**Texas Commission on Environmental Quality**

**Title 40 Code of Federal Regulations NSPS § 60, Subpart WWW**

**Checklist for Conditions and Requirements**

**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks.** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.751 Definitions** | **Response** |
| This MSWLF or Transfer Station is subject to the definitions in § 60.751? | | YES  NO |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | **Response** |
| (b)(1)(ii)(B) | If the landfill is not permanently closed, skip to question (a) below. | YES  NO |
| If the landfill is closed, have you submitted a closure notification as specified in § 60.757(d)? | | |
| *If NO, attach a written explanation.* | | |
| (a) | Does this landfill have a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume? | YES  NO |
| *If YES, submit an initial design capacity report as provided in* § 60.757(a).  *If NO, skip to (b) below.* | | |
| (a) | Have you submitted an initial design capacity report as provided in § 60.757(a)? | YES  NO |
| *If NO, submit an initial design capacity report with this checklist.* | | |
| (a)(1) | Are you required to submit an amended design capacity report as provided in § 60.757(a)(3)? | YES  NO |
| *If YES, submit an amended design capacity report with this checklist.*  *If NO, the remainder of the checklist does not apply.* | | |
| (a)(2) | Was this landfill previously exempted from the provisions of §60.752(b) through §60.759 of this subpart on the basis of the design capacity exemption in paragraph (a) of this section? | YES  NO |
| (a)(2) | Has there been an increase in the maximum design capacity of the landfill resulting in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters? | YES  NO |
| *If YES, continue with the checklist.*  *If NO, the remainder of the checklist does not apply.* | | |
| (b) | Does this landfill have a design capacity ≥ 2.5 million megagrams and 2.5 million cubic meters? | YES  NO |
| ***Note:*** *The owner or operator of an MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is subject to* 40 CFR 70 or 40 CFR 71 *Operating permit requirements.* | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | | |
| --- | --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | | | **Response** |
| (b) | Does this landfill have a General Operating (GOP) or Site Operating (SOP) Permit or pending application for a federal operating permit? | | | YES  NO |
| GOP Permit No.: | | | SOP Permit No.: | |
| (b) | Have you calculated the NMOC emission rate using the procedures specified in § 60.754? | | | YES  NO |
| ***Note:*** *The NMOC emission rate shall be recalculated annually, except as provided in* § 60.757(b)(1)(ii). | | | | |
| *If NO, calculate NMOC and return to this checklist*. | | | | |
| Use of EPA LandGEM computer model is preferred or use the TCEQ spreadsheet for calculating NMOC. | | | | |
| What is the calculated NMOC emission rate in units of megagrams (Mg) per year for the current year? | | | | |
| (Mg/yr) | | | | |
| (b)(1) | | Is the calculated NMOC emission rate less than 50 megagrams per year? | | YES  NO |
| *If NO, skip to (b)(2) below.* | | | | |
| (b)(1)(i) | | Did you submit an annual emission report? | | YES  NO |
| *If NO, the report may be submitted with this checklist.* | | | | |
| (b)(1)(ii) | | Will you recalculate the NMOC emission rate annually using the procedures specified in § 60.754(a)(1) until such time that the recalculated NMOC emission is ≥ 50 megagrams per year or the landfill is closed? | | YES  NO |
| *If NO, submit the report with this checklist.* | | | | |
| (b)(1)(ii)(A) | | If the recalculated NMOC emission rate is greater than 50 megagrams per year, will a gas collection and control system be installed in compliance with § 60.752 (b)(2)? | | YES  NO |
| *If NO, attach a written explanation.* | | | | |
| (b)(2) | | Is the calculated NMOC emission rate ≥ 50 megagrams per year? | | YES  NO |
| *If YES, answer* (b)(2)(ii) *below.*  *If NO, a GCCS does not have to be installed at this time* | | | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | **Response** |
| (b)(2)(ii) | Has Tier 2 or Tier 3 sampling as specified in § 60.757(c)(1) or § 60.757(c)(2) demonstrated that the NMOC emission rate is less than 50 megagrams per year? | YES  NO |
| *If YES, a GCCS does not have to be installed until such time the NMOC is* ≥ *50 megagrams per year. Recalculate the NMOC emission rate annually using the procedures specified in* § 60.754*(a)(1) until such time that the recalculated NMOC emission is* ≥*50 megagrams per year or the landfill is closed. Do not complete to remainder of the checklist at this time.*  *If NO, answer the next question.* | | |
| (b)(2)(i) | Have you submitted, or will you submit, a gas collection and control system (GCCS) design plan prepared by a professional engineer within 1 year of attaining an NMOC emission rate 50 megagrams per year? | YES  NO |
| *If NO, attach a written explanation.* | | |
| (b)(2)(i)(A) | Does the GCCS described in the plan meet the design requirements of paragraph § 60.752 (b)(2)(ii) of this section? | YES  NO |
| ***Note:*** *The design requirements are outlined below in* (b)(2)(ii)(A) *or* (b)(2)(ii)(B). | | |
| *If NO, attach a written explanation.* | | |
| (b)(2)(i)(B) | Does the GCCS design plan include any proposed alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, record keeping or reporting provisions of §§ 60.753 through 60.758? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(2)(i)(C) | Does the GCCS design plan conform with the specifications for active collection systems in § 60.759? | YES  NO |
| *If YES, skip the next question.*  *If NO, the requirements of the next question must be met.* | | |
| (b)(2)(i)(C) | Does the GCCS design plan include a demonstration to the Administrator of the sufficiency of the alternative provisions to § 60.759? | YES  NO |
| ***Note:*** *The GCCS design plan must conform to the requirements of § 60.759 or an Alternate* | | |
| *Means of Control (AMOC) GCCS design approved by the Agency.* | | |
| *Attach the AMOC GCCS Design Plan to the* AMOC Submittal Form *and submit as instructed.* | | |
| *If YES, enclose proof of Administrator’s approval in the submitted GCCS design plan.*  *If NO, GCCS design plan must conform to § 60.759.* | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | | **Response** |
| (b)(2)(ii) | Have you installed, or will you install within 30 months after the first annual report of an NMOC emission rate of 50 megagrams per year, a GCCS that captures the gas generated within the landfill as required by paragraph (b)(2)(ii)(A) or (b)(2)(ii)(B) and (b)(2)(iii) of this section? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (b)(2)(ii)(A) | Have you installed, or will you install, an active collection system? | | YES  NO |
| *If NO, attach a detailed explanation and skip to* (b)(2)(ii)(B) *below.* | | | |
| (b)(2)(ii)(A)(1) | Is the existing or proposed active collection system designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended useful period of the gas control or treatment system equipment? | | YES  NO |
| Maximum Landfill Gas Flow Rate (include units of flow): | | | |
| (b)(2)(ii)(A)(2) | Does the existing or proposed active collection system collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for the indicated periods? | | YES  NO |
| *Check the appropriate answer to the right and the appropriate box(es) below.* | | | |
| 5 years or more if active | | 2 years or more if closed or at final grade | |
| (b)(2)(ii)(A)(3) | Is the existing or proposed active collection system designed to collect gas at a sufficient extraction rate? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (b)(2)(ii)(A)(4) | Is the existing or proposed active collection system designed to minimize off-site migration of subsurface gas? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (b)(2)(ii)(B) | Have you installed, or will you install, a passive collection system? | | YES  NO |
| *If YES, attach a detailed explanation.*  *If NO, skip to* (b)(2)(iii) *below.* | | | |
| (b)(2)(ii)(B)(1) | Is the existing or proposed passive collection system designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment? | | YES  NO |
| Maximum Landfill Gas Flow Rate (include units of flow): | | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | | **Response** |
| *If NO, attach a detailed explanation.* | | | |
| (b)(2)(ii)(B)(1) | Does the existing or proposed passive collection system collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for the indicated periods? | | YES  NO |
| *Check the appropriate answer to the right and the appropriate box(es) below:* | | | |
| 5 years or more if active | | 2 years or more if closed or at final grade | |
| (b)(2)(ii)(B)(1) | Is the existing or proposed passive collection system designed to minimize off-site migration of subsurface gas? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (b)(2)(ii)(B)(2) | Is the existing or proposed passive collection system installed with liners installed as required under § 258.40 on the bottom and all sides in all areas in which gas is to be collected? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (b)(2)(iii) | Did you route, or will you route, all the collected gas to a control system that complies with the requirements in paragraph (b)(2)(iii)(A), (b)(2)(iii)(B), or (b)(2)(iii)(C) below? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (b)(2)(iii)(A) | Is the existing or proposed control system an open flare, designed and operated in accordance with § 60.18? | | YES  NO |
| *If, YES, and you would like to apply for a performance test waiver for the landfill flare under* § 60.18(a)(4), *fill out the* Flare Performance Test Waiver Form and attach *to this checklist.*  *If NO, attach a detailed explanation.* | | | |
