SECTION .1500 – SOIL REMEDIATION

15A NCAC 02T .1501 is proposed for readoption without substantive changes as follows:

15A NCAC 02T .1501 SCOPE

The rules in this Section apply to the Disposal or Treatment of Soils Containing Petroleum Products or other Contaminated Soil by Land Application, Storage, or Containment and Treatment. These Rules do not apply to:

(1) "hazardous waste" as defined in 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b), 40 CFR 261.3 as adopted by reference in 15A NCAC 13A .0106(a), and North Carolina General Statute 130A-290;

(2) soil contaminated with "hazardous waste" or "hazardous waste constituents" as defined in 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) and 40 CFR 261.3 as adopted by reference in 15A NCAC 13A .0106(a) from a "Facility" as defined in 15A NCAC 13A .0102(c); or

(3) cuttings and other wastes generated in the construction and development of oil and gas wells regulated by Article 27 of G.S. 113.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006;
Amended Eff. March 19, 2015.
Readopted Eff. XX 1, 201X.

15A NCAC 02T .1502 is proposed for readoption with substantive changes as follows:

15A NCAC 02T .1502 DEFINITIONS

The following definitions apply to this Section:

(1) "Contaminated soil" means soil containing petroleum products or other soil that has been affected by non-petroleum substances as a result of a release or discharge, but does not include hazardous waste.

(2) "Dedicated site" means a site used for the repetitive treatment of soils.

(3) "Permitting agency" means the Division of Waste Management, UST Section, for contaminated soils originating from underground storage tanks (USTs) and for dedicated sites. For other soil, the permitting agency means the Division of Water ~~Quality~~Resources. When the permitting agency is the Division of Waste Management, the Division of Waste Management shall be considered the Division for the purposes of Section .0100 of this Subchapter.

(4) "Petroleum contaminated soil" or "Soil containing petroleum products" shall mean any soil that has been exposed to petroleum products because of any emission, spillage, leakage, pumping, pouring, emptying, or dumping of petroleum products onto or beneath the land surface and that exhibits characteristics or concentrations of petroleum product constituents in sufficient quantities that exceed either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations established by the Department pursuant to 15A NCAC 02L .0411, whichever is lower ~~as to be detectable~~ by compatible laboratory analytical procedures pursuant to 15A NCAC 02H .0800.

(5) "Petroleum product" means all petroleum products as defined by G.S. 143-215.94A and includes motor gasoline, aviation gasoline, gasohol, jet fuels, kerosene, diesel fuel, fuel oils (#1 through #6), and motor oils (new and used).

(6) "Soil remediation at conventional rates" means the treatment of contaminated soils by land application methods, at an evenly distributed thickness not to exceed six inches.

(7) "Soil remediation at minimum rates" means the treatment of contaminated soils by land application methods, at an evenly distributed application thickness not to exceed an average of one inch.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.
Readopted Eff. XX 1, 201X.

15A NCAC 02T .1503 is proposed for readoption without substantive changes as follows:

15A NCAC 02T .1503 PERMITTING BY REGULATION

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

(1) Storage sites for petroleum contaminated soils that are utilized for less than 45 days, storage is on 10 mil or thicker plastic, provisions are made for containing potential leachate and runoff, setbacks required in Rule .1506 of this Section are maintained, and approval of the activity has been received from the appropriate Regional Supervisor or his designee that the site meets the criteria of this Rule.

(2) Land application sites for petroleum contaminated soils with volumes of soil from each source of less than or equal to 50 cubic yards or for the application of up to 100 cubic yards if the application is at minimum rate, setbacks required in Rule .1506 of this Section are maintained, and approval of the activity has been received from the appropriate Regional Supervisor or his designee that the site meets the criteria of this Rule.

(3) Land application sites for the disposal of drill cuttings if applied on the site where the drilling occurs and setbacks required in Rule .1506 of this Section are maintained. Soils contaminated with non-petroleum substances must be determined by chemical analysis to be non-hazardous wastes.

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.
Readopted Eff. XX 1, 201X.

15A NCAC 02T .1504 is proposed for readoption without substantive changes as follows:

15A NCAC 02T .1504 APPLICATION SUBMITTAL

(a) For all applications the following shall be submitted to the permitting agency by the applicant:

(1) A complete chemical analysis of the contaminated soil to be remediated, including total petroleum hydrocarbons (TPH), semivolatile and volatile organics, pH, and heavy metals. All methods and procedures shall be in accordance with 15A NCAC 02H .0800.

