

**15A NCAC 13A .0109 STANDARDS FOR OWNERS/OPERATORS OF HWTSD FACILITIES - PART 264**

- (a) Any person who treats, stores or disposes of hazardous waste shall comply with the requirements set forth in this Section. The treatment, storage or disposal of hazardous waste is prohibited except as provided in this Section.
- (b) 40 CFR 264.1 through 264.4 (Subpart A), "General", are incorporated by reference including subsequent amendments and editions.
- (c) 40 CFR 264.10 through 264.19 (Subpart B), "General Facility Standards", are incorporated by reference including subsequent amendments and editions.
- (d) 40 CFR 264.30 through 264.37 (Subpart C), "Preparedness and Prevention", are incorporated by reference including subsequent amendments and editions.
- (e) 40 CFR 264.50 through 264.56 (Subpart D), "Contingency Plan and Emergency Procedures", are incorporated by reference including subsequent amendments and editions.
- (f) 40 CFR 264.70 through 264.77 (Subpart E), "Manifest System, Recordkeeping, and Reporting", are incorporated by reference including subsequent amendments and editions.
- (g) 40 CFR 264.90 through 264.101 (Subpart F), "Releases From Solid Waste Management Units", are incorporated by reference including subsequent amendments and editions. For the purpose of this incorporation by reference, "January 26, 1983" shall be substituted for "July 26, 1982" contained in 40 CFR 264.90(a)(2).
- (h) 40 CFR 264.110 through 264.120 (Subpart G), "Closure and Post-Closure", are incorporated by reference including subsequent amendments and editions.
- (i) 40 CFR 264.140 through 264.151 (Subpart H), "Financial Requirements", are incorporated by reference including subsequent amendments and editions, except that 40 CFR 264.143(a)(3), (a)(4), (a)(5), (a)(6), 40 CFR 264.145(a)(3), (a)(4), (a)(5), and 40 CFR 264.151(a)(1), Section 15 are not incorporated by reference.
- (1) The following shall be substituted for the provisions of 40 CFR 264.143(a)(3) which were not incorporated by reference:

The owner or operator shall deposit the full amount of the closure cost estimate at the time the fund is established. Within one year of February 1, 1987, an owner or operator using a closure trust fund established prior to February 1, 1987, shall deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or shall obtain other financial assurance as specified in this Section.
  - (2) The following shall be substituted for the provisions of 40 CFR 264.143(a)(6) which were not incorporated by reference:

After the trust fund is established, whenever the current closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator within 60 days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference.
  - (3) The following shall be substituted for the provisions of 40 CFR 264.145(a)(3) which were not incorporated by reference:
    - (A) Except as otherwise provided in Part (i)(3)(B) of this Rule, the owner or operator shall deposit the full amount of the post-closure cost estimate at the time the fund is established.
    - (B) If the Department finds that the owner or operator of an inactive hazardous waste disposal unit cannot provide financial assurance for post-closure through any other option (e.g. surety bond, letter of credit, or corporate guarantee), a plan for annual payments to the trust fund over the term of the RCRA post-closure permit may be established by the Department as a permit condition.
  - (4) The following additional requirement shall apply:

The trustee shall notify the Department of payment to the trust fund, by certified mail within 10 days following said payment to the trust fund. The notice shall contain the name of the Grantor, the date of payment, the amount of payment, and the current value of the trust fund.
- (j) 40 CFR 264.170 through 264.179 (Subpart I), "Use and Management of Containers", are incorporated by reference including subsequent amendments and editions.
- (k) 40 CFR 264.190 through 264.200 (Subpart J), "Tank Systems", are incorporated by reference including subsequent amendments and editions.
- (l) The following are requirements for Surface Impoundments:

- (1) 40 CFR 264.220 through 264.232 (Subpart K), "Surface Impoundments", are incorporated by reference including subsequent amendments and editions.
- (2) The following are additional standards for surface impoundments:
  - (A) The liner system shall consist of at least two liners;
  - (B) Artificial liners shall be equal to or greater than 30 mils in thickness;
  - (C) Clayey liners shall be equal to or greater than five feet in thickness and have a maximum permeability of  $1.0 \times 10^{-7}$  cm/sec;
  - (D) Clayey liner soils shall have the same characteristics as described in Subparts (r)(4)(B)(ii), (iii), (iv), (vi) and (vii) of this Rule;
  - (E) A leachate collection system shall be constructed between the upper liner and the bottom liner;
  - (F) A leachate detection system shall be constructed below the bottom liner; and
  - (G) Surface impoundments shall be constructed in such a manner to prevent landsliding, slippage or slumping.
- (m) 40 CFR 264.250 through 264.259 (Subpart L), "Waste Piles", are incorporated by reference including subsequent amendments and editions.
- (n) 40 CFR 264.270 through 264.283 (Subpart M), "Land Treatment", are incorporated by reference including subsequent amendments and editions.
- (o) 40 CFR 264.300 through 264.317 (Subpart N), "Landfills", are incorporated by reference including subsequent amendments and editions.
- (p) A long-term storage facility shall meet groundwater protection, closure and post-closure, and financial requirements for disposal facilities as specified in Paragraphs (g), (h), and (i) of this Rule.
- (q) 40 CFR 264.340 through 264.351 (Subpart O), "Incinerators", are incorporated by reference including subsequent amendments and editions.
- (r) The following are additional location standards for facilities:
  - (1) In addition to the location standards set forth in 15A NCAC 13A .0109(c), the Department, in determining whether to issue a permit for a hazardous waste management facility, shall consider the risks posed by the proximity of the facility to water table levels, flood plains, water supplies, public water supply watersheds, mines, natural resources such as wetlands, endangered species habitats, parks, forests, wilderness areas, and historical sites, and population centers and shall consider whether provision has been made for buffer zones as required by this Rule. The Department shall also consider ground water travel time, soil pH, soil cation exchange capacity, soil composition and permeability, slope, climate, local land use, transportation factors such as proximity to waste generators, route, route safety, and method of transportation, aesthetic factors such as the visibility, appearance, and noise level of the facility; potential impact on air quality, existence of seismic activity and cavernous bedrock. The basis for issuing or denying the permit are found in 40 CFR 264 as adopted by reference in this Rule.
  - (2) The following minimum separation distances shall be required of all hazardous waste management facilities except that existing facilities shall be required to meet these minimum separation distances to the maximum extent feasible:
    - (A) All hazardous waste management facilities shall be located at least 0.25 miles from institutions including but not limited to schools, health care facilities and prisons, unless the owner or operator can demonstrate that no risks shall be posed by the proximity of the facility.
    - (B) All hazardous waste treatment and storage facilities shall comply with the following separation distances: all hazardous waste shall be treated and stored a minimum of 50 feet from the property line of the facility; except that all hazardous waste with ignitable, incompatible or reactive characteristics shall be treated and stored a minimum of 200 feet from the property line of the facility if the area adjacent to the facility is zoned for any use other than industrial or is not zoned.
    - (C) All hazardous waste landfills, long-term storage facilities, land treatment facilities and surface impoundments, shall comply with the following separation distances:
      - (i) All hazardous waste shall be located a minimum of 200 feet from the property line of the facility;