| (b)(2)(iii)(B) | Is the existing or proposed control system an enclosed combustion device? | | YES  NO |
| *If NO, skip to* (b)(2)(iii)(C) *below.* | | | |
| (b)(2)(iii)(B) | Does the existing or proposed enclosed combustion device either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen? | | YES  NO |
| ***Note:*** *The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in* § 60.754(d)*.* | | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | **Response** |
| *If NO, attach a detailed explanation.* | | |
| (b)(2)(iii)(B)(1) | If a boiler or process heater is used as the control device, is the landfill gas stream introduced, or will it be introduced, into the flame zone? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(2)(iii)(B)(2) | Is the existing or proposed control device operated within the parameter ranges established during the initial or most recent performance test? | YES  NO |
| ***Note:*** *The operating parameters to be monitored are specified in* § 60.756. | | |
| *If NO, attach a detailed explanation.* | | |
| (b)(2)(iii)(C) | Is the collected gas routed, or will it be routed, to a treatment system that processes the collected gas for subsequent sale or use? | YES  NO |
| ***Note:*** *All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph* (b)(2)(iii)(A) *or* (b)(2)(iii)(B) *of this section.* | | |
| (b)(2)(iv) | Is the existing or proposed collection and control device operated in accordance with the provisions of §§ 60.753, 60.755, and 60.756? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(2)(v) | Will the collection and control system be capped or removed? | YES  NO |
| *If NO, skip to* (c) *below.* | | |
| *If YES, the conditions of paragraph* (b)(2)(v)(A)*,* (b)(2)(v)(B)*, and* (b)(2)(v)(C) *must be met.* | | |
| (b)(2)(v)(A) | Is the landfill a closed landfill as defined in § 60.751? | YES  NO |
| (b)(2)(v)(A) | Has a closure report been submitted to the Administrator as provided in § 60.757(d)? | YES  NO |
| (b)(2)(v)(B) | Has the collection and control system been in operation for a minimum of 15 years? | YES  NO |
| (b)(2)(v)(C) | Following the procedures specified in § 60.754(b) of this subpart, has the calculated NMOC gas produced by the landfill been less than 50 megagrams per year on three successive test dates? | YES  NO |
| ***Note:*** *Attach the calculations to this checklist.* | | |
| (b)(2)(v)(C) | List the test dates (mm/dd/yyyy): | |
| ***Note:*** *The test dates shall be no less than 90 days apart, and no more than 180 days apart.* | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | **Response** |
| (c) | Does this landfill require a Title V permit? | YES  NO |
| ***Note:*** *For purposes of obtaining an operating permit under Title V, the owner or operator of a MSWLF landfill subject to this subpart with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the requirement to obtain an operating permit for the landfill under* 40 CFR 70 or 40 CFR 71, unless the landfill is otherwise subject to either 40 CFR 70 or 40 CFR 71. | | |
| (c) | Have you submitted, or are you submitting, a timely application for an operating permit? | YES  NO |
| *If YES,* (c)(1) or (c)(2) *below must be met.*  *If NO, explain in detail.* | | |
| ***Note:*** *The owner or operator of a MSW landfill subject to this subpart with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters, and not otherwise subject to either parts* 70 or 71*, becomes subject to the requirements of* § 70.5(a)(1)(i) or § 71.5(a)(1)(i) *of this chapter, regardless of when the design capacity report is actually submitted, no later than the appropriate date in* (c)(1) or (c)(2) *below.* | | |
| *If” NO,” attach a detailed explanation.* | | |
| (c)(1) | Was the application for an operating permit submitted by June 10, 1996? | YES  NO |
| ***Note:*** *This date applies to MSW landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996.* | | |
| *If NO, attach a detailed explanation. For example, LF expansion was after June 10, 1996.* | | |
| (c)(2) | Has the application for an operating permit been submitted, or will it be submitted, within ninety (90) days after the date of commenced construction, modification, or reconstruction? | YES  NO |
| ***Note:*** *This timeframe applies to MSW landfills that commence construction, modification, or reconstruction on or after March 12, 1996.* | | |
| *If NO, attach a detailed explanation.* | | |
| (d) | Has this landfill been closed, or will it be closed? | YES  NO |
| ***Note*:** *If YES, the owner operator is no longer subject* *to the requirement to maintain an operating permit under* parts 70 or 71 | | |
| *If NO, skip the remainder of (d).* | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.752 - Standards for Air Emissions from MSWLF** | | **Response** |
| (d) | Was this landfill subject to the requirements of either part 70 or 71? | | YES  NO |
| ***Note:*** *Unless this MSW landfill is otherwise subject to the requirements of either* part70 or 71*, you are no longer subject to the requirement to maintain an operating permit under* parts 70 or 71 *of this chapter if either* (d)(1) or (d)(2) *below is met.* | | | |
| (d)(1) | Was the landfill ever subject to the requirement for a control system under paragraph (b)(2) of this section? | | YES  NO |
| (d)(2) | Are the conditions for control system removal specified in paragraph (b)(2)(v) met? | | YES  NO |
| **Regulation** | **40 CFR § 60.753 Operational Standards for Collection and Control Systems** | | **Response** |
| Does this landfill have a gas collection and control system (GCCS) used to comply with the provisions of § 60.752(b)(2)(ii)? | | | YES  NO |
| *If NO, attach a detailed explanation and skip the remainder of this section (§ 60.753) of the checklist.* | | | |
| ***Note:*** *Compliance with* § 60.752(b)(2)(ii) *is required within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified in* § 60.757(c)(1) *or* § 60.757(c)(2)*.* | | | |
| (a) | Will the collection system operate such that gas is collected from each area, cell, or group of cells in which solid waste has been in place for the following periods? | | YES  NO |
| 5 years or more if active | | 2 years or more if closed or at final grade | |
| (b) | Will the collection system be operated with negative pressure at each wellhead except under the following conditions? | | YES  NO |
| a fire or increased well temperature | | | |
| ***Note:*** *The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire.* | | | |
| *These records shall be submitted with the annual reports as provided in* § 60.757(f)(1). | | | |
| use of a geo membrane or synthetic cover | | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.753 Operational Standards for Collection and Control Systems** | **Response** |
| ***Note:*** *The owner or operator shall develop acceptable pressure limits in the GCCS design plan.* | | |
| a decommissioned well | | |
| ***Note:*** *A well may experience a static positive pressure after shut down to accommodate for declining flows.* | | |
| A*ll design changes shall be approved by the Agency.* | | |
| *If NO, a passive collection system must comply with the provisions of* § 60.752(b)(2)(ii)(B) | | |
| (c) | Will each interior wellhead in the collection system operate with a landfill gas temperature less than 55 degrees C and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent? | YES  NO |
| ***Note:*** *The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well.* | | |
| *A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.* | | |
| *Attach supporting data.* | | |
| (c)(1) | Will the nitrogen level be determined using Method 3C, unless an alternative test method is established in the GCCS design plan and approved by the Agency? | YES  NO |
| ***Note****: If an alternative method is used, attach a detailed explanation.* | | |
| (c)(2) | Will the oxygen level be determined by an oxygen meter using Method 3A or 3C, unless an alternative test method is established in the GCCS design plan and approved by the Agency? | YES  NO |
| ***Note:*** *The following exceptions to Methods 3A and 3C apply to this requirement.* | | |
| *If an alternative method is used, attach a detailed explanation:* | | |
| (i) *The span shall be set so that the regulatory limit is between 20 and 50 percent of the span;* | | |
| (ii) *A data recorder is not required;* | | |
| (iii) *Only two calibration gases are required, a zero and span, and ambient air may be used as the span;* | | |
| (iv) *A calibration error check is not required; and* | | |
| (v) *The allowable sample bias, zero drift, and calibration drift are ±10 percent.* | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.753 Operational Standards for Collection and Control Systems** | **Response** |
| (d) | Will the collection system be operated so that the methane concentration is less than 500 parts per million above background at the surface of the landfill? | YES  NO |
| ***Note:*** *To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30‑meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.* | | |
| *If NO, attach a detailed explanation.* | | |
| (e) | Will the collection system be operated such that all collected gases are vented to a control system designed and operated in compliance with § 60.752(b)(2)(iii)? | YES  NO |
| ***Note:*** *In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the gas collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour.* | | |
| *If NO, attach a detailed explanation.* | | |
| (f) | Will the control or treatment system be operated at all times when the collected gas is routed to the system? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (g) | If monitoring demonstrates that the operational requirements in paragraphs (b), (c), or (d) of this section are not met, will corrective action be taken as specified in § 60.755(a)(3), § 60.755(a)(4), and § 60.755(a)(5) or § 60.755(c)? | YES  NO |