(2) A determination of hazardous waste constituents using the Toxicity Characteristic Leaching Procedure (TCLP) described in 40 CFR 261.24. Any substance shall be considered a hazardous waste if the results of the TCLP analysis indicates concentrations of constituents greater than the federal regulatory level, unless documentation is provided stating that the contaminated soil is not a hazardous waste (i.e. within the scope of this Section as provided in Rule .1501 of this Section). A TCLP analysis shall be required for all permit applications to dispose of petroleum contaminated soil in accordance with the following criteria:

(A) If the source of the soil contamination is a virgin (unused) petroleum product from an underground storage tank regulated under Subtitle I of RCRA, the contaminated soil shall not be considered a hazardous waste and no TCLP analysis is required. In lieu of the TCLP analysis, certification of soil contamination from a virgin petroleum product shall be required.

(B) If an analysis of the source of petroleum product is submitted showing concentrations less than the regulatory level associated with the constituents of the TCLP analysis (Table II.2 of the Federal Register, Volume 55, No. 61), the contaminated soil shall not be considered a hazardous waste and no TCLP analysis shall be required.

(C) For soils contaminated with used motor oil, the soils shall be considered hazardous until proven otherwise by a TCLP analysis for volatile organics and metals (EPA Hazardous Waste Nos. D004-D011).

(D) For soils contaminated by waste oil, a TCLP analysis for all constituents in Table II.2 of the Federal Register, Volume 55, No. 61, with the exception of pesticides and herbicides, shall be required.

(E) For soils contaminated with petroleum products not regulated under Subtitle I of RCRA (excluding used motor and waste oils), the soils shall be considered hazardous waste until proven otherwise.

(3) Site map. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. A scaled map of the site with a horizontal scale of one inch equals 100 feet or less and topographic contour intervals not exceeding 10 feet or 25 percent of total site relief, whichever is less and including the following:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]

(A) all property boundaries and all structures within the treatment, storage and land application areas,

(B) the location of all wells, springs, lakes, ponds, or other surface drainage features within 500 feet of the waste disposal site;

(C) setbacks as required by Rule .1506 of this Section; and

(D) any residences or place of public assembly under separate ownership within 400 feet of the waste disposal site.

(4) Confirmation that an erosion control plan has been submitted to the Division of Land Quality or its designee, for disposal sites encompassing more than one acre.

(5) The volume of contaminated soil to be remediated.

(6) A landowner agreement to allow the use of the property for the purpose of remediating contaminated soil. The agreement is not required when the permit applicant is the sole landowner.

(b) For soil remediation at minimum rates the following shall be submitted to the permitting agency by the applicant:

(1) a calculation of the area required for land application using the maximum application thickness of one inch,

(2) an indication of cover crop(s), and

(3) proof of written notification in the form of certified mail return receipts to each city and county government having jurisdiction over any part of the land over which disposal is to occur.

(c) For soil remediation at conventional rates (dedicated or non-dedicated sites) the following shall be submitted to the permitting agency by the applicant:

(1) A soils evaluation report of the disposal area to evaluate the soil to a depth of five feet. If required by G.S. 89F, a soil scientist shall prepare this evaluation. The report shall include:

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]

(A) field descriptions of texture, color, and structure,

(B) depth and thickness of soil horizons,

(C) presence of any restrictive horizons,

(D) depth to seasonal high water table,

(E) soil pH and cation exchange capacity, and

(F) estimates of liming and fertilization requirements.

(2) The calculation of the size of the disposal area and thickness of application.

(3) A description of the proposed cover crop.

(4) A site maintenance plan.

(5) Proposed groundwater quality monitor well network (dedicated sites only).

(6) Proof of written notification in the form of certified mail return receipts to each city and county government having jurisdiction over any part of the land over which disposal is to occur.

(d) For containment and treatment the following shall be submitted to the permitting agency by the applicant:

(1) A soils evaluation report of the disposal area to evaluate the soil to a depth of five feet. If required by G.S. 89F, a soil scientist shall prepare this evaluation. The report shall include: [Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]

(A) field descriptions of texture, color, and structure,

(B) depth and thickness of soil horizons,

(C) presence of any restrictive horizons, and

(D) depth to seasonal high water table.

(2) The plans and specifications of the soil containment vessel and any associated leachate collection system, including the operating thickness of the soil to be contained and treated.

(3) A description of the chemical or biological additives used in treating the contaminated soil.

