15A NCAC 13B .0105 COLLECTION AND TRANSPORTATION OF SOLID WASTE

(a) The solid waste collector shall be responsible for the collection and transportation of all solid waste to a solid waste management facility as defined in G.S. 130A-290 that is permitted by the Division.

(b) The solid waste collector shall transport to a site or facility only those solid wastes that are allowed by facility permit.

(c) Vehicles or containers used for the collection of solid waste, and transportation by whatever means, including highway, rail, and navigable waterway, shall be constructed, operated, and maintained to be leak resistant in order to prevent the creation of a nuisance to public health from the escape of solid, semi-solid, or liquid waste. In order to meet the requirement to be leak resistant, the owner and/or operator of the vehicle or container shall adhere to the following standards:

(1) All surfaces that come in contact with waste shall be smooth and non-absorbent.

(2) All drain holes and valves shall be closed, plugged, or sealed.

(3) The vehicle or container shall be equipped with seals, gaskets, or other devices pursuant to manufacturer specifications in order to prevent the escape of liquids. Such seals, gaskets, and other devices shall be maintained and replaced pursuant to manufacturer specifications.

(4) The vehicle or container body, waste holding area, and hopper, if so equipped, shall be free of holes, cracks, rusting, corrosion, or other evidence of damage or weakness that may allow the escape of solid, semi-solid, or liquid waste.

(5) The waste holding area, including the hopper and around the packer blade, if so equipped, shall be clean of debris to prevent vectors or the accumulation of litter.

(6) The vehicle or container shall be loaded, transported, operated, and maintained to prevent the escape of solid, semi-solid, or liquid waste to the environment.

(7) The vehicle or container shall be serviced, repaired, and cleaned to maintain sanitary conditions, to preserve the integrity of the door seal, to prevent the accumulation of mechanical fluids, dirt, and filth on the vehicle's exterior, and to prevent contamination of the environment by fluids.

History Note: *Authority G.S. 130A-294(b); S.L. 2013-413;*
Eff. April 1, 1982;
Amended Eff. March 16, 2017; February 1, 1988.

The BIO-ZIP™ Sealable Liner

The **BIO-ZIP**™ *Sealable Liner* is a cleaner, more convenient way of managing large volume biological and organic waste streams and the associated odor, leakage, disease and environmental contamination issues.

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Bird Droppings	***Contaminated Manure***
Animal Litter & Bedding	***Spoiled Feed Material***
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Carcass Disposal:

Off-Site Transport and Locations

The use of rendering facilities or landfills may be necessary for carcass disposal when on-site methods, such as burial or burning, are not feasible or are not permitted.

Rendering

- **Heat conversion of animal carcasses into useable products**
  - Meat and bone meal (protein-based solids)
  - Melted fat (tallow)
  - Water
- **Temperature between 240-275°F - Moisture converted to steam**
  - Destroys harmful pathogens
- **Considerations**
  - Disposal of final product (e.g., landfill or burial)
  - Coordination of transport to facilities
  - Surge capacity may be limited
  - Biosecurity and wastewater procedures in place
  - Process is closely regulated

Landfills

- **Public and privately owned**
  - Existing site with liners, leachate and gas collection systems
  - Minimal environmental risk
- **EPA's I-WASTE tool to find locations.**
  - http://www2.ergweb.com/bdrtool/
- **Highly regulated**
  - Resources Conservation and Recovery Act (RCRA)
    - Title 40 Code of Federal Regulations Parts 239-299
- **Considerations**
  - Immediately available
  - Minimal environmental risk
  - May have limited capacity
  - Owner acceptance and terms of use
  - Transportation biosecurity and cost
  - Public opposition

Off-Site Transportation

The transportation of carcasses off-site will require thoughtful planning to ensure good biosecurity measures are used to prevent further spread of disease.

- **Planning**
  - Ensure all personnel have training & guidelines
  - Obtain enough transport vehicles
  - Determine a direct travel route
  - Supplies for
    - Cleaning and disinfection
    - Personal protective equipment
  - Permits and official documents
    - Federal, state & local
- **Transport Containers**
  - Biohazardous waste must be transported in closed, leak-proof containers or trucks.
  - Additional or secondary containment may be necessary.
  - Containers must be liquid tight and equipped with an absorption or liquid collection system.
    - Approximately one foot of wood shavings, or other absorbent material should be distributed on the floor of the container to absorb liquid in the transport container
    - A heavier concentration of sawdust should be placed near the rear door
  - Containers for hauling the carcasses should be double lined.
    - Polyethylene plastic is commonly used
    - There should be sufficient lining material on all sides to allow "wrapping" of the carcasses
- **Loading the Containers**
  - Fill container
    - One foot from top
    - Maximum weight limit
  - Spray carcasses with disinfectant
  - Wrap and seal load
  - Cover the container with its lid or several layers of tarpaulin and polyethylene plastic
  - Before leaving the loading site, check for leaks
  - Clean and disinfect the container exterior before leaving the site

- **Transportation Regulations**
  - Special procedures and permitting will be needed
  - Regulations on handling and transport
    - Environmental Protection Agency (EPA)
    - Department of Transportation (DOT)
    - Dot Hazardous Materials Program Definitions and General Procedures – 49 CFR Part 105
  - Additional official documents may be required by local, state, or federal authorities
    - Movement permit
    - Certificate of disinfection
  - Special escort vehicles may be needed
- **Transport Process**
  - Use designated routes
  - Avoid unplanned stops (unless for an emergency)
  - Have drivers take breaks on long distance trips
  - Two-way communication at all times
- **Unloading at the Disposal Site**
  - Unloading procedures specified by facility
  - Unload close to the disposal site
  - Prior to unloading, check for any leaks and lid/cover integrity
  - Clean and disinfect after unloading
    - Vehicle interior, exterior, undercarriage
    - Tools and equipment
  - Dispose of PPE at the end of the shift

Additional Resources

USDA Foreign Animal Disease Preparedness (FAD PReP) Guidelines: Disposal
http://www.aphis.usda.gov/animal_health/emergency_management/downloads/nahems_guidelines/disposal_nahems.pdf

Carcass Disposal: A Comprehensive Review. National Agricultural Biosecurity Center Consortium. http://fss.k-state.edu/FeaturedContent/CarcassDisposal/CarcassDisposal.htm

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