| ***Note:*** *If corrective actions are taken as specified in* § 60.755*, the monitored exceedance is not a violation of the operational requirements in this section.* | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.754 Test Methods and Procedures** | **Response** |
| *If NO, attach a detailed explanation.* | | |
| (a)(1) | Tier 1 Are you calculating the NMOC emission rate for the landfill for the first time under Tier 1? | YES  NO |
| ***Note:*** *If you are calculating the NMOC emission rate for purposes of determining when the gas collection and control system can be removed as provided in § 60.752(b)(2)(v), answer this question “NO” and skip to (b) below.* | | |
| *If YES, you may use either the equation provided in paragraph (a)(1)(i) of this section or the equation provided in paragraph (a)(1)(ii) of this section. Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in paragraph (a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph (a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for Lo, and 4,000 parts per million by volume as hexane for the CNMOC. For landfills located in geographical areas with a thirty-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.* | | |
| (a)(1)(i) | Did you use the following equation for years in which the actual year-to-year solid waste acceptance rate is known? | YES  NO |
| n  MNMOC = Σ 2 k Lo Mi (e-kti)(CNMOC)(3.6 × 10-9)  i=1  where MNMOC = Total NMOC emission rate from the landfill, megagrams per year  k=methane generation rate constant, year-1  Lo=methane generation potential, cubic meters per megagram solid waste  Mi=mass of solid waste in the ith section, megagrams  ti=age of the ith section, years  CNMOC=concentration of NMOC, parts per million by volume as hexane  3.6 × 10-9=conversion factor | | |
| ***Note:*** *The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for Mi if documentation of the nature and amount of such wastes is maintained.* | | |

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| --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.754 Test Methods and Procedures** | | **Response** |
| (a)(1)(ii) | Did you use the following equation for years in which the actual year-to-year solid waste acceptance rate is unknown? | | YES  NO |
| MNMOC = 2Lo R (e-kc-e-kt) CNMOC (3.6 × 10-9)  where: MNMOC=mass emission rate of NMOC, megagrams per year  Lo=methane generation potential, cubic meters per megagram solid waste  R=average annual acceptance rate, megagrams per year  k=methane generation rate constant, year-1  t=age of landfill, years  CNMOC=concentration of NMOC, parts per million by volume as hexane  c=time since closure, years; for active landfill c=0 and e-kc=1  3.6×10-9=conversion factor | | | |
| (a)(i) | What is the NMOC emission rate calculated using the above equation(s)? | | |
| megagrams per year | | | |
| Check which equation applies. | | | |
| (a)(1)(i) | | (a)(1)(ii) | |
| (a)(2) | Tier 1 Compare the NMOC emission rate calculated in (a)(1) above to the standard of 50 megagrams per year. | | |
| Check which one applies: | | | |
| the calculated NMOC emission rate is less than 50 megagrams per year | | | |
| the calculated NMOC emission rate is greater than or equal to 50 megagrams per year | | | |
| (a)(2)(i) | Tier 1 If the calculated NMOC emission rate is less than 50 megagrams per year, do both of the following: | | |
| submit an emission rate report as provided in § 60.757(b)(1), and | | | |
| recalculate the NMOC mass emission rate annually as required under § 60.752(b)(1) | | | |
| (a)(2)(ii) | Tier 1 If the calculated NMOC emission rate is ≥ 50 megagrams per year, do either of the following: | | |
| comply with § 60.752(b)(2), or | | | |
| determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in paragraph (a)(3) below | | | |

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**Checklist for Conditions and Requirements**

**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | | **40 CFR § 60.754 Test Methods and Procedures** | **Response** |
| (a)(3) | | Tier 2 Are you required to determine the NMOC concentration? | YES  NO |
| *If NO, skip to (a)(4) below.* | | | |
| (a)(3) | Tier 2 Determine the NMOC concentration using the following sampling procedure: | | |
| install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years | | | |
| if the landfill is larger than 25 hectares in area, only 50 samples are required | | | |
| the sample probes should be located to avoid known areas of nondegradable solid waste | | | |
| the owner or operator shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of Appendix A | | | |
| method 18 of Appendix A may be used to analyze the samples collected by the Method 25 or 25C sampling procedure | | | |
| taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe | | | |
| for each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal | | | |
| composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes | | | |
| terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes | | | |
| if using Method 18, the owner or operator must identify all compounds in the sample and, as a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP–42), minus carbon monoxide, hydrogen sulfide, and mercury | | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.754 Test Methods and Procedures** | **Response** |
| as a minimum, the instrument must be calibrated for each of the compounds on the list | | |
| convert the concentration of each Method 18 compound to CNMOC as hexane by multiplying by the ratio of its carbon atoms divided by six | | |
| if more than the required number of samples are taken, all samples must be used in the analysis | | |
| the landfill owner or operator must divide the NMOC concentration from Method 25 or 25C of Appendix A by six to convert from CNMOC as carbon to CNMOC as hexane | | |
| if the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement | | |
| for active collection systems (already installed to control odor, etc.), samples may be collected from the common header pipe before the gas moving or condensate removal equipment (preapproval is not required) | | |
| for these systems, a minimum of three samples must be collected from the header pipe | | |
| (a)(3)(i) | Tier 2. Recalculate the NMOC emission rate using the equations provided in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (a)(1) of this section. | |
| (a)(3)(i) | Tier 2. What is the NMOC emission rate calculated using the Tier 2 method specified in (a)(3)(i) above? | |
| megagrams per year | | |
| (a)(3)(ii) | Tier 2 If the resulting NMOC emission rate calculated using the site-specific NMOC concentration is greater than or equal to50 megagrams per year, then do one of the following: | |
| comply with § 60.752(b)(2), or | | |
| determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in paragraph (a)(4) of this section | | |
| (a)(3)(iii) | Tier 2 If the resulting NMOC emission rate is less than 50 megagrams per year, do both of the following: | |
| submit a periodic estimate of the emission rate report as provided in § 60.757(b)(1), and | | |
| retest the site-specific NMOC concentration every 5 years using the methods specified in this section | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.754 Test Methods and Procedures** | **Response** |
| (a)(4) | Tier 3 Are you required to calculate a site-specific methane generation rate constant*?* | YES  NO |
| *If NO, skip to (a)(5) below.* | | |
| (a)(4) | Tier 3 Did you use the procedures provided in Method 2E of Appendix A to calculate the site-specific methane generation rate constant? | YES  NO |
| *If YES, you should estimate the NMOC emission rate using equations in paragraph (a)(1)(i) or (a)(1)(ii) of this section and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in paragraph (a)(3) of this section instead of the default values provided in paragraph (a)(1) of this section.*  *If NO attach a detailed explanation of the method used, as allowed under § 60.754(a)(5), and a copy of the US EPA approval letter as required by § 60.750(b) and skip to (a)(5) below.* | | |
| (a)(4) | Tier 3 What is the NMOC emission rate calculated using the site-specific methane generation rate and concentration of NMOC? | |
| megagrams per year | | |
| (a)(4) | Tier 3 Compare the NMOC emission rate calculated in (a)(4) above to the standard of 50 megagrams per year. | |
| the calculated NMOC emission rate is ≥50 megagrams per year | | |
| the calculated NMOC emission rate is < 50 megagrams per year | | |
| (a)(4)(i) | Tier 3 If the NMOC emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is greater than or equal to 50 megagrams per year, do the following: | |
| comply with § 60.752(b)(2) | | |
| (a)(4)(ii) | Tier 3 If the calculated NMOC emission rate is < 50 megagrams per year, do both of the following: | |
| submit a periodic emission rate report as provided in § 60.757(b)(1), and | | |
| recalculate the NMOC mass emission rate annually, as provided in § 60.757(b)(1) using the equations in paragraph (a)(1) of this section and using the site-specific methane generation rate constant and NMOC concentration obtained in paragraph (a)(3) of this section | | |
| ***Note:*** *The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.* | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.754 Test Methods and Procedures** | | **Response** |
| (a)(5) | Have you used other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in paragraphs (a)(3) and (a)(4) above*?* | | YES  NO |
| *If NO, skip to (b) below* | | | |
| (a)(5) | | Have the alternatives to the methods required in paragraphs (a)(3) and (a)(4) of this section been approved by the US Environmental Protection Agency? | YES  NO |