(e) For containment and utilization at brick, asphalt, or other production facilities, a site management plan, consisting of a complete description of all operational procedures related to the handling of soils at the proposed facility shall be submitted to the permitting agency by the applicant, including:

(1) a description of the staging area(s) designated for initial receipts of the contaminated soils,

(2) the method of emplacement of the soils in the containment area(s),

(3) the average residence time of the soils in the containment area(s),

(4) the method of incorporation of the soils into the production facility's product materials, and

(5) the method of containment and disposal of any leachate or runoff resulting from the containment and storage of contaminated soils.

(f) For soil remediation using mobile or portable self-contained facilities the following shall be submitted to the permitting agency by the applicant:

(1) a description of the treatment system to include procedures for controlling any vapors, liquid or solid by-products of the treatment process,

(2) the method by which any by-products will be disposed,

(3) the predicted average concentration of contaminants in the untreated soil,

(4) the sampling procedures and analytical methods by which the concentration(s) and type(s) of contaminants in the treated soil will be determined,

(5) the method of disposal of the treated soil, and

(6) for applications proposing to stage soils, a description of the method proposed to prevent contact of contaminated soil with the environment.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.
Readopted Eff. XX 1, 201X.

15A NCAC 02T .1505 is proposed for readoption with substantive changes as follows:

15A NCAC 02T .1505 DESIGN CRITERIA

(a) Land Application of Soils Containing Petroleum Products at Minimum Rates. Petroleum contaminated soils shall be incorporated into the native soils of the receiver site immediately upon application. Liming, fertilization, and aeration of the soils mixture shall be optional. Subsequent application of petroleum contaminated soils onto the same receiver site shall not occur for at least 18 months from the date of the most recent application of petroleum contaminated soils and shall cause the receiver site to be reclassified as a "dedicated site" unless the permittee or applicant can demonstrate, through soil sampling and contaminant analytical procedures pursuant to 15A NCAC 02H .0800, that the petroleum contaminant level in the upper eight inches of the receiver site soils is below either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations established by the Department pursuant to 15A NCAC 02L .0411, whichever is lower. ~~analytical detection levels.~~

(b) Land Application of Soil Containing Petroleum Products at Conventional Rates. Land application of soils containing petroleum products at an application thickness greater than one inch shall require fertilization, liming, and aeration of the native soils and petroleum contaminated soils mixture. Application thickness shall be based upon the nature of the receiver site soils, depth to the seasonal high water table, the intended cover crop, and the source of contamination. Operation of the land application program shall not result in contravention of groundwater or surface water standards. Subsequent application of petroleum contaminated soils onto the same receiver site shall not occur for at least 18 months from the date of the most recent application of petroleum contaminated soils and shall cause the receiver site to be reclassified as a "dedicated site" unless the permittee or applicant can demonstrate, through soil sampling and contaminant analytical procedures pursuant to 15A NCAC 02H .0800, that the petroleum contaminant level in the upper eight inches of the receiver site soils is below either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations established by the Department pursuant to 15A NCAC 02L .0411, whichever is lower. ~~analytical detection levels.~~

(c) Disposal of Soils Containing Petroleum Products at Dedicated Land Application Sites. Subsequent applications of petroleum contaminated soils at dedicated sites shall not recur until such time as it can be demonstrated that additional applications of contaminated soils will not result in the contravention of any groundwater or surface water standards.

(d) Containment and Treatment and Containment and Utilization of Contaminated Soil.

(1) A containment structure designed to bioremediate or volatilize contaminated soil shall be constructed of either a synthetic liner of at least 30 mils thickness or of a one foot thick liner of natural material, compacted to at least 95 percent standard proctor dry density and with a permeability of less than 1×10^{-7} cm/sec.

(2) The bottom of the containment structure shall be at least three feet above the seasonal high water table or bedrock.

(3) A leachate collection system ~~must~~shall be installed in order to prevent runoff from the contaminated soils within the containment structure, or a cover provided to avoid accumulation of stormwater within the containment structure.

(4) The containment structure shall be compatible with the chemical and physical properties of the contaminants involved.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.
Readopted Eff. XX 1, 201X.

15A NCAC 02T .1506 is proposed for readoption without substantive changes as follows:

15A NCAC 02T .1506 SETBACKS

Remediation systems shall adhere to the following setbacks and greater where necessary to comply with minimum horizontal distance requirements set by the Division pursuant to Subchapter 15A NCAC 02L .0107:

	Feet
Any habitable residence or place of public assembly under separate ownership or not to be maintained as part of the project site	100
Any well with the exception of a Division approved groundwater monitoring well	100
Surface waters (streams – intermittent and perennial, perennial waterbodies, and wetlands)	100
Surface water diversions (ephemeral streams, waterways, ditches)	25
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25
Subsurface groundwater lowering drainage systems	25
Any building foundation except treatment facilities	15
Any basement	15
Any property line	50
Any water line	10
Any swimming pool	100
Rock outcrops	25
Public right-of-way	50

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.
Readopted Eff. XX 1, 201X.