- (ii) Each hazardous waste landfill, long-term storage or surface impoundment facility shall be constructed so that the bottom of the facility is 10 feet or more above the historical high ground water level. The historical high ground water level shall be determined by measuring the seasonal high ground water levels and predicting the long-term maximum high ground water level from published data on similar North Carolina topographic positions, elevations, geology, and climate; and
  - (iii) All hazardous waste shall be located a minimum of 1,000 feet from the zone of influence of any existing off-site ground water well used for drinking water, and outside the zone of influence of any existing or planned on-site drinking water well.
- (D) Hazardous waste storage and treatment facilities for liquid waste that is classified as TC toxic, toxic, or acutely toxic and is stored or treated in tanks or containers shall not be located:
- (i) in the recharge area of an aquifer which is designated as an existing sole drinking water source as defined in the Safe Drinking Water Act, Section .1424(e) [42 U.S.C. 300h-3(e)] unless an adequate secondary containment system, as described in 40 CFR 264 as adopted by reference in this Rule, is constructed, and after consideration of applicable factors in Subparagraph (r)(3) of this Rule, the owner or operator can demonstrate no risk to public health;
  - (ii) within 200 feet of surface water impoundments or surface water stream with continuous flow as defined by the United States Geological Survey;
  - (iii) in an area that will allow direct surface or subsurface discharge to WS-I, WS-II or SA waters or a Class III Reservoir as defined in 15A NCAC 02B .0200 and 15A NCAC 18C .0102;
  - (iv) in an area that will allow direct surface or subsurface discharge to the watershed for a Class I or II Reservoir as defined in 15A NCAC 18C .0102;
  - (v) within 200 feet horizontally of a 100-year floodplain elevation;
  - (vi) within 200 feet of a seismically active area as defined in Paragraph (c) of this Rule; and
  - (vii) within 200 feet of a mine, cave, or cavernous bedrock.
- (3) The Department shall require any hazardous waste management facility to comply with greater separation distances or other protective measures when necessary to avoid risks posed by the proximity of the facility to water table levels, flood plains, water supplies, public water supply watersheds, mines, natural resources such as wetlands, endangered species habitats, parks, forests, wilderness areas, and historical sites, and population centers or to provide a buffer zone as required by this Rule. The Department shall also require protective measures when necessary to avoid unreasonable risks posed by the soil pH, soil cation exchange capacity, soil composition and permeability, climate, transportation factors such as proximity to waste generators, route, route safety, and method of transportation, aesthetic factors such as the visibility, appearance, and noise level of the facility, potential impact on air quality, and the existence of seismic activity and cavernous bedrock. In determining whether to require greater separation distances or other protective measures, the Department shall consider the following factors:
- (A) All proposed hazardous waste activities and procedures to be associated with the transfer, storage, treatment or disposal of hazardous waste at the facility;
  - (B) The type of hazardous waste to be treated, stored, or disposed of at the facility;
  - (C) The volume of waste to be treated, stored, or disposed of at the facility;
  - (D) Land use issues including the number of permanent residents in proximity to the facility and their distance from the facility;
  - (E) The adequacy of facility design and plans for containment and control of sudden and non-sudden accidental events in combination with adequate off-site evacuation of potentially adversely impacted populations;
  - (F) Other land use issues including the number of institutional and commercial structures such as airports and schools in proximity to the facility, their distance from the facility, and the particular nature of the activities that take place in those structures;
  - (G) The lateral distance and slope from the facility to surface water supplies or to watersheds draining directly into surface water supplies;

- (H) The vertical distance, and type of soils and geologic conditions separating the facility from the water table;
  - (I) The direction and rate of flow of ground water from the sites and the extent and reliability of on-site and nearby data concerning seasonal and long-term groundwater level fluctuations;
  - (J) Potential air emissions including rate, direction of movement, dispersion and exposure, whether from planned or accidental, uncontrolled releases; and
  - (K) Any other relevant factors.
- (4) The following are additional location standards for landfills, long-term storage facilities and hazardous waste surface impoundments:
- (A) A hazardous waste landfill, long-term storage, or a surface impoundment facility shall not be located:
    - (i) In the recharge area of an aquifer which is an existing sole drinking water source;
    - (ii) Within 200 feet of a surface water stream with continuous flow as defined by the United States Geological Survey;
    - (iii) In an area that will allow direct surface or subsurface discharge to WS-I, WS-II or SA waters or a Class III Reservoir as defined in 15A NCAC 02B .0200 and 15A NCAC 18C .0102;
    - (iv) In an area that will allow direct surface or subsurface discharge to a watershed for a Class I or II Reservoir as defined in 15A NCAC 18C .0102;
    - (v) Within 200 feet horizontally of a 100-year flood hazard elevation;
    - (vi) Within 200 feet of a seismically active area as defined in Paragraph (c) of this Rule; and
    - (vii) Within 200 feet of a mine, cave or cavernous bedrock.
  - (B) A hazardous waste landfill or long-term storage facility shall be located in geologic formations with the following soil characteristics:
    - (i) The depth of the unconsolidated soil materials shall be equal to or greater than 20 feet;
    - (ii) The percentage of fine-grained soil material shall be equal to or greater than 30 percent passing through a number 200 sieve;
    - (iii) Soil liquid limit shall be equal to or greater than 30;
    - (iv) Soil plasticity index shall be equal to or greater than 15;
    - (v) Soil compacted hydraulic conductivity shall be a maximum of  $1.0 \times 10^{-7}$  cm/sec;
    - (vi) Soil Cation Exchange Capacity shall be equal to or greater than 5 milliequivalents per 100 grams;
    - (vii) Soil Potential Volume Change Index shall be equal to or less than 4; and
    - (viii) Soils shall be underlain by a geologic formation having a rock quality designation equal to or greater than 75 percent.
  - (C) A hazardous waste landfill or long-term storage facility shall be located in areas of low to moderate relief to the extent necessary to prevent landsliding or slippage and slumping. The site may be graded to comply with this standard.
- (5) All new hazardous waste impoundments that close with hazardous waste residues left in place shall comply with the standards for hazardous waste landfills in Subparagraph (r)(4) of this Rule unless the applicant can demonstrate that equivalent protection of public health and environment is afforded by some other standard.
- (6) The owners and operators of all new hazardous waste management facilities shall construct and maintain a minimum of two observation wells, one upgradient and one downgradient of the proposed facility; and shall establish background groundwater concentrations and monitor annually for all hazardous wastes that the owner or operator proposes to store, treat, or dispose at the facility.
- (7) The owners and operators of all new hazardous waste facilities shall demonstrate that the community has had an opportunity to participate in the siting process by complying with the following:
- (A) The owners and operators shall hold at least one public meeting in the county in which the facility is to be located to inform the community of all hazardous waste management activities including but not limited to: the hazardous properties of the waste to be managed; the type of management proposed for the wastes; the mass and volume of the wastes; and the source of the wastes; and to allow the community to identify specific health, safety and

