

10A NCAC 15 .0348 SPECIFIC LICENSES: CERTAIN INCINERATOR FACILITIES

(a) In addition to the requirements set forth in Rule .0317 of this Section, an application for a license authorizing construction and operation of an incinerator as part of a radioactive waste processing facility as defined in Rule .0104 of this Chapter shall include an environmental assessment that addresses the following topics:

- (1) description of the applicant:
 - (A) the company or corporate structure with the names, addresses and titles of officers;
 - (B) present products and activities;
 - (C) prior experience in the use, processing and disposal of radioactive material;
 - (D) financial and technical ability to construct, operate and decommission the proposed radioactive waste processing facility;
- (2) description of the site:
 - (A) physical location and general description to include nearest buildings, residences, schools, hospitals, etc.;
 - (B) populations and land use in the general area to include nearest buildings, residences, schools, hospitals, etc.;
 - (C) geological and hydrological characterization of the site to include soil type, topography, past and projected seismic activity, groundwater, aquifers and surface waters;
 - (D) meteorology to include climate, distribution of wind speed and direction, atmospheric stability and dispersion characteristics, and data on precipitation, floods, hurricanes and tornados;
 - (E) background radiation and radioactivity;
 - (F) transportation routes;
- (3) incinerator design:
 - (A) general description;
 - (B) manufacturer, basis for selecting the proposed incinerator design and identification of operating incinerators of the same or similar design;
 - (C) maximum capacity, minimum chamber temperatures, minimum chamber residence times, residual ash collection and effluent controls (e.g., scrubber filters and stack);
 - (D) decontamination, maintenance and anticipated operating life;
 - (E) waste handling, storage and injection systems;
 - (F) instrumentation and controls;
 - (G) minimum performance specifications for the incinerator and effluent control systems, and preoperational testing/certification program;
- (4) facility design:
 - (A) compartmentalization/zoning, waste storage and handling areas, waste flow, ventilation and contamination control/containment;
 - (B) sanitary sewer, drains, holdup systems, showers and other liquid handling systems;
- (5) management and staffing:
 - (A) structure of facility organization showing line configuration of the radiation safety officer;
 - (B) qualifications of management, supervisory and safety personnel;
 - (C) staff training program;
- (6) description of waste:
 - (A) general chemical, physical and radiological properties;
 - (B) maximum quantity of each radionuclide to be incinerated per year;
 - (C) maximum quantity of each radionuclide to be stored on-site at any one time;
 - (D) maximum quantity of each toxic or hazardous constituent of the waste to be incinerated per year;
 - (E) maximum quantity of each toxic or hazardous constituent of the waste to be stored on-site at any one time;
 - (F) acceptance and rejection criteria for waste to be received for incineration;
- (7) treatment of waste to be shipped off-site:
 - (A) classification;
 - (B) immobilization;
 - (C) packaging;
 - (D) storage;
 - (E) shipment;
 - (F) disposal;

- (G) processing and disposal of ash;
- (8) preclicensing and operational public information program:
 - (A) state and local government;
 - (B) media and public;
- (9) plan for maintaining radiation exposures and releases of radioactivity as low as reasonably achievable (ALARA):
 - (A) procedures, systems and criteria to maintain whole body, thyroid, and other organ radiation doses of the off-site public as low as reasonably achievable below the limits stated in Section .1600 of this Chapter;
 - (B) procedures, systems and criteria to maintain whole body, thyroid, and other organ radiation doses of on-site personnel as low as reasonably achievable below the limits established in Section .1600 of this Chapter;
- (10) off-site impact assessment for routine operation:
 - (A) maximum quantity and concentration of each radionuclide and toxic or hazardous constituent of the waste released annually to the air, to the water and to the soil;
 - (B) maximum radiation doses to off-site populations to include dose to the nearest resident, a description of computational models, sample computations and a summary of any previous experience;
 - (C) maximum off-site radionuclide concentrations in air, soil, water and food;
- (11) monitoring programs and systems:
 - (A) analytical and portable monitoring equipment for radiological and chemical measurements;
 - (B) inspection, monitoring and analysis of waste containers and waste prior to incineration;
 - (C) alarms, area monitors, stack/effluent monitors and facility shutdown mechanisms to include action levels, reset and restart procedures and criteria;
 - (D) personnel monitoring and bioassay;
 - (E) preoperational environmental monitoring;
 - (F) operational environmental monitoring, to include, if available, a copy of the last environmental monitoring report filed with the U.S. Nuclear Regulatory Commission or agreement state program;
- (12) other rules, standards and permits:
 - (A) federal, state and local regulations and standards which will apply to the proposed facility or would apply to the facility in the absence of the radioactive content of the waste;
 - (B) other permits which are required to include the current status of applications for and issuance of such permits;
- (13) accident analysis:
 - (A) identification of accident modes;
 - (B) major credible accidents and projected potential off-site impacts;
 - (C) mitigation of accidents and protection of the public;
- (14) emergency response plan:
 - (A) on-site response;
 - (B) local and county;
 - (C) state and regional;
 - (D) training and public information;
 - (E) if available, copies of most current emergency response plans submitted to the U.S. Nuclear Regulatory Commission or an agreement state;
- (15) decontamination and decommissioning:
 - (A) schedule;
 - (B) procedure;
 - (C) radioactive waste disposal plan.

(b) The applicant shall submit to the agency ten copies of the license application, environmental assessment, and other information required in Paragraph (a) of this Rule and Rule .0317 of this Section.

History Note: Authority G.S. 104E-7(2); 104E-7(a)(8); 104E-10(b); Eff. October 1, 1984; Amended Eff. January 1, 1994; Transferred and Recodified from 15A NCAC 11 .0348 Eff. February 1, 2015.