| *If NO, then such alternative methods may not be used.* | | | |
| ***Note:*** *Authority for the approval of these alternatives is retained by the EPA and cannot be transferred to the State, as per § 60.750(b). If you have received such approval, please attach a copy of the related documentation for verification purposes* | | | |
| (b) | | After a gas collection and control system (GCCS) been installed in compliance with § 60.755, are you seeking to determine when the GCCS can be removed as provided in § 60.752(b)(2)(v)? | YES  NO |
| *If NO, skip to (c) below.* | | | |
| (b) | | You shall calculate the NMOC emission rate using the following equation. | |
| MNMOC = 1.89 × 10-3 QLFG CNMOC  where, MNMOC = mass emission rate of NMOC, megagrams per year  QLFG = flow rate of landfill gas, cubic meters per minute  CNMOC = NMOC concentration, parts per million by volume as hexane | | | |
| ***Note:*** *The flow rate of landfill gas, QLFG, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of Appendix A.* | | | |
| ***Note:*** *The average NMOC concentration, CNMOC, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of Appendix A. If using Method 18 of Appendix A, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C of Appendix A by six to convert from CNMOC as carbon to CNMOC as hexane.* | | | |
| ***Note:*** *The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Agency. If using an alternate method, please attach a detailed explanation.* | | | |
| (c) | | Are you required to calculate emissions for PSD purposes? | YES  NO |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks.** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.754 Test Methods and Procedures** | **Response** |
| *If NO, skip to (d) below.* | | |
| (c) | Have AP–42 or other approved measurement procedures been used to estimate the NMOC emission rate for comparison to the PSD major source and significance levels in §§51.166 or 52.21 of this chapter? | YES  NO |
| ***Note:*** *Attach the calculations and an explanation of the methodology used.* | | |
| (d) | Does the gas collection and control system (GCCS) design plan include any alternatives to the test methods provisions of § 60.754? | YES  NO |
| *If YES, attach a detailed explanation.* | | |
| (d) | Have you completed (or will you perform) the gas control system initial performance test required in § 60.752(b)(2)(iii)(B)? | YES  NO |
| ***Note:*** *The following equation shall be used to calculate efficiency:* | | |
| Control Efficiency = (NMOCin - NMOCout)/(NMOCin)  where, NMOCin = mass of NMOC entering control device  NMOCout = mass of NMOC exiting control device | | |
| (d) | Which test method will be used to determine compliance with the 98 weight-percent efficiency or the 20 ppmv outlet concentration level requirement? | |
| Method 25 | | |
| Method 25C | | |
| Method 18 | | |
| another method approved by the Agency as provided by § 60.752(b)(2)(i)(B) | | |
| ***Note:*** *In cases where the outlet concentration is less than 50 ppm NMOC as carbon (8 ppm NMOC as hexane), Method 25A should be used in place of Method 25.* | | |
| ***Note:*** *If using Method 18 of Appendix A, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP–42).* | | |
| ***Note:*** *If using an alternate method, please attach a detailed explanation.* | | |
| (d) | Which test method will be used to determine oxygen for correcting the NMOC concentration as hexane to 3 percent? | |
| Method 3 | | |
| Method 3A | | |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks.** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.755 Compliance Provisions** | **Response** |
| (a) | Does the gas collection and control system (GCCS) design plan include any alternatives to the compliance measures of § 60.755? | YES  NO |
| *If YES, attach a detailed explanation.*  *If NO, you must use the methods specified in* (a)(1)through (a)(6) *below to determine whether the gas collection system is in compliance with* § 60.752(b)(2)(ii). | | |
| (a)(1) | Are you calculating the maximum expected gas generation flow rate from the landfill to determine compliance with § 60.752(b)(2)(ii)(A)(*1*)? | YES  NO |
| I*f YES, use one of the following equations,* (a)(1)(i) *or* (a)(1)(ii).  *If NO, attach a detailed explanation.* | | |
| ***Note:*** *The k and Lo kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (*AP–42*) or other site specific values demonstrated to be appropriate and approved by the Agency. If k has been determined as specified in* § 60.754(a)(4)*, the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.* | | |
| (a)(1)(i) | Did you calculate the maximum expected gas generation flow rate using the following equation for sites with an unknown year-to-year solid waste acceptance rate? | YES  NO |
| Qm = 2Lo R (e-kc - e-kt)  where: Qm=maximum expected gas generation flow rate, cubic meters per year  Lo=methane generation potential, cubic meters per megagram solid waste  R=average annual acceptance rate, megagrams per year  k=methane generation rate constant, year-1  t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years  c=time since closure, years (for active landfill c=0 and e-kc = 1) | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.755 Compliance Provisions** | **Response** |
| (a)(1)(ii) | Did you calculate the maximum expected gas generation flow rate using the following equation for sites with a known year-to-year solid waste acceptance rate? | YES  NO |
| QM = Σ2 k Lo Mi (e-kti)  I = 1  where, QM=maximum expected gas generation flow rate, cubic meters per year  k = methane generation rate constant, year-1  Lo = methane generation potential, cubic meters per megagram solid waste  Mi = mass of solid waste in the 1st section, megagrams  ti = age of the 1st section, years | | |
| (a)(1)(iii) | Has a gas collection and control system already been installed? | YES  NO |
| *If NO, skip to* (a)(2) *below.* | | |
| (a)(1)(iii) | Did you use actual flow data to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in (a)(1)(i) and (a)(1)(ii) above? | YES  NO |
| *If YES, attach a detailed explanation.* | | |
| ***Note:*** *If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in paragraphs* (a)(1)(i) *or* (a)(1)(ii) *or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.* | | |
| (a)(2) | Are you seeking to demonstrate compliance with the provision of § 60.752(b)(2)(ii)(A)(*2*) for sufficient density of gas collectors? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(2) | Does the GCCS design plan include a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Agency, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards? | YES  NO |
| (a)(3) | Are you seeking to demonstrate compliance with the provision of § 60.752(b)(2)(ii)(A)(*3*) for sufficient gas collection system flow rate? | YES  NO |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks.** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.755 Compliance Provisions** | **Response** |
| *If NO, attach a detailed explanation.* | | |
| (a)(3) | Will you measure gauge pressure in the gas collection header at each individual well each month? | YES  NO |
| (a)(3)(a)(4) | Will you take the following correction action(s) if a positive pressure exists? | YES  NO |
| initiate action to correct the positive pressure within 5 calendar days, except for the three conditions allowed under § 60.753(b) | | |
| if negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure | | |
| any attempted corrective measure shall not cause exceedances of other operational or performance standards | | |
| ***Note:*** *An alternative timeline for correcting the exceedance(s) may be submitted to the Agency for approval.* | | |
| ***Note:*** *You are not required to expand the gas collection system during the first 180 days after gas collection system startup.* | | |
| (a)(5) | Are you seeking to identify whether excess air infiltration into the landfill is occurring? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(5) | Will you monitor each well monthly for temperature and nitrogen or oxygen as provided in § 60.753(c)? | YES  NO |
| (a)(5) | Will you take the following correction action(s) if any well exceeds one or more of the limits for these operating parameters? | YES  NO |
| initiate action to correct the exceedance within 5 calendar days | | |
| if correction of the exceedance cannot be achieved within 15 calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance | | |
| any attempted corrective measure shall not cause exceedances of other operational or performance standards | | |
| ***Note:*** *An alternative timeline for correcting the exceedance(s) may be submitted to the Agency for approval.* | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.755 Compliance Provisions** | | **Response** |
| (a)(6) | Are you seeking to demonstrate compliance with § 60.752(b)(2)(ii)(A)(*4*) through the use of a collection system not conforming to the specifications provided in § 60.759? | | YES  NO |
| *If NO, skip to (b) below.* | | | |
| (a)(6) | Have you provided information satisfactory to the Agency as specified in § 60.752(b)(2)(i)(C) which demonstrates that off-site migration is being controlled? | | YES  NO |
| *If YES, attach the relevant information to this checklist.* | | | |
| (b) | Are you seeking to comply with the provisions of § 60.753(a)? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (b) | Have you placed each well or design component as specified in the approved GCCS design plan as provided in § 60.752(b)(2)(i)? | | YES  NO |
| (b) | Was each well installed no later than 60 days after the date on which the initial solid waste has been in place for the period(s) specified below? | | YES  NO |
| 5 years or more if active | | 2 years or more if closed or at final grade | |
