



**REPUBLIC**  
**SERVICES, INC.<sup>SM</sup>**

Municipal Solid Waste Landfill Gas Collection and Control System

## **Startup, Shutdown, and Malfunction Plan**

*Prepared in accordance with the:*

**National Emission Standards for Hazardous Air Pollutants  
40 C.F.R. §63.6(e)(3)**

*Prepared for:*

**Facility:** Forest Lawn Landfill

**Address:** 8230 West Forest Lawn Road

Three Oaks, MI 49128

This document identifies the procedures for conducting startups, shutdowns or addressing malfunctions of the municipal solid waste landfill gas collection and control system in a timely and safe manner.

**Date of Issuance:** January 16, 2004

**Revision:** 2

**Revision Date:** June 4, 2020

**Revised By:** Impact Compliance and Testing, Inc.

# **START-UP, SHUTDOWN AND MALFUNCTION PLAN**

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## Introduction

The purpose of this plan is to fulfill the obligations set forth in the NESHAP for Municipal Solid Waste Landfills (40 CFR 63 Subpart AAAAA) and to provide site personnel with a flexible plan to minimize emissions of hazardous air pollutants during startup, shutdown or malfunction. This document identifies the procedures for conducting startups, shutdowns or addressing malfunctions of the gas collection and control equipment or processes subject to this plan in a timely and safe manner. In addition, specific record-keeping and reporting procedures are described.

In order to properly document that the site personnel have followed the plan as required, a single form to document all start-up, shutdown and malfunction (SSM) events has been prepared in a checklist format.

**Except as specifically excluded below, all components of the gas collection and control system as well as the continuous monitoring system for the control device(s) are to follow the SSM Plan:**

The following items are excluded from this SSM Plan:

1. Exceedances at Individual Wells for Pressure, Oxygen or Nitrogen, Temperature
2. Surface Emissions Monitoring Exceedances (readings 500 ppm or greater)
3. Portable and/or Intermittent Field Monitoring Equipment (i.e., GEM500, FID)
4. (Automatic) shutdowns of the flare and/or leachate evaporator which are followed by successful (automatic) re-start sequences. This is done automatically and is part of the control device's normal operating procedures.
5. Temporary (less than five days) closure of control valves within the landfill gas collection system, in order to isolate portions of the system for troubleshooting or maintenance.

The completed forms must be kept in the site files, for use in the semi-annual SSM Plan Report.

This **Startup, Shutdown and Malfunction Plan** must be revised if the procedures described herein do not address or adequately address any startup, or shutdown procedure or malfunction that occurs. Revisions to the plan must be discussed in the semi-annual SSM Plan Report.

A copy of the original plan and all revisions must be kept at the facility for at least five (5) years.

