



# Explosive Gas Monitoring Plan Checklist – Application

**Division of Materials and Waste Management  
Tab 1 – Facility Information**

Facility Name				
Address				
City		State		Zip Code
Contact Person				Phone
Owner Name			Operator Name	
Current Landowner or Lessee				Phone
County			Township	
Health District				
Latitude			Longitude	
Facility Status	Currently Operating:		Closed:	
	Yes	No	Yes	No
If Closed – Date facility ceased accepting waste: Date of Certification of Closure:				
Number of Occupied Structures	Within 200 ft. of emplaced waste:			Within 1000 ft. of emplaced waste:

**A mark in a check box for any of the sections below means the EGMP includes an in-depth discussion and/or documentation of how each element within the section will be or is met by the facility.**

**For EPA Use Only:**

Date
Reviewer
District office

**Tab 2 – Property Information and Records Review**  
**OAC Rule 3745-27-12(D)(1) and (2)**

	<b>Applicant Use Only</b>	<b>Ohio EPA Use Only</b>
	Mark if submitted within this application	Application Complete
Is the application form prescribed by the Director completed fully and accurately?	<input type="checkbox"/>	<input type="checkbox"/>
Detailed topographical maps (1"= 200 feet)		
<b>A YES for this component means the map(s) contain all of the following elements (it does not have to be on one map, as multiple maps may be used as long as all the elements are contained between all the maps).</b>		
Does the map(s) include each of the following elements?		
• Indication of the landfill property boundary	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of the landfill facility boundary	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of the horizontal limits of waste placement of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of a 1000 foot zone from the limits of waste placement	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of a 200 foot zone from the limits of waste placement	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of all property boundaries within the 1000 foot zone	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of all property ownership within the 1000 foot zone	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of all political subdivisions within the 1000 foot zone	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of all zoning classifications within the 1000 foot zone	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of all structures located within the foot print of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of all potential manmade explosive gas migration pathways within the 1000 foot zone? (such as; sewer, water, buried utilities, roads, railroads, mines, field tiles, pipelines)	<input type="checkbox"/>	<input type="checkbox"/>
• Indication of any other potential sources of explosive gas within the 1000 foot zone? (such as: oil and gas wells, other landfills, swamps, natural gas lines)	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 3 – Geologic Information**  
**OAC Rule 3745-27-12(D)(2)**

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
Discussion and/or documentation of the ground water table indicating the depth of ground water in the area of waste placement within the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion and/or documentation of all fluctuations in ground water levels in the area of waste placement within the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of factors that influence ground water level fluctuation within the area of waste placement within the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of site topography within the footprint of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of the topography of the surrounding area within the 1000 foot zone of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of any natural site characteristics that may act as a barrier to gas migration towards occupied structures either on or within the 1000 foot zone of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of any natural site characteristics that may allow for venting of gas and thus act to prevent migration towards occupied structures either on or within the 1000 foot zone of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of all potential gas migration pathways and their associated gas hazard for migration or accumulation within occupied structures either on or within the 1000 foot zone of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion and identification of any other sources of gas generation or presence within the 1000 foot zone of the landfill that may potentially cause subsurface migration of gas towards occupied structures either on or within the 1000 foot zone of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Geologic cross sections of the perimeter of the landfill property equal to the depth of waste placement, showing all stratus of the various geologic formations present?  This will allow for a review and evaluation of potential gas generation and/or migration at the landfill perimeter which may migrate towards occupied structures within the 1000 foot zone of the landfill.	<input type="checkbox"/>	<input type="checkbox"/>
Geologic cross sections of the perimeter of the landfill property showing potential natural pathways within the various stratus of the various geologic formations that may allow gas to migrate towards occupied structures within the 1000 foot zone of the landfill	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 4 – Landfill Characteristics**  
**OAC Rule 3745-27-12(D)(3)**