| (c) | Are you seeking to demonstrate compliance with the surface methane operational standard as provided in § 60.753(d)? | | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (c)(1) | Will you monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in paragraph (d) below? | | YES  NO |
| ***Note:*** *This requirement applies after installation of the collection system.* | | | |
| (c)(2) | Will you determine the background concentration by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells? | | YES  NO |
| (c)(3) | Will monitoring of surface emissions be performed in accordance with section 4.3.1 of Method 21 of Appendix A, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground? | | YES  NO |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.755 Compliance Provisions** | **Response** |
| ***Note:*** *Monitoring shall be performed during typical meteorological conditions.* | | |
| (c)(4) | Will any reading of 500 parts per million or more above background at any location be recorded as a monitored exceedance? | YES  NO |
| (c)(4) | Will the following actions be taken when a monitored exceedance occurs? | YES  NO |
| The location of each monitored exceedance shall be marked and the location recorded. | | |
| Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within 10 calendar days of detecting the exceedance. | | |
| If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within 10 days of the second exceedance. If the re‑monitoring shows a third exceedance for the same location, the action specified in paragraph (c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in paragraph (c)(4)(v) has been taken. | | |
| Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring specified in paragraph (c)(4)(ii) or (c)(4)(iii) of this section shall be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in paragraph (c)(4)(iii) or (c)(4)(v) shall be taken. | | |
| For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar days of the initial exceedance. | | |
| ***Note:*** *As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of* § 60.753(d). | | |
| ***Note:*** *An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Agency for approval.* | | |
| (c)(5) | Have you implemented a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis? | YES  NO |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.755 Compliance Provisions** | **Response** |
| *If NO, attach a detailed explanation* | | |
| (d) | Are you seeking to comply with the provisions of § 60.755(c) for instrumentation specifications and procedures for surface emission monitoring? | YES  NO |
| *If YES, verify compliance with the instrumentation specifications and procedures for surface emission monitoring devices by answering questions* (d)(1) *through* (d)(4) *below.*  *If NO, attach a detailed explanation.* | | |
| (d)(1) | Will the portable analyzer meet the instrument specifications provided in section 3 of Method 21 of Appendix A, except that “methane” shall replace all references to VOC? | YES  NO |
| (d)(2) | Will the calibration gas be methane, diluted to a nominal concentration of 500 parts per million in air? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (d)(3) | Will the instrument evaluation procedures of section 4.4 of Method 21 of Appendix A be used to meet the performance evaluation requirements in section 3.1.3 of Method 21 of Appendix A? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (d)(4) | Will the calibration procedures provided in section 4.2 of Method 21 of Appendix A be followed immediately before commencing a surface monitoring survey? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (e) | Will you comply with the provisions of § 60.755 at all times, except during periods of start-up, shutdown, or malfunction? | YES  NO |
| ***Note:*** *With respect to noncompliance with the provisions of* § 60.755*, the duration of start-up, shutdown, or malfunction shall not exceed 5 days for collection systems and shall not exceed 1 hour for treatment or control devices.* | | |
| *If NO, attach a detailed explanation.* | | |
| **Regulation** | **40 CFR § 60.756 Monitoring of Operations** | **Response** |
| Does the gas collection and control system (GCCS) design plan include any alternatives to the monitoring provisions of § 60.756? | | YES  NO |
| *If YES, attach a detailed explanation.* | | |
| (a) | Will this landfill have an active gas collection system which complies with § 60.752(b)(2)(ii)(A)? | YES  NO |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.756 Monitoring of Operations** | **Response** |
| *If NO, attach an explanation and skip to (b) below.* | | |
| (a) | Will a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurement be installed at each wellhead? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(1) | Will the gauge pressure in the gas collection header be measured on a monthly basis as provided in § 60.755(a)(3)? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(2) | Will the nitrogen or oxygen concentration in the landfill gas be monitored on a monthly basis as provided in § 60.755(a)(5)? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(3) | Will the temperature of the landfill gas be monitored on a monthly basis as provided in § 60.755(a)(5)? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b) | Will this landfill have an enclosed combustor which complies with § 60.752(b)(2)(iii)? | YES  NO |
| *If NO, skip to* (c) *below.* | | |
| (b) | Will the equipment listed in (b)(1) and (b)(2) below be calibrated, maintained, and operated according to the manufacturer’s specifications? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(1) | Will the temperature monitoring device be equipped with a continuous recorder and have a minimum accuracy of ±1% of the temperature being measured expressed in degrees Celsius, or ±0.5 degrees Celsius, whichever is greater? | YES  NO |
| ***Note:*** *A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than or equal to 44 megawatts.* | | |
| *If NO, attach a detailed explanation.* | | |
| (b)(2) | Will a device be used to record flow to or bypass of the control device? | YES  NO |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks.** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.756 Monitoring of Operations** | **Response** |
| *If NO, attach a detailed explanation.* | | |
| (b)(2)(i) | Will a gas flow rate measuring device that records the flow to the control device at least every 15 minutes be installed, calibrated, and maintained? | YES  NO |
| *If NO, the requirements of* (b)(2)(ii) *below must be met.* | | |
| (b)(2)(ii) | The bypass line valve must be secured in the closed position with a car-seal or a lock-and-key type configuration? | YES  NO |
| (b)(2)(ii) | Will a visual inspection of the seal or closure mechanism be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (c) | Will this landfill have an open flare which complies with § 60.752(b)(2)(iii) that is, § 60.18? | YES  NO |
| *If NO, skip to* (d) *below.* | | |
| (c) | Will the equipment listed in (c)(1) and (c)(2) below be calibrated, maintained, and operated according to the manufacturer’s specifications? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (c)(1) | Will a heat sensing device, such as an ultraviolet beam sensor or thermocouple, be used at the pilot light or the flame itself to indicate the continuous presence of a flame? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (c)(2) | Will a device be used to record flow to or bypass of the flare? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (c)(2)(i) | Will a gas flow rate measuring device that records the flow to the control device at least every 15 minutes be installed, calibrated, and maintained? | YES  NO |
| *If NO, the requirements of (c)(2)(ii) below must be met.* | | |
| (c)(2(ii) | Will the bypass line valve be secured in the closed position with a car-seal or a lock-and-key type configuration? | YES  NO |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | | **40 CFR § 60.756 Monitoring of Operations** | **Response** |
| *If NO, attach a detailed explanation.* | | | |
| (c)(2)(ii) | | Will a visual inspection of the seal or closure mechanism be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line? | YES  NO |
| *If NO, attach a detailed explanation.* | | | |
| (d) | | Will this landfill have a control device other than an open flare or an enclosed combustor? | YES  NO |
| *If YES, submit the control device's engineering design and operational parameters for Agency approval prior to construction.*  *If NO, skip to* (e) *below.* | | | |
| (d) | Does the GCCS design plan include information describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures? | | YES  NO |
| ***Note:*** *The Agency will review the information and either approve it, or request that additional information be submitted. The Agency also may specify additional appropriate monitoring procedures.* | | | |
| (e) | Are you seeking to install a collection system that does not meet the specifications in § 60.759 or seeking to monitor alternative parameters to those required by § 60.753 through § 60.756? | | YES  NO |
| *If NO, skip to* (f) *below.* | | | |
| (e) | Does the GCCS design plan include information describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures? | | YES  NO |
| ***Note:*** *The Agency may specify additional appropriate monitoring procedures.* | | | |
| *If NO, attach a detailed explanation.* | | | |
| (f) | Are you required to demonstrate compliance with § 60.755(c) for surface methane concentration? | | YES  NO |

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| **Check the Most Appropriate Answer and Fill in the Blanks.** | | | |
| --- | --- | --- | --- |
| **Regulation** | | **40 CFR § 60.756 Monitoring of Operations** | **Response** |