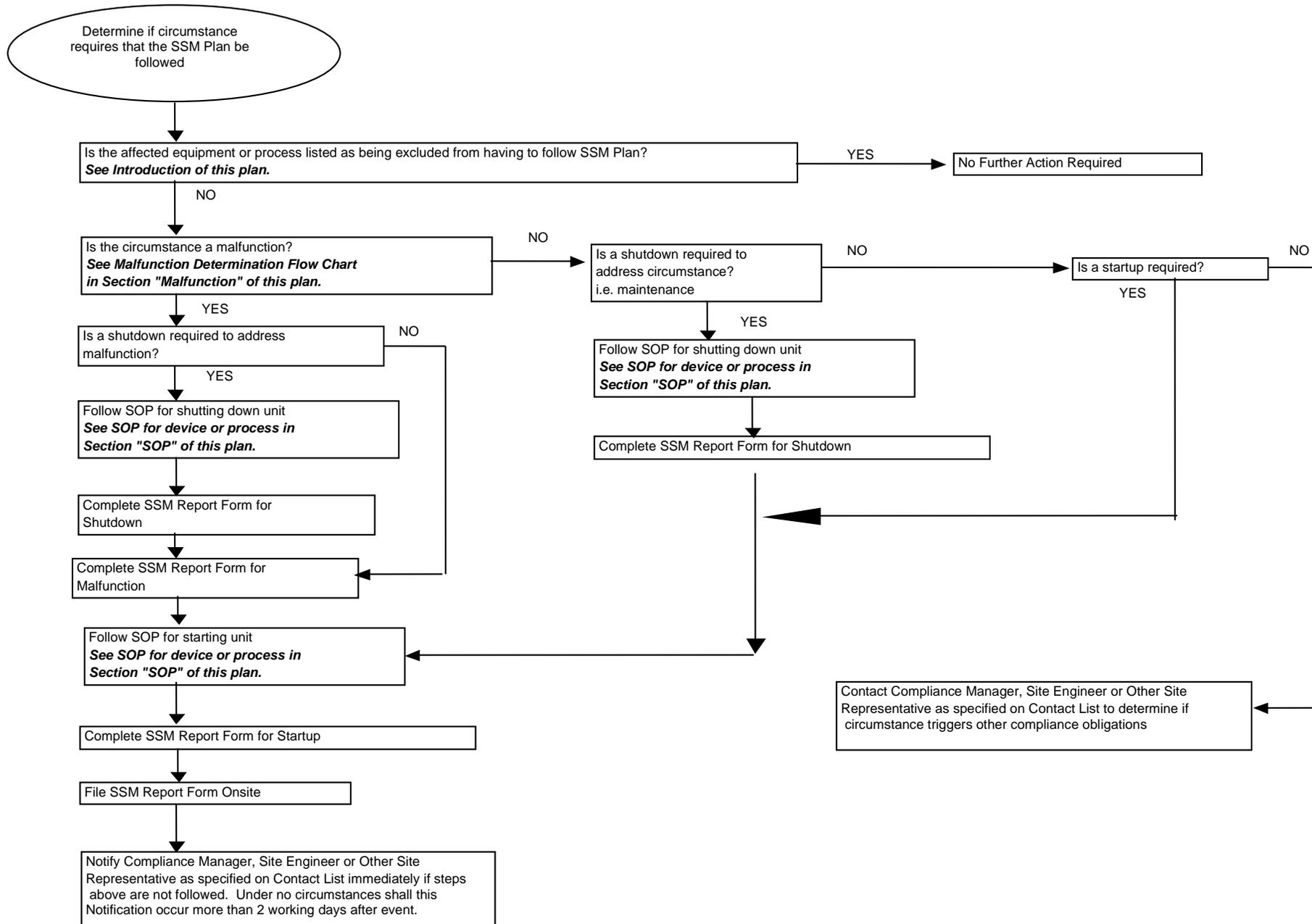
**Facility Description:**

The Forest Lawn Landfill is an existing affected source under 40 CFR 63 Subpart AAAA and currently accepts wastes as permitted by the Michigan Department of Environment, Great Lakes and Energy (EGLE). Republic Services, Inc. is the parent company of the Forest Lawn Landfill and owns and operates the landfill, landfill gas collection system, leachate evaporation system, and open flare.

