revising for clarity. Staff revisions are incorporated for consideration.

(a) When more than one shot is fired in the same hole, hole and there is any reasonable doubt in the mind of either the seismic agent or the field manager of the party as to the legal depth of the hole after the shot is fired, the hole will be measured for depth every shot is fired, before reloading to ascertain that it is the required depth in accordance with the table of charges and depth.

(b) All surveying hub stakes 2 x 2's used for survey lines must shall be clearly stamped with the name of the permittee company using the stakes at approximately three-foot intervals.

(c) All holes drilled in geophysical operations in land areas must shall be filled filled, by the permittee the persons or agency drilling these holes, before leaving the location.

(d) No explosives shall be discharged within 300 feet of any oyster reef or bed, including any state-owned natural reefs, or within 300 feet of any dock, pier, causeway or other fixed structure, structure anchored to the seabed without written permission signed by the owner and/or and lessee of the reef or bed, approved by the department Department.

(e) All shot charges suspended in the water by floats shall be of such type and packaged in such manner that same will disintegrate and neutralize in the water within a short time, and any suspended charge which fails to discharge shall be immediately removed from the water if same can, in the opinion of the party chief or manager, be done without endangering the life of any member of the party, but, in no event, shall any such undischarged suspended charge be abandoned without destroying the floats attached thereto. Where inflated floats are used, all charges will be suspended from dual floats either of which will be capable of retaining the charge at the proper depth.

(f)(c) Boats, marsh buggies or other types of marsh vehicles must shall be so used as to cause the minimum disturbance of an injury to lands, waterbottoms, and wildlife and fisheries thereon. All such vehicles shall be clearly painted or otherwise distinctively marked so as to be easily seen and identified.

(g) Agents assigned to seismic crews are to be employees of and under the supervision of the department.

(h) The department on request, will have access to all records, such as shot point location maps, shooters' logs and tracings, but only to the extent necessary, to determine that all protective requirements have been complied with.

(i) The interpretation of these rules by the department will be accepted by the seismic operator and the seismic agent.

(j) The party chief will instruct the members of his party as to these rules, and to the duty and authority of the department and the seismic agent.

(k) The party chief will assist the seismic agent to fill out the required form by furnishing all necessary data.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

#### 15A NCAC 05C .0123 POWERS OF SEISMIC AGENTS

The seismic agent has the right to stop any particular shooting shooting, if, in his opinion, if it will violate the rules in this Subchapter, but does not have the authority to shut down the entire exploration work. If, in the opinion of the seismic agent, If such violations continue, he or she shall will immediately contact the Department within 24 hours, department, and the members of the exploration party will assist him to do this with all the facilities at their disposal.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

#### 15A NCAC 05C .0124 DUTIES OF PARTY CHIEF

(a) The party chief shall provide will furnish the department Department's representative supervisor or his or her agent with transportation facilities to for inspection enable him to visit of the working area, if required.

(b) The party chief is required to notify the Department department immediately if the seismic agent is not on the working area, job, and will notify the department supervisor if it should become necessary to relieve an agent at any time. The Department department supervisor will shall arrange relief for the seismic agent, agent, if necessary.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**Commented [A19]:** DEQ staff recommended revision for clarity:

When more than one shot is fired in the same hole, the permittee shall measure the legal depth of the hole after every shot is fired.

**Commented [A20]:** Chair Lister left original phrase "fixed structure" in his revisions.

DEQ staff believe a definition would be necessary if retaining the "fixed structure" phrase and propose replacing "fixed structure" with "structure anchored to the seabed." Staff revision is incorporated for consideration.

**Commented [A21]:** DEQ staff recommend repealing (c) as unnecessary.

**Commented [A22]:** DEQ staff note that Paragraph numbering will need to be updated once revisions are finalized.

**Commented [A23]:** DEQ staff moved to definitions.

**Commented [A24]:** DEQ staff removed because staff believe it is unnecessary to have in rule, as the Department should have access to records to ensure permit compliance.

**Commented [A25]:** DEQ staff believe this is not a "rule" within the definition in the APA.

**Commented [A26]:** DEQ staff believe this is not a "rule" within the definition of the APA.

**Commented [A27]:** DEQ staff believe this is not necessary to have in rule.

**15A NCAC 05C .0125 RELEASE FROM THESE REGULATIONS**

No seismic agent shall have the right to release any operator from the obligations imposed by these rules. Permittee may request an exception to these rules in writing by setting forth reasons for the request. Exceptions may be granted by the ~~department~~Department only, after written application setting forth reasons for exception. ~~The release and will~~shall designate the particular area and rule affected and the procedure to be followed in lieu of the established rule.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**15A NCAC 05C .0126 DUTIES OF OPERATORS**

All ~~operator~~permittees conducting seismic operations shall use ~~reasonable~~precaution in accordance with approved and accepted ~~methods.~~ methods to prevent destruction of, or injury to, fish, oysters, shrimp, and other aquatic life, wildlife, or other natural resources.

History Note: Authority G.S. 113-391;  
Eff. February 1, 1976;  
Readopted Eff. August 1, 1982.

**Commented [A28]:** DEQ staff believe this rule could be repealed.

If the rule is to be retained, DEQ staff propose revising the rule:  
All permittees conducting seismic operations shall use precaution in accordance with approved and accepted methods to prevent destruction of, or injury to, fish, oysters, shrimp, and other aquatic life, wildlife, or other natural resources.

Staff revision is incorporated into the rule for consideration.