| *If NO, skip the next question.* | | | |
| (f) | | Will you monitor the surface concentrations of methane according to the instrument specifications and procedures as provided in § 60.755(d)? | YES  NO |
| ***Note:*** *Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.* | | | |
| *If NO, attach a detailed explanation.* | | | |
| **Regulation** | | **40 CFR § 60.757 Reporting Requirements** | **Response** |
| Does the gas collection and control system (GCCS) design plan include any alternatives to the reporting provisions of § 60.757? | | | YES  NO |
| *If YES, attach a detailed explanation.* | | | |
| (a) | | Are you submitting a design capacity report? | YES  NO |
| *If YES and you are submitting an amended design capacity report, skip to* (a)(3) *below. If YES and you are submitting an initial design capacity report, continue.*  *If NO, skip to* (b) *below.* | | | |
| (a)(1)(i)  (a)(1)(ii) | | On what date did construction, modification, or reconstruction of this landfill commence? | |
| MM/DD/YYYY: | | | |
| ***Note:*** *If this date is before March 12, 1996, the initial design capacity report was due no later than*  *June 10, 1996.* | | | |
| ***Note:*** *If this date is on or after March 12, 1996, the initial design capacity report was (or is) due within ninety (90) days after the date on which construction, modification, or reconstruction commenced.* | | | |
| (a)(1)(i)  (a)(1)(ii) | | On what date did you submit the initial design capacity report? | |
| MM/DD/YYYY: | | | |
| (a)(2)(i) | Does the initial design capacity report contain a map or plot of the landfill? | | YES  NO |
| ***Note:*** *The map or plot must provide the size and location of the landfill, and identify all areas where solid waste may be landfilled according to the permit issued by the State, local, or tribal agency responsible for regulating the landfill.* | | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | | | |
| --- | --- | --- | --- | --- |
| **Regulation** | | **40 CFR § 60.757 Reporting Requirements** | | **Response** |
| (a)(2)(ii) | | Does the initial design capacity report contain the maximum design capacity of the landfill? | | YES  NO |
| ***Note:*** *Where the maximum design capacity is specified in the permit issued by the State, local, or tribal agency responsible for regulating the landfill, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with the relevant parameters as part of the report. The State, Tribal, or local agency may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.* | | | | |
| Attach the Initial Design Capacity Report Submittal Form to the Report and submit as instructed. | | | | |
| *If NO, attach a detailed explanation.* | | | | |
| (a)(3) | | Are you submitting an amended design capacity report? | | YES  NO |
| *If YES, continue.* Attach the Amended Design Capacity Report Submittal Form to the Report and submit as instructed.  *If NO, skip to (b) below and attach a detailed explanation.* | | | | |
| ***Note:*** *The report must be submitted within 90 days of an increase in the maximum design capacity of the landfill to or above 2.5 million megagrams and 2.5 million cubic meters.* | | | | |
| (a)(3) | What is the increased maximum design capacity being reported? | | | |
| megagrams | | | million m3 | |
| ***Note:*** *This increase in design capacity may result from an increase in the permitted volume of the landfill or an increase in the density as documented in the annual recalculation required in* § 60.758(f). | | | | |
| (b) | | Are you submitting an NMOC emission rate report? | | YES  NO |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Regulation** | | | **40 CFR § 60.757 Reporting Requirements** | | | **Response** |
| *If NO, skip to (b)(3) below.* | | | | | | |
| (b)(1) | | | What type of NMOC emission rate report are you submitting? | | | |
| initial | | | | | | |
| Annual | | | | | | |
| 5-year estimate in lieu of an annual report | | | | | | |
| ***Note:*** *If the estimated NMOC emission rate as reported in the annual report to the Agency is less than 50 megagrams per year in each of the next 5 consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next 5-year period in lieu of the annual report.* | | | | | | |
| Attach NMOC Emission Report Submittal Form and submit as instructed. | | | | | | |
| (b)(1) | | Which formulas and procedures were used to calculate the NMOC emission rate in this report? | | | | |
| § 60.754(a) | | | | | | |
| § 60.754(b) | | | | | | |
| (b)(1)(i) | | Is the initial NMOC emission rate report combined with the initial design capacity report or submitted as a separate report? | | | | |
| combined report | | | | | | |
| separate report | | | | | | |
| (b)(1)(i)(A) | | On what date did construction, modification, or reconstruction of this landfill commence? | | | | |
| MM/DD/YYYY: | | | | | | |
| ***Note:*** *If this date is before March 12, 1996, the initial NMOC emission rate report was due no later than June 10, 1996.* | | | | | | |
| ***Note:*** *If this date is on or after March 12, 1996, the initial NMOC emission rate report was (or is) due within ninety (90) days after the date on which construction, modification, or reconstruction commenced.* | | | | | | |
| *(*b)(1)(i) | | On what date did you submit the initial NMOC emission rate report? | | | | |
| MM/DD/YYYY: | | | | | | |
| ***Note:*** *Subsequent reports must be submitted annually thereafter.* | | | | | | |
| (b)(1)(ii) | | If you are submitting a 5-year estimate, what is the 5-year period covered by the report? | | | | |
| MM/DD/YYYY: |  | | | to |  | |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.757 Reporting Requirements** | **Response** |
| ***Note:*** *This estimate shall be revised at least once every 5 years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the 5-year estimate, a revised 5-year estimate shall be submitted to the Agency. The revised estimate shall cover the 5-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.* | | |
| (b)(2) | Does the NMOC emission rate report include all the data, calculations, sample reports and measurements used to estimate the annual or 5-year emissions? | YES  NO |
| ***Note:*** *If submitting a 5-year estimate, the estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the 5 years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Agency.* | | |
| ***Note:*** *The Agency may request such additional information as may be necessary to verify the reported NMOC emission rate.* | | |
| *If NO, attach a detailed explanation.* | | |
| (b)(3) | Are you claiming exemption from the requirements of paragraphs (b)(1) and (b)(2) of this section? | YES  NO |
| *If NO, skip to (c) below.* | | |
| (b)(3) | Has a gas collection and control system for compliance with § 60.752(b)(2) been installed? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(3) | Has the gas collection and control system been in operation and in compliance with §§ 60.753 and 60.755 during the period for which you claim exemption from the requirements of (b)(1) and (b)(2)? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (c) | Are you submitting a gas collection and control system design plan? | YES  NO |
| ***Note:*** *The design plan must be submitted to the Agency within 1 year of the first NMOC emission rate report in which the emission rate equals or exceeds 50 megagrams per year, unless the exceptions of (c)(1) or (c)(2) below apply.* | | |
| *If YES, Attach* Gas Collection and Control System Design Plan Submittal Form *and submit as instructed.*  *If NO, go the next question.* | | |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.757 Reporting Requirements** | **Response** |
| (c)(1) | Are you claiming an exception to the reporting requirement in (c) above because recalculation of the NMOC emission rate after Tier 2 NMOC sampling and analysis, as provided in § 60.754(a)(3),has resulted in an emission rate of less than 50 megagrams per year? | YES  NO |
| ***Note:*** *If you elect to claim this exception, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The Revised NMOC Emission Rate Report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year*. | | |
| *Attach the Revised NMOC Emission Rate Report* *to the* Revised NMOC Emission Rate Report (Tier 2) Submittal Form *and submit as instructed.* | | |
| *If NO, attach a detailed explanation* | | |
| (c)(2) | Are you claiming an exception to the reporting requirement in (c) above because recalculation of the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in § 60.754(a)(4), has resulted in an emission rate of less than 50 megagrams per year? | YES  NO |
| ***Note:*** *If you elect to claim this exception, annual periodic reporting shall be resumed. The resulting site‑specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of* § 60.754(a)(4) *and the resulting site-specific methane generation rate constant (k) shall be submitted to the Agency within 1 year of the first calculated emission rate exceeding 50 megagrams per year.* | | |
| *Attach the Revised NMOC Emission Rate Repor*t *to the* Revised NMOC Emission Rate Report (Tier 3) Submittal Form *and submit as instructed.* | | |
| *If NO, attach a detailed explanation.* | | |
| (d) | Are you submitting a closure report? | YES  NO |
| *If YES, the report must be submitted to the Agency within 30 days of waste acceptance cessation.* *Attach Closure Report to the* Closure Report Submittal Form *and submit as instructed.*  *If NO, skip to* (e) *below.* | | |
| (d) | What is the date of waste acceptance cessation? | |
| MM/DD/YYYY: | | |
| ***Note:*** *If a closure report has been submitted to the Agency, no additional wastes may be placed into the landfill without filing a notification of modification as described under* § 60.7(a)(4). | | |

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**Municipal Solid Waste Landfills (MSWLF)**