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
Discussion and/or documentation of the lowest elevation of waste placement within the footprint of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion and/or documentation of the depth of any and all excavations, regardless of waste placement within the excavation, within the footprint of the landfill	<input type="checkbox"/>	<input type="checkbox"/>
Discussion and/or documentation of any and all historical operations of the landfill, including but not limited to the following:		
<ul style="list-style-type: none"> <li>• Dates of landfill operation This should include when the landfill began operations and ceased waste acceptance</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Any and all previous and current landfill ownership information (Name, address, company affiliation, etc.)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Previous regulatory authorizations granted for the site (Director's Final Findings and Orders, Rule 13, Enforcement actions, etc.)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Current regulatory authorizations granted for the site (Director's Final Findings and Orders, Rule 13, Enforcement actions, etc.)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Discussion and/or documentation of any records or information regarding types of wastes disposed at the landfill (Industrial wastes, construction and demolition and debris, yard waste, incinerator wastes, municipal solid waste – household trash)	<input type="checkbox"/>	<input type="checkbox"/>
Discussion and/or documentation of the construction of the landfill, including but not limited to the following:		
<ul style="list-style-type: none"> <li>• The type of any liner material used on the bottom of the landfill</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• The characteristics or composition of any liner material used on the bottom of the landfill</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• The type(s) of any final cover material used on top of the landfill once landfilling activities have ceased at the landfill</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
<ul style="list-style-type: none"> <li>The characteristics or composition of any final cover material used on top of the landfill once landfilling activities have ceased at the landfill</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The most recent evaluation of the performance and/or appearance of the existing cover conditions over the landfill footprint (Presence of bare areas, depth or extent of any erosion, presence of vegetation, water ponding, uneven settling, shifting or sliding of cover material downslope, dead vegetation, etc.)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Description and/or documentation of any previous or currently existing gas extraction system present on the landfill (whether operating or not) (Passive gas extraction operates without the use of mechanical means to remove the gas from within the landfill, active gas extraction operates with the use of mechanical means to remove the gas from within the landfill, or any other system designed to remove gas from within the landfill and destroy the extracted gas)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Description and/or documentation of any previous or currently existing gas venting system present on the landfill (whether operating or not) (Passive gas extraction operates without the use of mechanical means to remove the gas from within the landfill, active gas extraction operates with the use of mechanical means to remove the gas from within the landfill, or any other system designed to remove gas from within the landfill and vent the gas to the atmosphere without destruction of the extracted gas)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Description and/or documentation of any previous or currently existing explosive gas monitoring system used to detect the migration or presence of explosive gas from the landfill (Combustible gas indicators, permanent monitoring probes, Punch Bar stations, etc.)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The most recent evaluation of any existing explosive gas monitoring system effectiveness and/or performance in detecting gas migration towards occupied structures off the landfill property.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 5 – Review of Explosive Gas Generation Potential  
OAC Rule 3745-27-12(D)(4)**

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
Discussion and/or documentation regarding any historical observations or evaluation of the potential generation and/or migration of gas at the landfill, including but not limited to the following elements:		
Was the landfill inspected for visual and, due to the presence of odors, for signs of gas generation or migration  (Odors typical of landfill gas, bubbling liquids leaking from the landfill, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Have there been any complaint(s) filed by neighbors or the local citizenry regarding odors or leachate or condition of the landfill?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Have there been any noted observances of dead vegetation?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Have there been any noted observances of odors typical of landfill gas?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Have there been any noted observances of atypical snow melt at various areas within the footprint of the landfill?</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Discussion and/or documentation regarding the most recent observations or evaluations of the potential generation and/or migration of gas at the landfill (Punch Bar holes, monitoring probes, site observations, odor, final cover damage, etc.)	<input type="checkbox"/>	<input type="checkbox"/>

