



# **Technical Considerations for Land Use Over a Closed MSW Landfill**

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# Agenda



Background of Subchapter T



Land uses that require approval

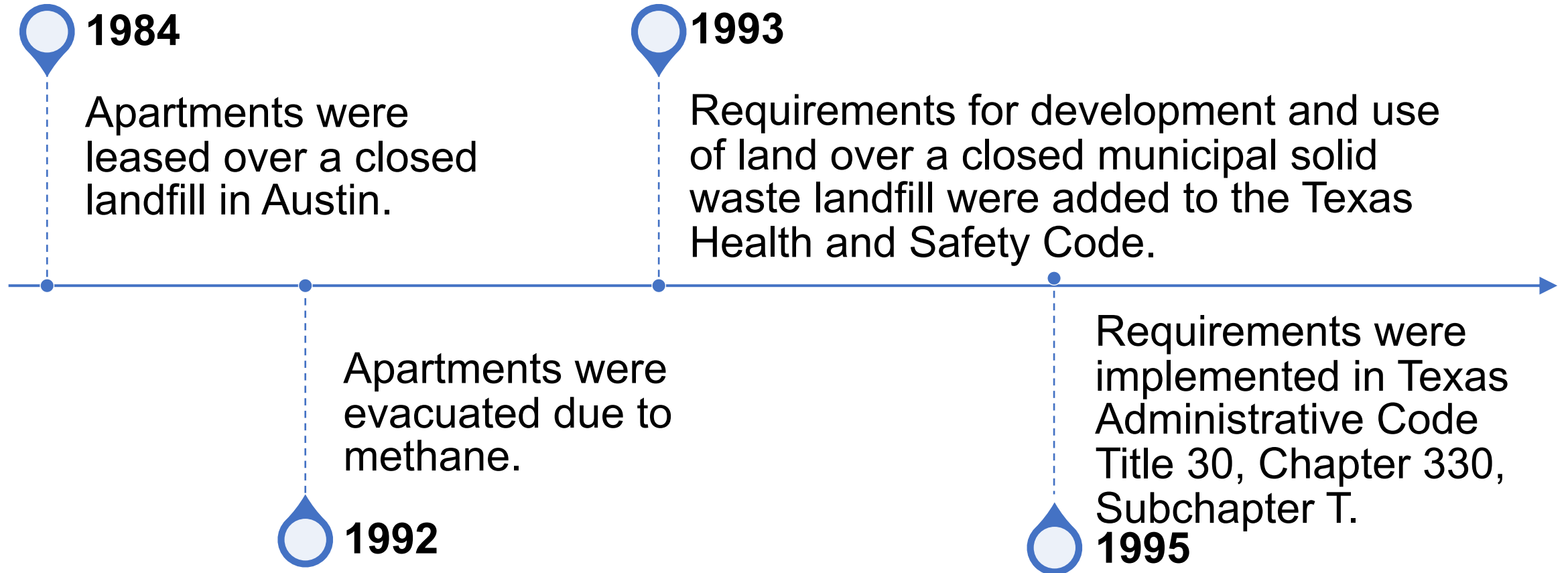


Application requirements



Ways to improve your application

# Background



# Benefits



Developments of more than one acre require site investigations for landfills.



New and existing structures over landfills have design requirements.



Designs include ventilation, methane barriers, and methane monitoring.



The public and the occupants are made aware of development on closed landfills.

# Definitions

- Closed municipal solid waste landfill – An area that received municipal solid waste and was covered. 30 TAC 330.951(3) and (8)
- Municipal solid waste – Any waste except industrial solid waste. 30 TAC 330.3(90)
- Enclosed structure – Any permanent structure a person would go into. 30 TAC 330.951(9)
- Non-enclosed structure – Allows unrestricted airflow under or through.

# Land Uses That Require Approval

- Cover disturbance without an enclosed structure requires an authorization:
  - Application Form TCEQ-20787
- Pre-1993 enclosed structure requires a registration:
  - Application Form TCEQ-20786
- New enclosed structure requires a development permit:
  - Application Form TCEQ-20785
- Each type of approval is issued an MSW Subchapter T number unless the site has an active MSW Permit number.
- Project at a site with an active MSW permit requires:
  - A Permit Modification or Permit Amendment
  - A Subchapter T application on the appropriate form, i.e. “workplan”
- You may require a construction stormwater authorization from Water Quality



## Activities Requiring an Authorization to Disturb Final Cover



Unenclosed structures, such as patios, pavilions, playgrounds, power poles, and fence posts.