| **Check the Most Appropriate Answer and Fill in the Blanks** | | | | |
| --- | --- | --- | --- | --- |
| **Regulation** | | **40 CFR § 60.757 Reporting Requirements** | | **Response** |
| (d) | | Has a permanent closure taken place in accordance with the requirements of 40 CFR § 258.60? | | YES  NO |
| ***Note:*** *The Agency may request additional information to verify permanent closure.* | | | | |
| *If NO, attach a detailed explanation.* | | | | |
| (e) | | Are you submitting a Control Equipment Removal Report? | | YES  NO |
| *If YES, the report must be submitted to the Agency 30 days prior to removal or cessation of operation of the control equipment.*  *If NO, skip to* (f) *below.* | | | | |
| (e) | What is the date on which the control equipment will be removed or will cease operation? | | | |
| MM/DD/YYYY: | | | | |
| removal | | | cease operation | |
| (e)(1)  (e)(2) | | Does the Equipment Removal Report contain all of the following items: | | YES  NO |
| a copy of the closure report submitted in accordance with paragraph (d) of this section | | | | |
| a copy of the initial performance test report demonstrating that the 15 year minimum control period has expired | | | | |
| dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 megagrams or greater of NMOC per year | | | | |
| *If NO, attach a detailed explanation.* | | | | |
| ***Note:*** *The Agency may request such additional information as may be necessary to verify that all of the conditions for removal in* § 60.752(b)(2)(v) *have been met.* | | | | |
| *Attach Control Equipment Removal Report to the* Control Equipment Removal Report Submittal Form *and submit as instructed.* | | | | |
| (f) | | Are you submitting an Annual Report of recorded information for an active gas collection system as specified in § 60.757(f)(1) through § 60.757(f)(6)? | | YES  NO |
| *If NO, skip to (g) below.* | | | | |
| (f) | | What is the date of installation and start-up of the gas collection and control system? | | |
| MM/DD/YYYY: | | | | |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.757 Reporting Requirements** | **Response** |
| ***Note:*** *The initial annual report shall be submitted within 180 days of installation and start-up of the gas collection and control system, and shall include the initial performance test report required under* § 60.8. | | |
| *If performance testing was waived under § 60.8(a)(4) attach a copy of the approval letter.* | | |
| (f)(1)-(f)(6) | Indicate below which types of recorded information are included in the report: | |
| value and length of time for exceedance of applicable parameters monitored under § 60.756(a), § 60.756(b), § 60.756(c), and § 60.756(d) | | |
| ***Note:*** *For enclosed combustion devices and flares, reportable exceedances are defined under* § 60.758(c)*.* | | |
| description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under § 60.756 | | |
| description and duration of all periods when the control device was not operating for a period exceeding 1 hour and length of time the control device was not operating | | |
| all periods when the collection system was not operating in excess of 5 days | | |
| the location of each exceedance of the 500 parts per million methane concentration as provided in § 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month | | |
| the date of installation and the location of each well or collection system expansion added pursuant to § 60.755(a)(3), § 60.755(b), and § 60.755(c)(4) | | |
| *Attach Annual Report to the* Annual Report Submittal Form *and submit as instructed.* | | |
| (g) | Are you submitting the Initial Performance Test Report required under § 60.8 for a gas collection and control system? | YES  NO |
| *If NO, skip to the checklist for* § 60.758 *Recordkeeping Requirements.* | | |
| (g)(1)-(g)(6) | Does the Initial Performance Test Report include all of the following required information? | YES  NO |
| a diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion | | |
| the data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based | | |
| the documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material | | |
| the sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.757 Reporting Requirements** | **Response** |
| the provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill | | |
| the provisions for the control of off-site migration | | |
| **Regulation** | **40 CFR § 60.758 Recordkeeping Requirements** | **Response** |
| *Attach the* Initial Performance Test Report for the Control System Submittal Form *and submit as instructed.* | | |
| *If performance testing was waived under § 60.8(a)(4) attach a copy of the approval letter.* | | |
| (a) | Are you keeping (for at least 5 years) up-to-date, readily accessible, on-site records of the following? | YES  NO |
| the design capacity report which triggered § 60.752(b) | | |
| the current amount of solid waste in-place | | |
| the year-by-year waste acceptance rate | | |
| ***Note:*** *These records are required if the calculated NMOC emission rate is ≥ 50 megagrams per year.* | | |
| ***Note:*** *Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.* | | |
| *If NO, attach a detailed explanation* | | |
| (b) | Are you keeping up-to-date, readily accessible records of the control equipment data listed in paragraphs (b)(1) through (b)(4) below? | YES  NO |
| data measured during the initial performance test or compliance determination will be kept for the life of the control equipment | | |
| records of subsequent tests or monitoring will be maintained for a minimum of 5 years | | |
| records of the control device vendor specifications shall be maintained until equipment removal | | |
| *If NO, attach a detailed explanation.* | | |
| (b)(1) | Are you seeking to demonstrate compliance with § 60.752(b)(2)(ii) for a GCCS installation? | YES  NO |
| *If NO, skip to* (b)(2) *below.* | | |
| (b)(1)((i) | Are you keeping records of the maximum expected gas generation flow rate as calculated in § 60.755(a)(1)? | YES  NO |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.758 Recordkeeping Requirements** | **Response** |
| ***Note:*** *If you are using another agency-approved method to determine the maximum gas generation flow rate, attach a detailed explanation.* | | |
| *If NO, attach a detailed explanation.* | | |
| (b)(1)(ii) | Are you keeping records of the density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in § 60.759(a)(1)? | YES  NO |
| *If NO, attach a detailed explanation* | | |
| (b)(2) | Are you seeking to demonstrate compliance with § 60.752(b)(2)(iii), GCCS Control System, through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity *≥* 44 megawatts? | YES  NO |
| *If NO, skip to* (b)(3) *below.* | | |
| (b)(2)(i) | Are you keeping records of the average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(2)(ii) | Are you keeping records of the percent reduction of NMOC achieved by the control device as determined by the method specified in § 60.752(b)(2)(iii)(B)? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(3) | Are you seeking to demonstrate compliance with § 60.752(b)(2)(iii)(B)(*1*) through use of a boiler or process heater of any size? | YES  NO |
| *If NO, skip to* (b)(4) *below.* | | |
| (b)(3) | Are you keeping a record of the description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(4) | Are you seeking to demonstrate compliance with § 60.752(b)(2)(iii)(A) through use of an open flare? | YES  NO |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.758 Recordkeeping Requirements** | **Response** |
| *If NO, skip to* (c) *below.* | | |
| (b)(4) | Are you keeping the following required records? | YES  NO |
| flare type (i.e., steam-assisted, air-assisted, or nonassisted) | | |
| all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in § 60.18 | | |
| continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent | | |
| *If NO, attach a detailed explanation.* | | |
| (c) | Are you keeping (for at least 5 years) up-to-date, readily accessible, records of the following? | YES  NO |
| continuous records of the equipment operating parameters specified to be monitored in § 60.756 | | |
| records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded | | |
| *If NO, attach a detailed explanation.* | | |
| (c)(1) | Are you keeping records of the following exceedances? | YES  NO |
| ***Note:*** *These exceedances should also be reported under* § 60.757(f). | | |
| for enclosed combustors except for boilers and process heaters with design heat input capacity of *≥* 44 megawatts, all 3-hour periods of operation during which the average combustion temperature was more than 28 degrees C below the average combustion temperature during the most recent performance test at which compliance with § 60.752(b)(2)(iii) was determined | | |
| for boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under paragraph (b)(3) of this section | | |
| *If NO, attach a detailed explanation.* | | |
| (c)(2) | Are you keeping continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under § 60.756? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (c)(3) | Does the landfill use as a control device a boiler or process heater with a design heat input capacity *≥* 44 megawatts? | YES  NO |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.758 Recordkeeping Requirements** | **Response** |
| *If NO, skip to* (c)(4) *below.* | | |
| (c)(3) | Are you keeping records of all periods of operation of the boiler or process heater? | YES  NO |
| ***Note:*** *Such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal, or Federal regulatory requirements.* | | |
| *If NO, attach a detailed explanation.* | | |
| (c)(4) | Does the landfill use an open flare as a control device? | YES  NO |