**Proposed Explosive Gas Monitoring System  
OAC Rule 3745-27-12(D)(5)**

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
<p><b>Proposed permanent monitor locations:</b></p> <p><u>One monitor should monitor only ONE pathway/depth NOT multiple pathways/depths</u></p> <p>(Does the EGMP include an in-depth discussion and/or documentation of each of the following elements?)</p> <p>Compare the locations, depths, and screened intervals of each permanent monitor with the known strata of all gas migration pathways towards occupied structures within the 1000 foot zone. If a gas migration pathway exists and is in direct line with an occupied structure(s) within the 1000 foot zone, a permanent monitor must be installed</p>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Discussion and/or documentation of all proposed and installed permanent monitor locations</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Discussion and/or documentation of all proposed and installed permanent monitor depths</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Discussion and/or documentation of all proposed and installed permanent monitor screened intervals within the monitor</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Discussion and/or documentation of all proposed and installed permanent monitor identification designations for each monitor</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Proposed Permanent Punch Bar locations:</b></p> <p><u>One Punch Bar location should monitor only ONE pathway/depth NOT multiple pathways/depth</u></p> <p>(Does the EGMP include an in-depth discussion and/or documentation of each of the following elements?)</p> <p>Compare the locations, depths, and screened intervals of each permanent Punch Bar location with the known strata of all gas migration pathways towards occupied structures within the 1000 foot zone. If a gas migration pathway exists, is in direct line with an occupied structures within the 1000 foot zone, and is at a depth that a Punch Bar can reach, then a permanent Punch Bar location may be installed</p>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Discussion and/or documentation of all proposed and installed permanent Punch Bar locations</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
<ul style="list-style-type: none"> <li>Discussion and/or documentation of all proposed and installed permanent Punch Bar location depths</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Discussion and/or documentation of all proposed and installed permanent Punch Bar location screened intervals within the monitor</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Discussion and/or documentation of all proposed and installed permanent Punch Bar identification designations for each location</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>



**Tab 7 – Property Information and Records Review**  
**OAC Rule 3745-27-12(D)(5)(a)**

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
<b>Monitoring system must have:</b> <ul style="list-style-type: none"> <li>• Permanent monitors for any pathways towards the facility boundary</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Punch Bar locations for pathways that do not represent a hazard to an occupied structure and are within the reach for the depth of the Punch Bar</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Occupied structures within the foot print of the limits of waste placement must have:</b>		
<ul style="list-style-type: none"> <li>• Explosive gas alarms in the structure with owner’s consent (if the owner of the occupied structure does not consent then documentation regarding the denial is to be included in the EGMP)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Occupied structures within 200 foot zone of waste placement must have:</b>		
<ul style="list-style-type: none"> <li>• Explosive gas alarms in the structure with owner’s consent (if the owner of the occupied structure does not consent then documentation regarding the denial is to be included in the EGMP)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Permanent Monitors and/or Punch Bars stations for pathways towards occupied structures to detect the presence of explosive gas</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Punch Bar for pathways that do not represent a hazard to an occupied structure and are within the reach for the depth of the Punch Bar</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Occupied structures within 1000 foot zone of waste placement must have:</b>		
<ul style="list-style-type: none"> <li>• Permanent Monitors and/or Punch Bars locations for pathways towards occupied structures to detect the presence of explosive gas</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Punch Bar locations for pathways that do not represent a hazard to an occupied structure are within the reach for the depth of the Punch Bar</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Occupied structures within 1000 foot zone of waste placement but cannot properly place Permanent Monitors or Punch Bar locations must have:</b>		
<ul style="list-style-type: none"> <li>• Explosive gas alarms in the structure with owner’s consent (if the owner of the occupied structure does not consent then documentation regarding the denial is to be included in the EGMP)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 8 – Landfills That Ceased Accepting Waste After July 1, 1970  
OAC Rule 3745-27-12(D)(5)(a)**