Earthwork projects such as grading, parking lots, golf courses, utility construction, and excavating waste.



Excavating all the waste under a proposed building footprint to avoid needing a development permit.

# Rules for Applications

Subject	Authorization to Disturb Final Cover	Registration	Development Permit
Application Contents	330.960	330.956 330.959	330.956 330.957
As-built Drawings	-	-	330.958
Miscellaneous Requirements	330.955		
Operational Requirements	330.961		
Notices by Property Owner and Lessors	330.962, 330.963, 330.964		
Notices by P.E.s	-	-	330.953



# Requirements for an Authorization to Disturb Final Cover

- Summary of existing conditions. 330.960(2), 330.957(c)
- Description of the project and its relation to the closed landfill. 330.960(3)
- Construction/investigation procedures. 330.960(4)
  - schedule: work hours, days of the week, timing
- Procedures for managing water, methane exposure, and excavated material. 330.960(5)
  - response to methane above 1.25% vol (25% LEL)
- Maps, drawings, engineering plans. 330.960(6) and (7)

# Requirements for a Registration of a pre-1993 Enclosed Structure

- Legal description of the property. 330.959(1)
- Notices by P.E.(s) under 330.953 and by property owners or lessors under 330.962, 963, and 964.  
330.959(2)
- Site drawing, maps, and survey drawing. 330.959(3)
- Site operating plan. 330.959(4)
- Structures gas monitoring plan. 330.959(5)
  - ensure methane below 1.0% by volume (20% LEL)
  - automatic methane gas sensors
  - gas sampling and analysis plan and a gas analysis
- Safety and evacuation plan. 330.959(6)

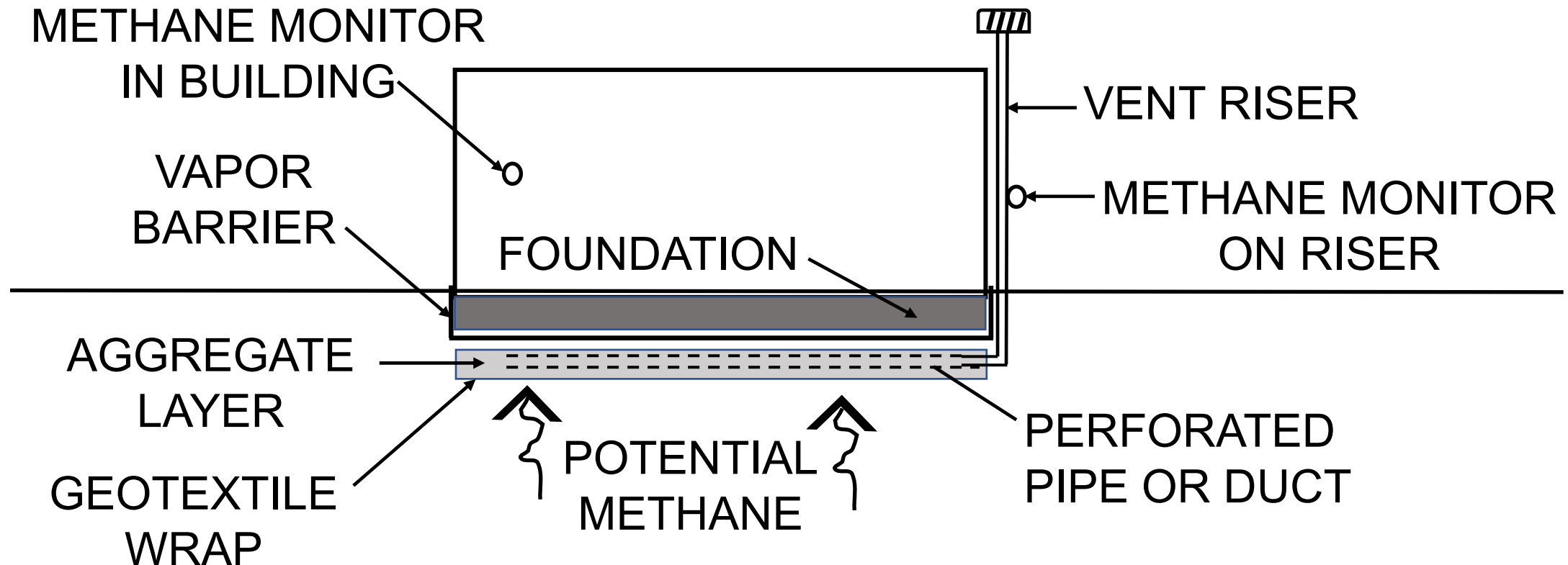
# Requirements for a Development Permit for a New Enclosed Structure