| *If NO, skip to (d) below.* | | |
| (c)(4) | Are you keeping the following required records? | YES  NO |
| continuous records of the flame or flare pilot flame monitoring specified under § 60.756(c) | | |
| records of all periods of operation in which the flame or flare pilot flame is absent | | |
| *If NO, attach a detailed explanation.* | | |
| (d) | Are you keeping for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (d)(1) | Are you keeping up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under § 60.755(b)? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (d)(2) | Are you keeping readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in § 60.759(a)(3)(i) as well as any nonproductive areas excluded from collection as provided in § 60.759(a)(3)(ii)? | YES  NO |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.758 Recordkeeping Requirements** | **Response** |
| *If NO, attach a detailed explanation.* | | |
| (e) | Are you keeping (for at least 5 years) up-to-date, readily accessible records of the following? | YES  NO |
| all collection and control system exceedances of the operational standards in § 60.753 | | |
| the reading in the subsequent month whether or not the second reading is an exceedance | | |
| the location of each exceedance | | |
| *If NO, attach a detailed explanation.* | | |
| (f) | Have you converted design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of “design capacity.” | YES  NO |
| *If NO, skip the next question.* | | |
| (f) | Are you keeping readily accessible, on-site records of the following conversion-related data? | YES  NO |
| the annual recalculation of site-specific density | | |
| the design capacity | | |
| the supporting documentation | | |
| ***Note:*** *Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.* | | |
| *If NO, attach a detailed explanation.* | | |
| **Regulation** | **40 CFR § 60.759 Specifications for Active Collection Systems** | **Response** |
| (a) | Is this landfill required to comply with § 60.752(b)(2)(i)? | YES  NO |
| *If YES, continue.*  *If NO, skip the remainder of this checklist.* | | |
| ***Note:*** *Compliance with* § 60.752(b)(2)(i) *is required if the calculated NMOC emission rate is greater than or equal to 50 megagrams per year.* | | |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.759 Specifications for Active Collection Systems** | **Response** |
| (a) | Have procedures and alternative mean of control (AMOC) for the GCCS been approved by the agency as provided in § 60.752(b)(2)(i)(C) and (D)? | YES  NO |
| *If YES, attach a detailed explanation of these alternative procedures and proof of agency AMOC approval.*  *If NO, continue.* | | |
| (a) | Will you site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(1) | Are the collection devices within the interior and along the perimeter areas certified by a professional engineer to achieve comprehensive control of surface gas emissions? | YES  NO |
| ***Note:*** *The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat.* | | |
| *If NO, attach a detailed explanation.* | | |
| (a)(2) | Does the density of gas collection devices determined by the design in paragraph (a)(1) of this section address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(3) | Will the placement of gas collection devices determined by the design in paragraph (a)(1) of this section control all gas producing areas, except as provided by paragraphs (a)(3)(i) and (a)(3)(ii) of this section? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (a)(3)(i) | Will this landfill have any segregated area(s) of asbestos or nondegradable material? | YES  NO |
| (a)(3)(i) | Will such area(s) be excluded from collection and documented as being excluded as provided under § 60.758(d)? | YES  NO |

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| --- | --- | --- |
| **Regulation** | **40 CFR § 60.759 Specifications for Active Collection Systems** | **Response** |
| ***Note:*** *The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the Agency upon request.* | | |
| (a)(3)(ii) | Can this site demonstrate that all excluded, nonproductive areas of the landfill contribute less than 1 percent of the total amount of NMOC emissions from the landfill? | YES  NO |
| *If YES, nonproductive area of the landfill may be excluded from control. The amount, location, and age of the material shall be documented and provided to the Agency upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:*  Qi = 2 k Lo Mi (e-kt i) (CNMOC) (3.6 × 10-9)  where, Qi = NMOC emission rate from the ith section, Mg per year  k = methane generation rate constant, year-1  Lo = methane generation potential, cubic meters per Mg solid waste  Mi = mass of the degradable solid waste in the ith section, Mg  ti = age of the solid waste in the ith section, years  CNMOC = concentration of nonmethane organic compounds, parts per million by volume  3.6 × 10-9 = conversion factor  *If NO, this equation cannot be used, skip to* (b) *below.* | | |
| ***Note:*** *The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in paragraph (a)(3)(i) of this section.* | | |
| (a)(3)(iii) | Were the values for k and CNMOC used in (a)(3)(ii) above determined by field testing? | YES  NO |
| *If NO, skip the next two questions.* | | |
| (a)(3)(iii) *year-1* | What is the value of k as determined by field testing? *year-1* | |
| (a)(3)(iii) | What is the value of CNMOC as determined by field testing? ppmv | |
| (a)(3)(iii) | Were default values for k, Lo, and CNMOC provided in § 60.754(a)(1) or the alternative values from § 60.754(a)(5) used in (a)(3)(ii) above? | YES  NO |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | |
| --- | --- | --- |
| **Regulation** | **40 CFR § 60.759 Specifications for Active Collection Systems** | **Response** |
| (b) | Is the collection and control system required to comply with § 60.752(b)(2)(i)(A)? | YES  NO |
| *If YES, complete sections (b) and (c) below.*  *If NO, attach an explanation.* | | |
| ***Note:*** *Compliance with* § 60.752(b)(2)(i) *is required if the calculated NMOC emission rate is greater than or equal to 50 megagrams per year.* | | |
| (b)(1) | Will the landfill gas extraction components be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions? | YES  NO |
| ***Note:*** *To be considered suitably sized, extraction components must be able to: convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads.* | | |
| *If NO, attach a detailed explanation.* | | |
| (b)(1) | Will the collection system extend as necessary to comply with emission and migration standards? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(1) | Will collection devices such as wells and horizontal collectors be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(1) | Will perforations be situated with regard to the need to prevent excessive air infiltration? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(2) | Will vertical wells be placed so as not to endanger underlying liners and to address the occurrence of water within the landfill? | YES  NO |
| *If NO, attach a detailed explanation.* | | |
| (b)(2) | Will holes and trenches constructed for piped wells and horizontal collectors be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill? | YES  NO |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.759 Specifications for Active Collection Systems** | | | **Response** | |
| *If NO, attach a detailed explanation.* | | | | | |
| (b)(2) | Will collection devices be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air? | | | | YES  NO |
| *If NO, attach a detailed explanation.* | | | | | |
| (b)(2) | Will any gravel used around pipe perforations be of a dimension so as not to penetrate or block perforations? | | | YES  NO | |
| *If NO, attach a detailed explanation.* | | | | | |
| (b)(3) | Will collection devices be connected to the collection header pipes below or above the landfill surface? | | | YES  NO | |
| above | | below | both | | |
| *If NO, attach a detailed explanation.* | | | | | |
| (b)(3) | Will the connector assembly include a positive closing throttle valve, any necessary seals and couplings, access couplings and at least one sampling port? | | | YES  NO | |
| *If NO, attach a detailed explanation.* | | | | | |
| (b)(3) | Will the collection devices be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness? | | | YES  NO | |
| *If NO, attach a detailed explanation.* | | | | | |
| (c) | Will the landfill gas be conveyed through collection header pipe(s) to a control system which complies with § 60.752(b)(2)(iii)? | | | YES  NO | |
| ***Note:*** *Does the site have approval for an alternate means of control under the provisions of § 60.752(b)(2)(i)(C), if so attach proof of approval.* | | | | | |
| *If NO, attach a detailed explanation.* | | | | | |
| (c)(1) | Is this an existing collection system? | | | YES  NO | |
| *If YES, continue. If NO, skip to* (c)(2)*.* | | | | | |
| (c)(1) | Is flow data available? | | | YES  NO | |

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| **Check the Most Appropriate Answer and Fill in the Blanks** | | | |
| --- | --- | --- | --- |
| **Regulation** | **40 CFR § 60.759 Specifications for Active Collection Systems** | | **Response** |
| *If YES, use the flow data to project the maximum flow rate.*  *If NO, the maximum flow rate shall be calculated per* § 60.755(a)(1)*.* | | | |
| (c)(2) | Will the maximum flow rate be calculated in accordance with § 60.755(a)(1)? | YES  NO | |
| *If NO, attach a detailed explanation.* | | | |
| (c) | Will the gas mover equipment be sized to handle the maximum gas generation flow rate expected over the intended use period? | YES  NO | |
| *If NO, attach a detailed explanation.* | | | |
| ***Note:*** *The maximum gas generation flow rate must be calculated as specified in § 60.755(a)(1).* | | | |