	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
Occupied structures <b>within the foot print</b> of the limits of waste placement must have:		
<ul style="list-style-type: none"> <li>Explosive gas alarms in the structure with owner's consent (if the owner of the occupied structure does not consent then documentation regarding the denial is to be included in the EGMP)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Occupied structures <b>within 200</b> foot zone of waste placement must have:		
<ul style="list-style-type: none"> <li>Explosive gas alarms in the structure with owner's consent (if the owner of the occupied structure does not consent then documentation regarding the denial is to be included in the EGMP)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Permanent Monitors and/or Punch Bars stations for pathways towards occupied structures to detect the presence of explosive gas</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Punch Bar for pathways that do not represent a hazard to an occupied structure and are within the reach for the depth of the Punch Bar</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Occupied structures <b>within 1000</b> foot zone of waste placement must have:		
<ul style="list-style-type: none"> <li>Permanent Monitors and/or Punch Bars locations for pathways towards occupied structures to detect the presence of explosive gas and are within the reach for the depth of the Punch Bar</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Punch Bar for pathways that do not represent a hazard to an occupied structure and are within the reach for the depth of the Punch Bar</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Occupied structures within 1000 foot zone of waste placement but cannot properly place Permanent Monitors or Punch Bar stations must have:		
<ul style="list-style-type: none"> <li>Explosive gas alarms in the structure with owner's consent (if the owner of the occupied structure does not consent then documentation regarding the denial is to be included in the EGMP)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

**Methods of Construction for Permanent Monitors and Punch Bar Locations OAC Rule 3745-27-12(D)(5)(b)**

	<b>Applicant Use Only</b>  Mark Yes if submitted within this application or note date when submitted during the past year	<b>Ohio EPA Use Only</b>  Application Complete
The construction and installation for Permanent Monitors and Punch Bar locations should include a discussion and/or documentation of the following elements:		
<ul style="list-style-type: none"> <li>Materials used in construction</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Installation procedures</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Quality assurance measures used in construction</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Security measures to protect the permanent monitor, after installation, to protect against vandalism or tampering</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Permanent Monitors must be designed to eliminate potential for the following issues: (A discussion and/or documentation needs to be included in the EGMP regarding how these elements will be prevented)		
<ul style="list-style-type: none"> <li>Contamination of the explosive gas sample</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Dilution of the explosive gas sample</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>Contamination of any ground water</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

Tab 10 –

**Location, Installation, Replacement of Permanent Monitors and Punch Bar Stations OAC Rule 3745-27-12(D)(5)(c) and (F)**

	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
Replacement Permanent Monitors and Punch Bars <u>must</u> be relocated/installed to meet the following requirement:		
<ul style="list-style-type: none"> <li>• Located in pathways towards occupied structures to detect presence of explosive gas</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Replacement in same pathway and vicinity of previous permanent monitor or Punch Bar</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Installed in compliance with approved EGMP installation procedures for Permanent Monitors or Punch Bars</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Once the permanent monitor or Punch Bar has been re-installed an installation certification must be submitted to the appropriate Ohio EPA District Office and approved local Health District. The EGMP is to include a discussion regarding how the Installation Certification will meet the following:		
<ul style="list-style-type: none"> <li>• Installation Certification must be submitted with the <u>initial</u> reporting of monitoring results</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Installation Certification must include record drawing(s) showing locations of all Permanent Monitors and Punch Bar stations with associated identification designations</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Installation Certification must include the geologic logs from each installation of permanent monitor <b>This is not required for Punch Bar locations</b></li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Depth and length of screened intervals for each permanent monitor <b>This is not required for Punch Bar locations</b></li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Landfill that ceased accepting waste prior to June 1, 1994 shall also include the following in the Installation Certification:		
<ul style="list-style-type: none"> <li>• Geologic cross section of the perimeter of the side of the landfill property of installation</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Required only if a cross section for that side of the landfill is not already provided</b>		