# Startup, Shutdown, Malfunction Plan –

## Gas Collection and Control System Operator Responsibilities

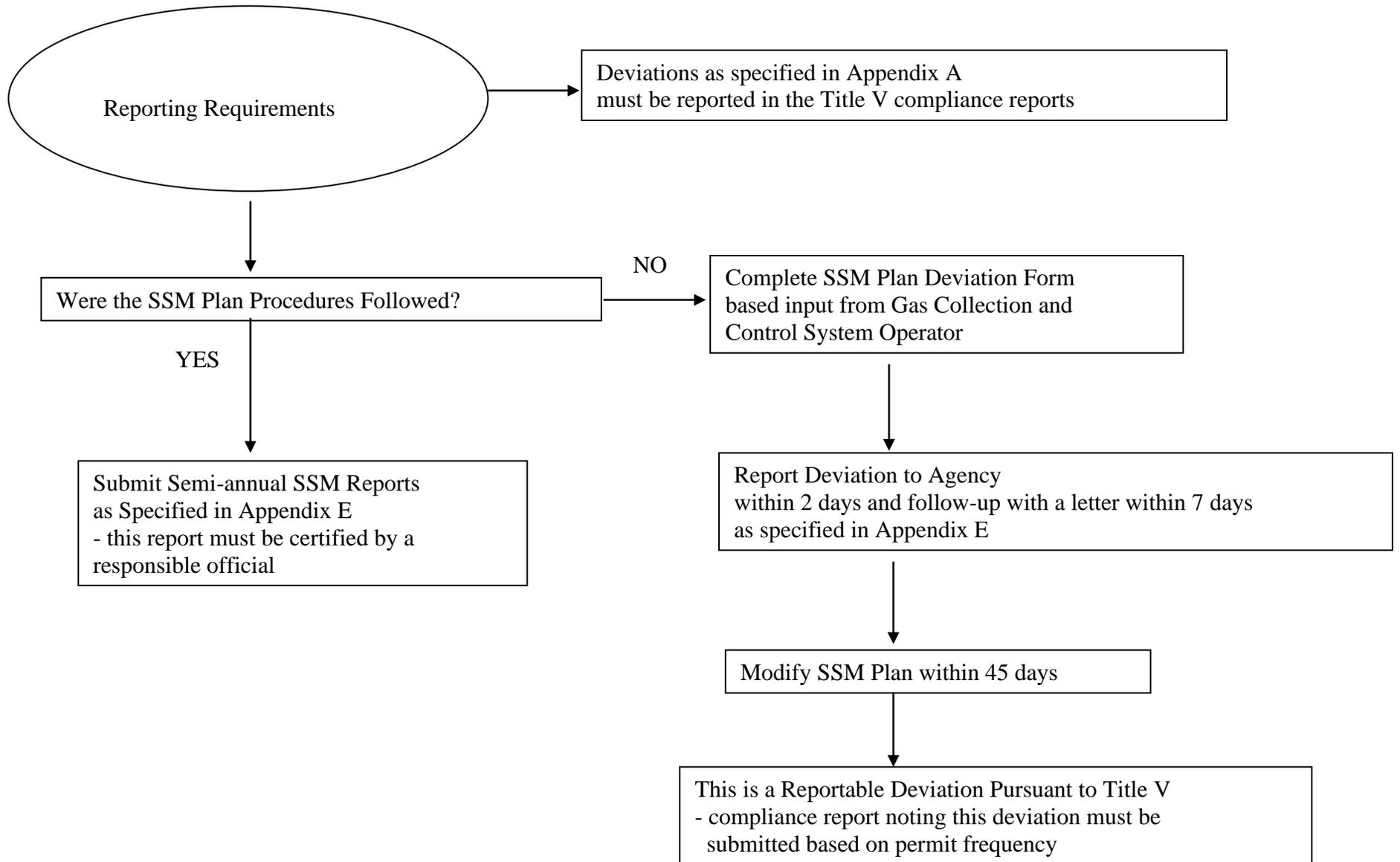
All persons or parties undertaking the operations or maintenance of the gas collection and control system must adhere to the following procedures.



# Startup, Shutdown, Malfunction Plan –

## Compliance Manager/ Site Engineer Responsibilities

All persons or parties undertaking the reporting of deviations must adhere to the following procedures.



## CONTACTS

*The following person(s) should be contacted (in order of priority) for any events requiring the implementation of the SSM plan. If unable to reach a person, contact next person on list:*

	<b>Title/Position</b>	<b>Phone</b>
1	Landfill O&M Manager	440-550-4506
2	Landfill Environmental Specialist	708-540-3663
3	Landfill Environmental Manager	708-540-3653
4	Midwest Area Environmental Manager	708-297-3949