environmental concerns or problems expressed by the community related to the hazardous waste activities associated with the facility. The owners and operators shall provide a public notice of this meeting at least 30 days prior to the meeting. Public notice shall be documented in the facility permit application. The owners and operators shall submit as part of the permit application a complete written transcript of the meeting, all written material submitted that represents community concerns, and all other relevant written material distributed or used at the meeting. The written transcript and other written material submitted or used at the meeting shall be submitted to the local public library closest to and in the county of the proposed site with a request that the information be made available to the public.

- (B) For the purposes of this Rule, public notice shall include: notification of the boards of county commissioners of the county where the proposed site is to be located and all contiguous counties in North Carolina; a legal advertisement placed in a newspaper or newspapers serving those counties; and provision of a news release to at least one newspaper, one radio station, and one TV station serving these counties. Public notice shall include the time, place, and purpose of the meetings required by this Rule.
- (C) No less than 30 days after the first public meeting transcript is available at the local public library, the owners and operators shall hold at least one additional public meeting in order to attempt to resolve community concerns. The owners and operators shall provide public notice of this meeting at least 30 days prior to the meeting. Public notice shall be documented in the facility permit application. The owners and operators shall submit as part of the permit application a complete written transcript of the meeting, all written material submitted that represents community concerns, and all other relevant written material distributed or used at the meeting.
- (D) The application, written transcripts of all public meetings and any additional material submitted or used at the meetings, and any additions or corrections to the application, including any responses to notices of deficiencies shall be submitted to the local library closest to and in the county of the proposed site, with a request that the information be made available to the public until the permit decision is made.
- (E) The Department shall consider unresolved community concerns in the permit review process and impose final permit conditions based on sound scientific, health, safety, and environmental principles as authorized by applicable laws or rules.

(s) 40 CFR 264.550 through 264.555 (Subpart S), "Special Provisions for Cleanup", are incorporated by reference including subsequent amendments and editions.

(t) 40 CFR 264.570 through 264.575 (Subpart W), "Drip Pads", are incorporated by reference including subsequent amendments and editions.

(u) 40 CFR 264.600 through 264.603 (Subpart X), "Miscellaneous Units", are incorporated by reference including subsequent amendments and editions.

(v) 40 CFR 264.1030 through 264.1049 (Subpart AA), "Air Emission Standards for Process Vents", are incorporated by reference including subsequent amendments and editions.

(w) 40 CFR 264.1050 through 264.1079 (Subpart BB), "Air Emission Standards for Equipment Leaks", are incorporated by reference including subsequent amendments and editions.

(x) 40 CFR 264.1080 through 264.1091 (Subpart CC), "Air Emission Standards for Tanks, Surface Impoundments, and Containers", are incorporated by reference including subsequent amendments and editions.

(y) 40 CFR 264.1100 through 264.1102 (Subpart DD), "Containment Buildings", are incorporated by reference including subsequent amendments and editions.

(z) 40 CFR 264.1200 through 264.1202 (Subpart EE), "Hazardous Waste Munitions and Explosives Storage", are incorporated by reference including subsequent amendments and editions.

(aa) Appendices to 40 CFR Part 264 are incorporated by reference including subsequent amendments and editions.

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