**Tab 11 – Abandonment of Permanent Monitors  
OAC Rule 3745-27-12(D)(5)(d)**

	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
Abandonment of any permanent monitor shall be in compliance with the procedures outlined in OAC Rule 3745-9-10?	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 12 – Proposed Explosive Gas Monitoring Process  
OAC Rule 3745-27-12(E)(1)**

<b>Minimum monitoring frequency (Permanent Monitors and Punch Bar stations)</b>		
<b>A YES below means the EGMP includes a discussion of how and when the facility will comply with each monitoring frequency.</b>		
	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
Quarterly	<input type="checkbox"/>	<input type="checkbox"/>
Monthly prior to closure (for landfill portions without flexible membrane liner)	<input type="checkbox"/>	<input type="checkbox"/>
Landfill that ceased accepting waste after July 1, 1970, but before June 1, 1994:		
Semi-annual after 5 years of post closure	<input type="checkbox"/>	<input type="checkbox"/>
<b>Landfills in operation on or after June 1, 1994, and Industrial or Residual landfills:</b>		
Semi-annual after 5 years of post closure As long as the owner or operator can demonstrate that semi-annual monitoring will detect off-site migration of explosive gases and is protective of human health and the environment.	<input type="checkbox"/>	<input type="checkbox"/>

Tab 13 –

**Parameters to be Monitored (Permanent Monitors and Punch Bar Stations) OAC Rule 3745-27-12(E)(2)**

	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
Does the EGMP include clear and understandable step by step instructions/procedures of how to conduct monitoring?		
<ul style="list-style-type: none"> <li>• Initial combustible gas concentration (in percent methane by volume)  <b>No venting prior to sampling is allowed</b></li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Gas Pressure (in Permanent Monitors)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Water level (in Permanent Monitors)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ambient Barometric pressure</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ambient air temperature</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Observed weather conditions</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Relative humidity</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 14 – Evaluation of Explosive Gas Monitoring Sampling Results  
OAC Rule 3745-27-12(E)(3)**

	<b>Applicant Use Only</b>  Mark if submitted within this application	<b>Ohio EPA Use Only</b>  Application Complete
Does the EGMP include clear and understandable step by step instructions how to evaluate the explosive gas monitoring sampling results to determine if the sampling results indicate an exceedance of the explosive gas threshold limit?	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a discussion of the explosive gas threshold limits that will be used to determine if the gas sampling results indicate an exceedance of the explosive gas threshold limit as stated below?	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• 5% methane at or within the facility boundary <b>OR</b> 100% of the Lower Explosive Limit (LEL) for methane</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• 1.25% methane in structures <b>OR</b> 25% of the LEL in structures</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>



**Reporting and Submission of Explosive Gas Monitoring Sampling Results OAC Rule 3745-27-12(E)(4)**

	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
Does the EGMP include clear and understandable step by step instructions as to how to report sampling results and to which appropriate authorities the results should be reported to?	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a specific discussion regarding to whom the submission is be sent, as listed below?		
<ul style="list-style-type: none"> <li>• Ohio EPA district office</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Local health district</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a discussion that the gas monitoring results are to be completed on a specific form prescribed by the Director (and included in the Appendix A: Reporting forms section of the EGMP)?	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a discussion that the gas monitoring results are to be submitted to the Ohio EPA district office and local health within 15 days from the date of gas monitoring event?	<input type="checkbox"/>	<input type="checkbox"/>