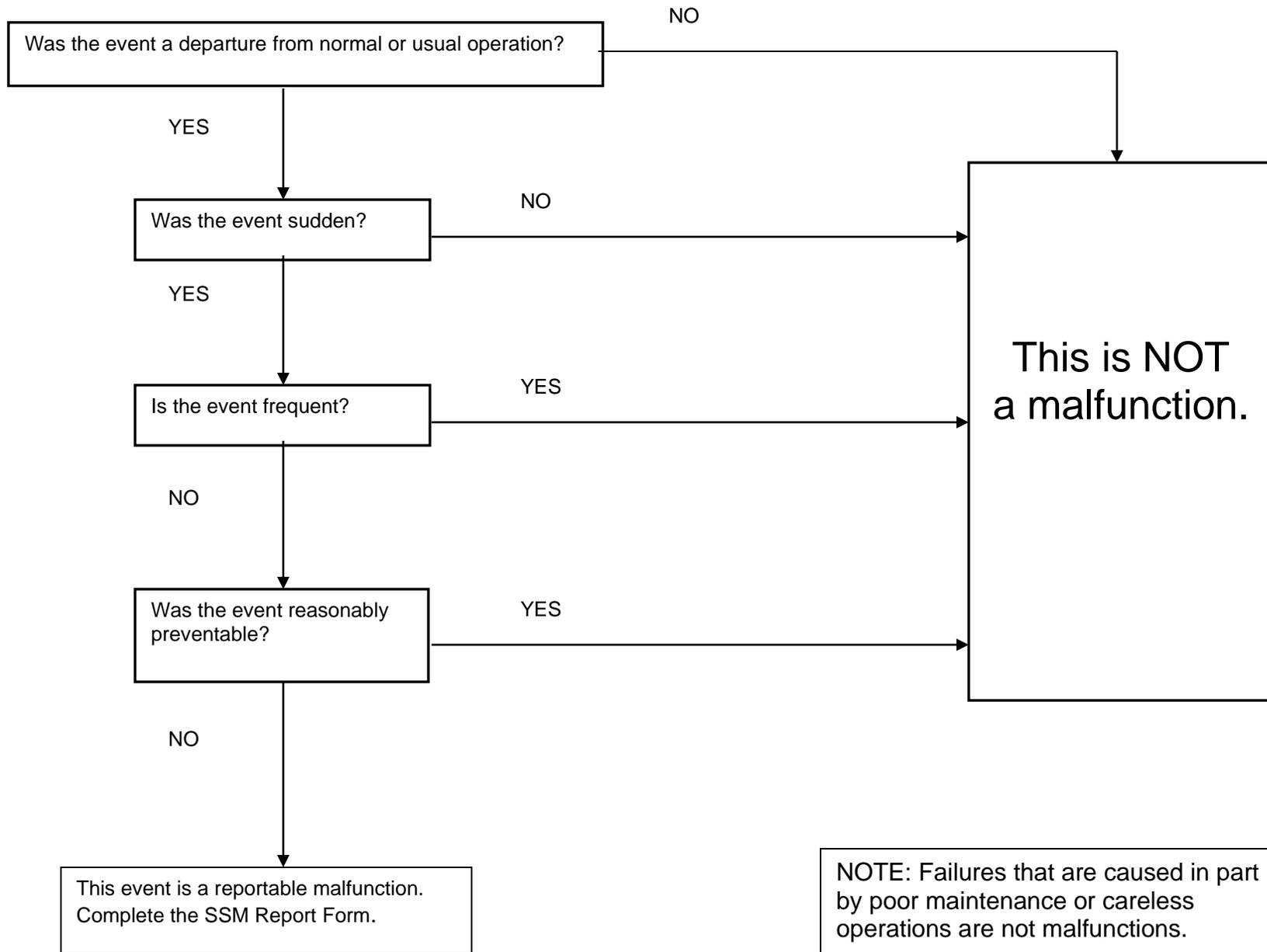
*The following telephone numbers are provided in the event additional resources are necessary to address a malfunction:*

<b>Resource</b>	<b>Name</b>	<b>Phone</b>
Evap/Flare Manufacturer	LFG Specialties	419-424-4999
Blower Manufacturer	HSI (Open Flare) Lamson (Evap)	713-947-1623 315-433-5500
Electrician	Schwartz Electric, Inc.	574-862-4221
LFG System Troubleshooting	Landfill O&M Manager	440-550-4506
Monitoring Systems	Landfill O&M Manager	440-550-4506

*The following person(s) should be contacted (in order of priority) if the SSM plan was not followed, the event resulted in the continued release of landfill gas to the air, or the event was not a malfunction, startup or shutdown as specified in the plan. If unable to reach a person, contact next person on list:*

	<b>Title</b>	<b>Phone</b>
1	Landfill O&M Manager	440-550-4506
2	Landfill Environmental Manager	708-540-3653
3	Midwest Area Environmental Manager and Responsible Official	708-297-3949

# Is this event a malfunction?



NOTE: Failures that are caused in part by poor maintenance or careless operations are not malfunctions.

# SSM PLAN REPORT FORM

## Startup/Shutdown/Malfunction Report Form

### Section 1 - All Events

Type of Event	Military Time		Duration (hours)	Event Code (see back of form)	SOP* Followed?	
	Date/Time Start	Date/Time End			Yes	No**
<input type="checkbox"/> Startup						
<input type="checkbox"/> Shutdown						
<input type="checkbox"/> Malfunction					Complete Section 2 Below	

Date Form Filled Out: \_\_\_\_\_ Signature: \_\_\_\_\_

\* Standard Operating Procedure (SOP) for Flare Startups (Manual & Automatic) and Shutdowns are provided in SSM Plan

\*\*If SOP in SSM Plan was not followed, **notify personnel on "Contact List"**.

