Georgia Department of Natural Resources
Environmental Protection Division • Land Protection Branch
Solid Waste Management Program
4244 International Parkway • Suite 104 • Atlanta • Georgia 30354
(404) 362-2692; Fax (404) 362-2693
Judson H. Turner, Director

INERT LANDFILL SITE SUITABILITY CRITERIA GUIDANCE AND CHECKLIST

MAY 2014

Zoning: The site must conform to all local zoning/land use ordinances.

Letter from local government indicating conformance – yes [ ] no [ ]

Reference – OCGA 12-8-31.1(e)(1)
Reference – Rule 391-3-4-.05(1)

Solid Waste Management Plan: The site must be consistent with the local solid waste management plan.

Letter from local government indicating consistency – yes [ ] no [ ]

Reference – OCGA 12-8-31.1(e)

National Historic Sites: No permit will be issued for an inert waste landfill located within 5,708 yards of any of the three sites in Georgia currently designated as a National Historic Site.

Within 5,708 yards of a National Historic Site – yes [ ] no [ ]

Reference – OCGA 12-8-25.1

Limit on Number of Solid Waste Facilities: No permit will be issued for an inert landfill if any part of the site lies within a circular area with a two-mile radius that already includes any portion of three or more landfills.

Three landfills within a two-mile radius – yes [ ] no [ ]

Reference – OCGA 12-8-25.4(b)

Floodplains: An inert waste landfill cannot be sited in a 100-year floodplain.

Location of 100-year floodplain shown - yes [ ] no [ ]

Reference – Rule 391-3-4-.07(4)(c)3

Wetlands: An inert waste landfill cannot be located in wetlands.

Wetlands delineated – yes [ ] no [ ]

Reference – Rule 391-3-4-.07(4)(c)3

Seismic Impact Zones: An inert waste landfill cannot be located in a seismic impact zone, unless it is demonstrated that all containment structures and stormwater control systems are designed to resist the maximum horizontal acceleration in lithified earth material for the site.

Located in a seismic impact zone – yes [ ] no [ ]

Reference – Rule 391-3-4-.05(1)(g)

Unstable Areas: An inert waste landfill located in an unstable area will need to demonstrate that engineering measures have been incorporated into the landfill design to ensure that the integrity of the structural components will not be disrupted.

Unstable areas identified – yes [ ] no [ ]

Reference – Rule 391-3-4-.05(1)(h)

Fault Areas: An inert waste landfill cannot be located within 200 feet of a fault that has had displacement in Holocene time.

Fault identified – yes [ ] no [ ]

Reference – Rule 391-3-4-.05(1)(f)

Presence of State Waters: All state waters require a 25-foot buffer.

State waters present – yes [ ] no [ ]

Reference – OCGA 12-7-6(b)(15)

Presence of Trout Streams: Perennial streams designated as “trout streams” will require a minimum 50-foot buffer.

Trout streams present – yes [ ] no [ ]

Reference – OCGA 12-7-6(b)(16)

Proximity to Surface Water Intake: Perennial stream buffers dependent on whether site is located within a seven-mile radius and upstream of a public water supply intake.

Within seven-mile radius and upgradient of surface water intake – yes [ ] no [ ]

Reference – Rule 391-3-16-.01(6)
Reference – Rule 391-3-16-.01(7)

Hydrogeological Assessment: The applicant must conduct a site hydrogeologic investigation[1] under the direction of a Georgia PG or PE. The site hydrogeologic investigation should include at least three soil test borings or one soil test boring per 20 acres of the proposed site, whichever is greater. Borings should extend a minimum of five feet below the water table or to competent bedrock. During drilling, standard penetration resistance tests (ASTM D1586) should be performed and soil samples collected at maximum five-foot depth intervals for description and classification. Temporary piezometers should be installed in borings that extend below the top of groundwater. Water level measurements in the piezometers should be measured at least 24 hours after installation. The investigation should also provide sufficient information to design a methane monitoring system for the landfill, unless the applicant can demonstrate that no organic component of inert waste has or will be disposed at the site, and also requests a variance from methane monitoring.

Adequate hydrogeologic investigation conducted – yes [ ] no [ ]

Reference – Rule 391-3-4-.07(4)(c)3
Reference – Rule 391-3-4-.07(4)(c)4

Borings and piezometers were constructed by a driller having a valid and current bond with the Water Well Standards Advisory Council – yes [ ] no [ ]

Reference – Rule 391-3-4-.05(1)(k)(5)

Site Suitability Assessment Report: A site suitability assessment report must be submitted under the signature and seal of a Georgia PG or PE as part of the application for a solid waste handling permit.

Site suitability assessment conducted under the direction of, and signed and sealed by, a Georgia PG or PE – yes [ ] no [ ]

Site suitability assessment report addresses all siting criteria items indicated above – yes [ ] no [ ]

Reference – Rule 391-3-4-.05(4)

The site suitability assessment report should, at a minimum, include the following:

(1) Proposed facility property boundary shown on a USGS 7.5-minute quadrangle map (1 inch = 2,000 feet) – *yes [ ] no [ ]*

(2) Site topographic map showing floodplains, wetlands, intermittent and perennial streams, karst features, unstable areas, waste unit and buffers (1 inch = 100 or 200 feet) – *yes [ ] no [ ]*

(3) Two geologic cross-sections, which also depict proposed horizontal and vertical extent of waste and the water table – *yes [ ] no [ ]*

(4) A groundwater potentiometric surface map based on water level measurements collected in temporary piezometers at least 24 hours after piezometer construction – *yes [ ] no [ ]*

(5) Soil test boring logs – *yes [ ] no [ ]*

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[1]***Rationale for requirements of site hydrogeologic investigation:***
Depth to water table must be determined to: (a) establish maximum allowable depth of waste mass and (b) to effectively design the methane monitoring system, if needed.

Temporary piezometers need to be installed in soil borings to accurately measure the depth to the water table. Simply determining the depth to the water table at the time of drilling can be difficult and inaccurate. In addition, groundwater elevations measured in open boreholes, without a piezometer, may not be accurate.

The minimum number of boreholes is based on requirement in Circular 14. The level of soil sampling proposed (every five feet) would be considered the minimum effort to characterize the subsurface.