Same as for a Registration, plus:

- Summary of existing conditions. 330.957(c)
- Coordination with all officials and agencies. 330.957(g)
- Engineering drawings for grading, drainage, and irrigation. 330.957(n)
- Statements about geology, soils, groundwater, and surface water. 330.957(k) and (l)
- Foundation plans. 330.957(m)
- Soil tests used to identify the landfill. 330.957(o)
- Closure plan. 330.957(q)

## Typical New Enclosed Structure

- Keep methane in the structure below 1% by volume (20% LEL)
- Include the design elements from 330.957(m) Foundation Plans



## 330.955 Miscellaneous Requirements

- Waste can not be placed back in an excavation. (c)
- Excavated material goes in containers or on plastic inside berms. (f)
- Excavations in waste should be backfilled with clayey soil and graded for drainage. (g)
- The minimum cover thickness will be 24 inches. (g), 330.453, 455, and 457
- Waste must be covered every night. (h)

## 330.961 Operational Requirements

- Ponded water is not allowed over waste. (d)
- Several types of piping are allowed over or through waste, but leak detection is optional. (g)

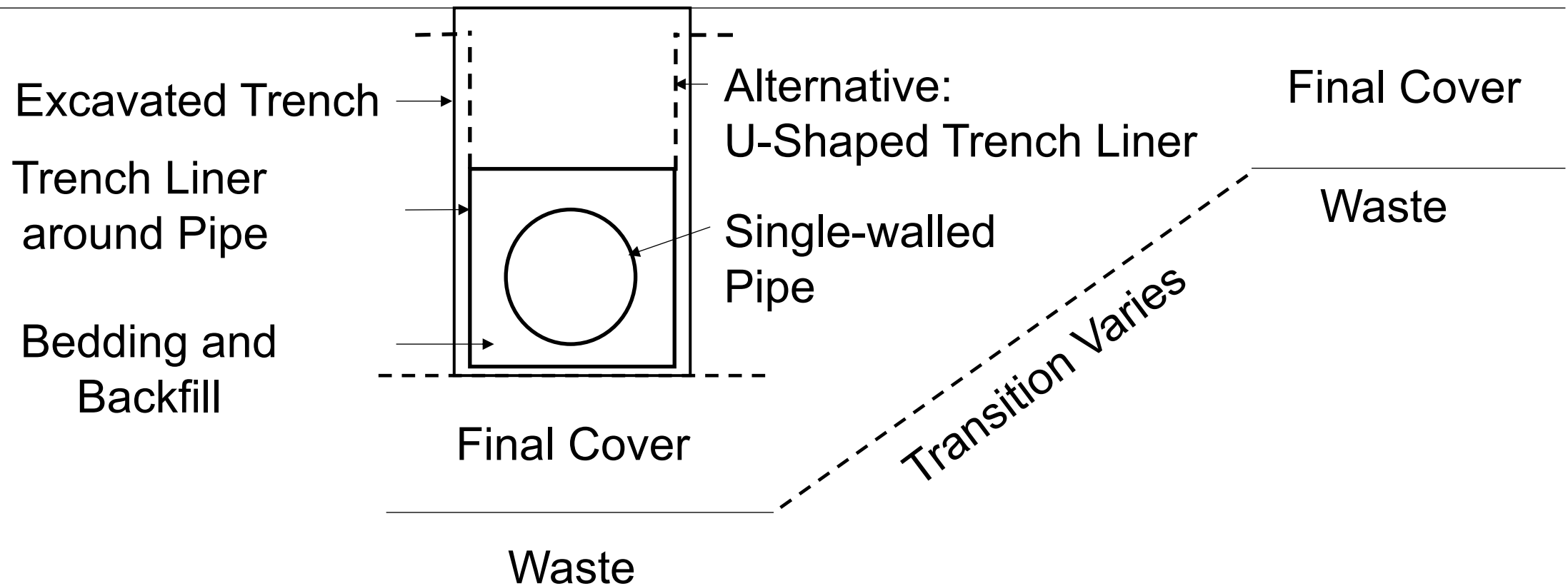


Double-Containment (g)