### Section 2 - Malfunction Events Only

<input checked="" type="checkbox"/> Check one of the following for each step:			
Step	Corrective Action Procedures for All Malfunctions	Procedure completed	Procedure Not Applicable
1.	Determine if landfill gas is being released to the air (can you smell landfill gas, or measure/detect gas flow?).	<input type="checkbox"/>	
2.	If landfill gas is being released to the air, notify personnel on "Contact List".	<input type="checkbox"/>	<input type="checkbox"/>
3.	Determine if the malfunction is causing an unsafe operating condition (air entering landfill or piping, smoking, vibration, or other problem), which may harm people, the environment or the landfill gas control equipment.	<input type="checkbox"/>	
4.	If unsafe operating condition exists, or landfill gas is being released to the air, <b>stop</b> (if possible) <b>landfill gas flow</b> .	<input type="checkbox"/>	<input type="checkbox"/>
5.	If Control device or other system component is shutdown, follow Shutdown SOP and Complete Section 1 - "Shutdown".	<input type="checkbox"/>	<input type="checkbox"/>
6.	Determine if other personnel/resource (qualified technician, electrician, consultant or other) are needed for malfunction diagnosis.	<input type="checkbox"/>	
7.	If additional personnel needed, notify qualified personnel: a. Record contact name, date and time: _____ b. Contact site representative with information recorded in #7.a.	<input type="checkbox"/>	<input type="checkbox"/>
8.	Start malfunction diagnosis.	<input type="checkbox"/>	
9.	Determine if other resources are needed to fix the malfunction (qualified technician, electrician, contractor, on-site resources, manufacturer's representative, or other).	<input type="checkbox"/>	
10.	If additional resources needed, contact qualified resource: a. Record contact name, date and time: _____ b. Contact site representative with information recorded in #10.a.	<input type="checkbox"/>	<input type="checkbox"/>
11.	Fix the malfunction.	<input type="checkbox"/>	
12.	Once the malfunction is fixed, re-start the system per SOP if it had been shut down, and record start-up times and dates in boxes in Section 1 of this form.	<input type="checkbox"/>	<input type="checkbox"/>
13.	Record date that malfunction occurred, date that malfunction was repaired, and total time that system was out of service in boxes in Section 1 of this form.	<input type="checkbox"/>	
14.	Sign this form and place it in the Start-up, Shutdown, Malfunction file.	<input type="checkbox"/>	
15.	If the procedures listed above were not followed, <b>notify personnel on "Contact List"</b> .	<input type="checkbox"/>	<input type="checkbox"/>

## EVENT CODES



### ***For Start-ups and Shutdowns:***

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**Startup:** *The setting in operation of an affected source or portion of an affected source for any purpose.*

**Shutdown:** *The cessation of operation of an affected source or portion of any source for any purpose.*

<b>Code</b>	<b>Event</b>
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1	Maintenance
2	Suspected Collection System Malfunction
3	Suspected Control Device Malfunction
4	Suspected Continuous Monitoring System Malfunction (Temperature/Flow/Other)
5	Training
6	Gas System Construction/Expansion
7	Suspected Treatment System Malfunction
99	Other (Describe) _____

### ***For Malfunctions:***

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**Malfunction:** *Any sudden, infrequent and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.*

10	Automatic shutdown of control device by designed protective systems
11	Auto-dialer callout
12	Shutdown alarms that result in the device not shutting down
13	Unalarmed shutdown
14	Control device smoking
15	Inspection identified malfunction
16	Loss of power - utility down
17	Loss of power - unknown
18	Damaged Well, Header or Lateral Piping
19	Leaks at wellheads, valves, flanges, test ports, seals, couplings, etc.
20	Condensate knock-out problems
21	Collection piping blockages
22	Problems due to settlement
23	Loss of phase
24	Blower overload condition
25	Blower bearing failure
26	Broken belts (if belt-drive) or broken coupling (if direct-drive) in blower
27	Continuous Monitoring System Malfunction - Thermocouple
28	Continuous Monitoring System Malfunction - UV Scanner
29	Continuous Monitoring System Malfunction - Flow Monitor
30	Continuous Monitoring System Malfunction - Flow Recorder
31	Continuous Monitoring System Malfunction - Temperature Recorder
32	Act of God (i.e., lightning, wind, etc.)
99	Other (Describe) _____

### **NOTES ON EVENT:**

# Standard Operating Procedure

## Startup

1. Ensure there are no unsafe conditions present
2. Ensure the system is ready to start by one or more of the following:
  - a. Valves are in correct operating position
  - b. Levels, pressures, temperatures are within normal starting range
  - c. Alarms are cleared
  - d. Power is on and available to control panel and energize equipment
  - e. Emergency Stop is de-energized
3. Initiate start sequence (Note time and date on top section of form as Start). Refer to Manufacturer's Information (if applicable) as an additional resource.
4. Observe that system achieves normal operating ranges for levels, pressures, and temperatures (Note time and date on top section of form as End).
5. Complete top section of form. Duration is the time it takes to go from Step 3 to 4

## Shutdown

1. Ensure there are no unsafe conditions present
  - a. Contact site O&M Manager and/or Environmental Manager immediately
2. Initiate shutdown sequence by one or more of the following (Note time and date on top section of form as Start). Refer to Manufacturer's Information (if applicable) as an additional resource.
  - a. Press Emergency Stop, if necessary
  - b. Close On/Off switch(es) or Push On/Off button(s)
  - c. Close adjacent valves, if necessary
3. Observe that system achieves normal shutdown ranges for levels, pressures, and temperatures (Note time and date on top section of form as End)
4. Complete top section of form. Duration is the time it takes to go from Step 2 to 3.