15A NCAC 02T .1507 is proposed for readoption with substantive changes as follows:

15A NCAC 02T .1507 CLOSURE REQUIREMENTS

(a) A permit ~~must~~shall be held and renewed if necessary until such time that the soil remediation facility has satisfied all conditions for closure and the permitting agency has notified the permit holder that the facility has satisfied conditions necessary for closure and rescinded the permit. The permittee ~~must~~shall notify the permitting agency 30 days prior to the initiation of closure activities. This Rule does not apply to deemed permitted facilities as described in Rule .1503 of this Section.

(b) A facility may be considered for closure once all of the following conditions have been satisfied:

(1) Any and all outstanding enforcement actions levied by the permitting agency have been resolved.

(2) Requirements for all other related on-site permitted activities have been met.

(3) For all land application sites the applicant shall provide to the permitting agency:

(A) Demonstration that no contaminant constituents in the groundwater exceed groundwater standards for dedicated and conventional rate land application sites.

(B) Demonstration that all remaining contaminated soil has been remediated to below either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations established by the Department pursuant to 15A NCAC 02L .0411, whichever is lower.~~detection levels.~~ The demonstration shall be based upon representative samples from the permitted site.

(C) If a groundwater drainage system or surface waters are present on the site or within the compliance boundary, a demonstration that surface water has not been impacted by contaminants at concentrations in excess of those established in Subchapter 15A NCAC 02B.

(4) For facilities utilizing containment and treatment or portable self-contained treatment systems.

(A) Demonstration by the applicant to the permitting agency that all treated soil has been remediated to below either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations established by the Department pursuant to 15A NCAC 02L .0411, whichever is lower~~ detection levels.~~.based upon analysis of representative soil samples or is disposed of under Subparagraph (b)(4)(B) of this Rule.

(B) All remaining soil that contains contaminants at levels that exceed either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations established by the Department pursuant to 15A NCAC 02L .0411, whichever is lower~~the method detection levels.. must~~shall be disposed of at another permitted facility and the permitting agency ~~must~~shall be notified prior to transport.

(C) Demonstration by the applicant to the permitting agency that the facility has been decontaminated based upon analysis of samples.

(5) For storage facilities, a demonstration that the storage facility has been decontaminated to below either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations established by the Department pursuant to 15A NCAC 02L .0411, whichever is lower ~~detection levels~~ shall be submitted by the permittee to the Division. The demonstration shall be based upon analysis of pollutants identified in the contaminated soil as provided in Rule .1504(a)(1) of this Section.

(c) A facility that satisfies the conditions for closure may petition the permitting agency for closure status approval and shall provide the following information:

(1) identification of the original permit authorizing the construction and operation of the soil remediation facility;

(2) the reason(s) for closure of facility;

(3) the name and title of the contact;

(4) sample analyses (tabulated and graphed) for the last four groundwater sampling events prior to facility shutdown showing the concentrations of the parameters of concern and if groundwater monitoring is required at a land application site, groundwater analytical results for sample collection to satisfy Subparagraph (b)(3)(A) of this Rule; ~~Rule .1507(b)(3)(A);~~

(5) laboratory analytical results for soil samples collected from the treated soil, which have been analyzed by methods approved in accordance with Rule .1504(a)(1) of this Section;

(6) if a groundwater drainage network (ditches) or surface waters are present on the site or within the compliance boundary, analytical results for surface water samples collected upstream of the facility, within the facility if applicable, and at a downstream location at the edge of the property to document that surface waters have not been impacted;

(7) decontamination procedures for any treatment or containment structure;

(8) a sedimentation and erosion control plan, prepared in accordance with the Division of Energy, Mineral, and Land Resources requirements pursuant to Subchapter 15A NCAC 04B, if a plan to restore the site to pre-soil treatment conditions is proposed that will disturb an area of land equal to or greater than one acre;

(9) a map of the facility~~facility, which~~ that shows the size, orientation, and location of the facility relative to existing monitor wells, roads, structures, and other site features; and

(10) certification that the closure has been accomplished and that the information submitted is complete, factual and accurate.

(d) Once the permitting agency has determined that all conditions required for site closure have been satisfied, the permitting agency shall issue a notice stating that the permit for the facility has been rescinded and "closure status" has been granted.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006;

Amended Eff. August 1, 2012 (see S.L. 2012-143, s.1.(f)).

Readopted Eff. XX 1, 201X.