Pipe-in-Pipe

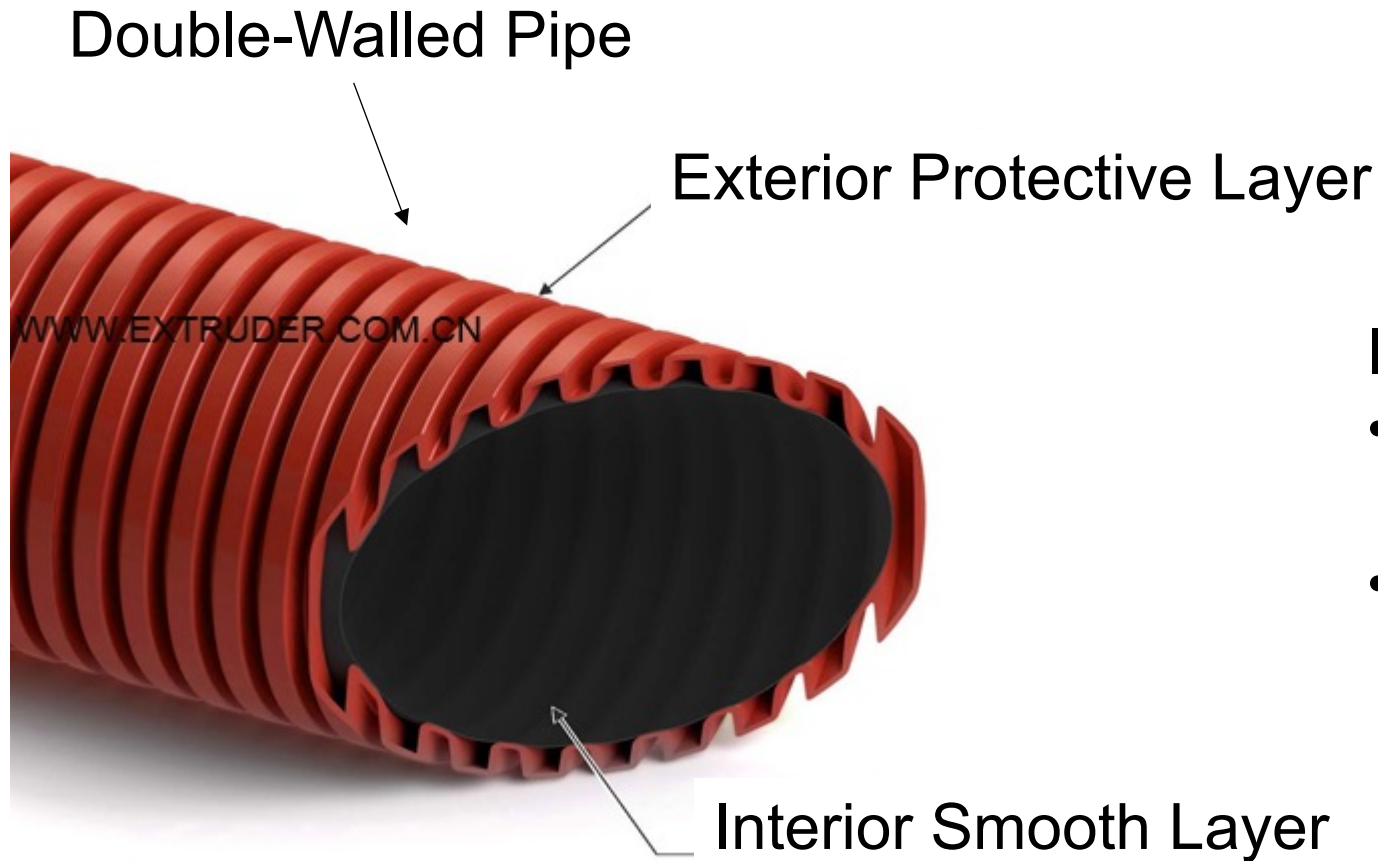


# Allowable Piping over or through Waste (cont'd)





# This is not Double-Containment Piping



## Issues:

- No secondary containment between the corrugations.
- At least one manufacturer has a vent connecting the corrugations.

## Ways to Improve Your Application

- Address the miscellaneous requirements. 330.955
- Address the operational requirements. 330.961
- Show waste disposal areas on plan views and cross-sections. 330.957(i) and (j), 330.960(6) and (7)
- Provide the notification(s) by the property owner or lessor. 330.962, 963, and 964
- Provide all four closed landfill notifications. 330.953(d)

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# Contact the MSW Permits Section

Texas Commission on Environmental Quality  
Municipal Solid Waste Permits Section – MC-124  
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Webpage:  
Requirements for Using Land Over Closed Municipal Solid Waste Landfills  
[https://www.tceq.texas.gov/permitting/waste\\_permits/msw\\_permits/closedlfs](https://www.tceq.texas.gov/permitting/waste_permits/msw_permits/closedlfs)