## Malfunction

1. Minimize/stop emissions of landfill gas (if present).
2. Determine cause of malfunction. Refer to Manufacturer's Information (if applicable) as an additional resource.
3. Fix malfunction
4. Complete form. Duration is the time it takes to go from discovery of malfunction (unless continuous monitoring records indicate malfunction started earlier) to Step 3.

**APPENDIX A**  
**LANDFILL NESHAP REGULATIONS**

## PART 63--[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

2. Part 63 is amended by adding a new subpart AAAA to read as follows:

Subpart AAAA--National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills

Sec.

### What This Subpart Covers

63.1930 What is the purpose of this subpart?

63.1935 Am I subject to this subpart?

63.1940 What is the affected source of this subpart?

63.1945 When do I have to comply with this subpart?

63.1947 When do I have to comply with this subpart if I own or operate a bioreactor?

63.1950 When am I no longer required to comply with this subpart?

63.1952 When am I no longer required to comply with the requirements of this subpart if I own or operate a bioreactor?

### Standards

63.1955 What requirements must I meet?

### General and Continuing Compliance Requirements

63.1960 How is compliance determined?

63.1965 What is a deviation?

63.1975 How do I calculate the 3-hour block average used to demonstrate compliance?

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### Other Requirements and Information

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63.1990 What definitions apply to this subpart?

### Tables to Subpart AAAA of Part 63

Table 1 of Subpart AAAA of Part 63--Applicability of NESHAP General Provisions to Subpart AAAA

**Sec. 63.1930 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants for existing and new municipal solid waste (MSW) landfills. This subpart requires all landfills described in Sec. 63.1935 to meet the requirements of 40 CFR part 60, subpart Cc or WWW and requires timely control of bioreactors.

This subpart also requires such landfills to meet the startup, shutdown, and malfunction (SSM) requirements of the general provisions of this part and provides that compliance with the operating conditions shall be demonstrated by parameter monitoring results that are within the specified ranges. It also includes additional reporting requirements.

**Sec. 63.1935 Am I subject to this subpart?**

You are subject to this subpart if you meet the criteria in paragraph (a) or (b) of this section.

(a) You are subject to this subpart if you own or operate a MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition and meets any one of the three criteria in paragraphs (a)(1) through (3) of this section:

(1) Your MSW landfill is a major source as defined in 40 CFR 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million megagrams (Mg) and 2.5 million cubic meters (m<sup>3</sup>) and has estimated uncontrolled emissions equal to or greater than 50 megagrams per year (Mg/yr) NMOC as calculated according to Sec. 60.754(a) of the MSW landfills new source performance standards in 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan that applies to your landfill.

(b) You are subject to this subpart if you own or operate an MSW landfill that has accepted waste since November 8, 1987 or has additional capacity for waste deposition, that includes a bioreactor, as defined in Sec. 63.1990, and that meets any one of the criteria in paragraphs (b)(1) through (3) of this section:

(1) Your MSW landfill is a major source as defined in 40 CFR 63.2 of subpart A.

(2) Your MSW landfill is collocated with a major source as defined in 40 CFR 63.2 of subpart A.

(3) Your MSW landfill is an area source landfill that has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup> and that is not permanently closed as of January 16, 2003.

**Sec. 63.1940 What is the affected source of this subpart?**

(a) An affected source of this subpart is an MSW landfill, as defined in Sec. 63.1990, that meets the criteria in Sec. 63.1935(a) or (b). The affected source includes the entire disposal facility in a contiguous geographic space where household waste is placed in or on land, including any portion of the MSW landfill operated as a bioreactor.

(b) A new affected source of this subpart is an affected source that commenced construction or reconstruction after November 7, 2000. An affected source is reconstructed if it meets the definition of reconstruction in 40 CFR 63.2 of subpart A.

(c) An affected source of this subpart is existing if it is not new.

**Sec. 63.1945 When do I have to comply with this subpart?**

(a) If your landfill is a new affected source, you must comply with this subpart by January 16, 2003 or at the time you begin operating, whichever is last.