**Contingency Reporting Procedures for Exceedances of the Threshold Limits OAC Rule 3745-27-12(E)(5)**

	<b>Applicant Use Only</b>	<b>Ohio EPA Use Only</b>
	Mark if submitted within this application	Application Complete
Does the EGMP include clear and understandable step by step instructions how to report explosive gas results equal to or exceeding the threshold limits, to which appropriate authorities the results should be reported to and when?	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a specific discussion regarding to whom the submission is be sent, as listed below?		
<ul style="list-style-type: none"> <li>• Local health district</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Fire department</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Police department</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Ohio EPA district office</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a discussion stating that the above authorities will be notified immediately upon initial discovery of the exceedance of the explosive gas threshold limits?	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a discussion stating that within 7 days from date of initial exceedance of the explosive gas threshold limits, the facility will submit to Ohio EPA district office and local health district the following documentation:		
<ul style="list-style-type: none"> <li>• Explosive gas monitoring sampling results</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Description of steps the facility will take to be protective of human health and the environment	<input type="checkbox"/>	<input type="checkbox"/>
Does the EGMP include a discussion stating that every 30 days from the date of the initial exceedance, the facility will submit to Ohio EPA district office and local health district the following documentation: (Does the EGMP include an in-depth discussion and/or documentation of each of the following elements?)	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
The facility's analysis and summary of the results of the contingency monitoring	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The facility's determination of the lateral extent of explosive gas concentration above the explosive gas threshold (How far had the explosive gas migrated laterally, especially towards occupied structures?)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The facility's characterization of the explosive gas pathways (Saturation, porosity, and possible cause for the increase in gas concentration)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The facility's analysis and summary of steps to be taken to be protective of human health and the environment</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 17 – Contingency Procedures**  
**OAC Rule 3745-27-12(E)(5)**

	<b>Applicant Use Only</b> Mark if submitted within this application	<b>Ohio EPA Use Only</b> Application Complete
Discussion stating that at a minimum the facility will increase the gas monitoring frequency to weekly?	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of an escalated course of action to remedy the exceedance to reduce the formation or migration of explosive gas towards occupied structures	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of the facility's procedures to be protection of human health and the environment	<input type="checkbox"/>	<input type="checkbox"/>
Landfills in operation on or after June 1, 1994:		
<ul style="list-style-type: none"> <li>• Closure and Post Closure cost estimates updated to reflect the additional facility up-grades to remediate or abate the explosive gas generation and/or migration towards occupied structures</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 18 – Return to Routine Explosive Gas Monitoring  
OAC Rule 3745-27-12(E)(5)**

	<b>Applicant Use Only</b>  Mark if submitted within this application	<b>Ohio EPA Use Only</b>  Application Complete
Discussion of when contingency monitoring is no longer warranted, however at a minimum the facility must perform the following:		
<ul style="list-style-type: none"> <li>The 4 sequential gas monitoring events must be performed, no less than a 2 week period</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>No exceedances of the explosive gas threshold can occur during the time of 2 week gas monitoring event</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
Discussion of the final report to be submitted to Ohio EPA district office and local health district by the facility must include, at a minimum the following elements:		
<ul style="list-style-type: none"> <li>The facility's analysis and summary of the results of the contingency monitoring</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The facility's determination of the lateral extent of explosive gas concentration above the explosive gas threshold (How far had the explosive gas migrated laterally, especially towards occupied structures?)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The facility's characterization of the explosive gas pathways (Saturation, porosity, and possible cause for the increase in gas concentration)</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>The facility's consideration of possible causes for the increase in gas concentration that caused the exceedance event</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>

**Tab 19 – Appendices**  
**OAC Rule 3745-27-12(E)(6)**

	<b>Applicant Use Only</b>	<b>Ohio EPA Use Only</b>
	Mark if submitted within this application	Application Complete
Appendix A – Reporting forms	<input type="checkbox"/>	<input type="checkbox"/>
Appendix B – Copies of letters of notification and consent to install gas alarm	<input type="checkbox"/>	<input type="checkbox"/>
Appendix C – Geologic boring logs	<input type="checkbox"/>	<input type="checkbox"/>
Appendix D – Certification reports	<input type="checkbox"/>	<input type="checkbox"/>

**Lack of a mark means the required element is not complete, accurate, clear, understandable or included in the submission.**

Questions or further assistance?  
 Please contact the Land Management Unit at 614-644-2621.