(b) If your landfill is an existing affected source, you must comply with this subpart by January 16, 2004.

(c) If your landfill is a new affected source and is a major source or is collocated with a major source, you must comply with the requirements in Sec. Sec. 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(d) If your landfill is an existing affected source and is a major source or is collocated with a major source, you must comply with the requirements in Sec. Sec. 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of

subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 13, 2004, whichever occurs later.

(e) If your landfill is a new affected source and is an area source meeting the criteria in Sec. 63.1935(a)(3), you must comply with the requirements of Sec. Sec. 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW.

(f) If your landfill is an existing affected source and is an area source meeting the criteria in Sec. 63.1935(a)(3), you must comply with the requirements in Sec. Sec. 63.1955(b) and 63.1960 through 63.1980 by the date your landfill is required to install a collection and control system by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or EPA approved and effective State or tribal plan that applies to your landfill or by January 16, 2004, whichever occurs later.

### **Sec. 63.1947 When do I have to comply with this subpart if I own or operate a bioreactor?**

You must comply with this subpart by the dates specified in Sec. 63.1945(a) or (b) of this subpart. If you own or operate a bioreactor located at a landfill that is not permanently closed as of January 16, 2003 and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup>, then you must install and operate a collection and control system that meets the criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan according to the schedule specified in paragraph (a), (b), or (c) of this section.

(a) If your bioreactor is at a new affected source, then you must meet the requirements in paragraphs (a)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in Sec. 63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

(b) If your bioreactor is at an existing affected source, then you must install and begin operating the gas collection and control system for the bioreactor by January 17, 2006 or by the date your bioreactor is required to install a gas collection and control system under 40 CFR part 60, subpart WWW, the Federal plan, or EPA approved and effective State plan or tribal plan that applies to your landfill, whichever is earlier.

(c) If your bioreactor is at an existing affected source and you do not initiate liquids addition to your bioreactor until later than January 17, 2006, then you must meet the requirements in paragraphs (c)(1) and (2) of this section:

(1) Install the gas collection and control system for the bioreactor before initiating liquids addition.

(2) Begin operating the gas collection and control system within 180 days after initiating liquids addition or within 180 days after achieving a moisture content of 40 percent by weight, whichever is later. If you choose to begin gas collection and control system operation 180 days after achieving a 40 percent moisture content instead of 180 days after liquids addition, use the procedures in Sec. 63.1980(g) and (h) to determine when the bioreactor moisture content reaches 40 percent.

### **Sec. 63.1950 When am I no longer required to comply with this subpart?**

You are no longer required to comply with the requirements of this subpart when you are no longer required to apply controls as specified in 40 CFR 60.752(b)(2)(v) of subpart WWW, or the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill.

**Sec. 63.1952 When am I no longer required to comply with the requirements of this subpart if I own or operate a bioreactor?**

If you own or operate a landfill that includes a bioreactor, you are no longer required to comply with the requirements of this subpart for the bioreactor provided you meet the conditions of either paragraphs (a) or (b).

(a) Your affected source meets the control system removal criteria in 40 CFR 60.752(b)(2)(v) of part 60, subpart WWW or the bioreactor meets the criteria for a nonproductive area of the landfill in 40 CFR 60.759(a)(3)(ii) of part 60, subpart WWW.

(b) The bioreactor portion of the landfill is a closed landfill as defined in 40 CFR 60.751, subpart WWW, you have permanently ceased adding liquids to the bioreactor, and you have not added liquids to the bioreactor for at least 1 year. A closure report for the bioreactor must be submitted to the Administrator as provided in 40 CFR 60.757(d) of subpart WWW.

(c) Compliance with the bioreactor control removal provisions in this section constitutes compliance with 40 CFR part 60, subpart WWW or the Federal plan, whichever applies to your bioreactor.

**Standards**

**Sec. 63.1955 What requirements must I meet?**

(a) You must fulfill one of the requirements in paragraph (a)(1) or (2) of this section, whichever is applicable:

(1) Comply with the requirements of 40 CFR part 60, subpart WWW.

(2) Comply with the requirements of the Federal plan or EPA approved and effective State plan or tribal plan that implements 40 CFR part 60, subpart Cc.

(b) If you are required by 40 CFR 60.752(b)(2) of subpart WWW, the Federal plan, or an EPA approved and effective State or tribal plan to install a collection and control system, you must comply with the requirements in Sec. Sec. 63.1960 through 63.1985 and with the general provisions of this part specified in table 1 of this subpart.

(c) For approval of collection and control systems that include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions, you must follow the procedures in 40 CFR 60.752(b)(2). If alternatives have already been approved under 40 CFR part 60 subpart WWW or the Federal plan, or EPA approved and effective State or tribal plan, these alternatives can be used to comply with this subpart, except that all affected sources must comply with the SSM requirements in Subpart A of this part as specified in Table 1 of this subpart and all affected sources must submit compliance reports every 6 months as specified in Sec. 63.1980(a) and (b), including information on all deviations that occurred during the 6-month reporting period. Deviations for continuous emission monitors or numerical continuous parameter monitors must be determined using a 3-hour monitoring block average.

(d) If you own or operate a bioreactor that is located at a MSW landfill that is not permanently closed and has a design capacity equal to or greater than 2.5 million Mg and 2.5 million m<sup>3</sup>, then you must meet the requirements of paragraph (a) and the additional requirements in paragraphs (d)(1) and (2) of this section.

(1) You must comply with the general provisions specified in Table 1 of this subpart and Sec. Sec. 63.1960 through 63.1985 starting on the date you are required to install the gas collection and control system.

(2) You must extend the collection and control system into each new cell or area of the bioreactor prior to initiating liquids addition in that area, instead of the schedule in 40 CFR 60.752(b)(2)(ii)(A)(2).

**General and Continuing Compliance Requirements**

**Sec. 63.1960 How is compliance determined?**

Compliance is determined in the same way it is determined for 40 CFR part 60, subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR

60.756(b)(1), (c)(1), and (d) of subpart WWW, are used to demonstrate compliance with the operating conditions for control systems. If a deviation occurs, you have failed to meet the control device operating conditions described in this subpart and have deviated from the requirements of this subpart. Finally, you must develop and implement a written SSM plan according to the provisions in 40 CFR 63.6(e)(3). A copy of the SSM plan must be maintained on site. Failure to write, implement, or maintain a copy of the SSM plan is a deviation from the requirements of this subpart.

### **Sec. 63.1965 What is a deviation?**

A deviation is defined in Sec. 63.1990. For the purposes of the landfill monitoring and SSM plan requirements, deviations include the items in paragraphs (a) through (c) of this section.

(a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 60.758(c)(1) of subpart WWW are exceeded.

(b) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour.

(c) A deviation occurs when a SSM plan is not developed, implemented, or maintained on site.

### **Sec. 63.1975 How do I calculate the 3-hour block average used to demonstrate compliance?**

Averages are calculated in the same way as they are calculated in 40 CFR part 60, subpart WWW, except that the data collected during the events listed in paragraphs (a), (b), (c), and (d) of this section are not to be included in any average computed under this subpart:

(a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments.

(b) Startups.

(c) Shutdowns.

(d) Malfunctions.

### **Notifications, Records, and Reports**

#### **Sec. 63.1980 What records and reports must I keep and submit?**

(a) Keep records and reports as specified in 40 CFR part 60, subpart WWW, or in the Federal plan, EPA approved State plan or tribal plan that implements 40 CFR part 60, subpart Cc, whichever applies to your landfill, with one exception: You must submit the annual report described in 40 CFR 60.757(f) every 6 months.

(b) You must also keep records and reports as specified in the general provisions of 40 CFR part 60 and this part as shown in Table 1 of this subpart. Applicable records in the general provisions include items such as SSM plans and the SSM plan reports.

(c) For bioreactors at new affected sources you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by Sec. 63.1947(a)(2) of this subpart.

(d) For bioreactors at existing affected sources, you must submit the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) within 180 days after the compliance date specified in Sec. 63.1947(b) of this subpart, unless you have previously submitted a compliance report for the bioreactor required by 40 CFR part 60, subpart WWW, the Federal plan, or an EPA approved and effective State plan or tribal plan.

(e) For bioreactors that are located at existing affected sources, but do not initiate liquids addition until later than the compliance date in Sec. 63.1947(b) of this subpart, you must submit the initial semiannual compliance report and performance tests results described in 40 CFR 60.757(f) within 180 days after the date you are required to begin operating the gas collection and control system by Sec. 63.1947(c) of this subpart.

(f) If you must submit a semiannual compliance report for a bioreactor as well as a semiannual compliance report for a conventional portion of the same landfill, you may delay submittal of a subsequent

semiannual compliance report for the bioreactor according to paragraphs (f)(1) through (3) of this section so that the reports may be submitted on the same schedule.

(1) After submittal of your initial semiannual compliance report and performance test results for the bioreactor, you may delay submittal of the subsequent semiannual compliance report for the bioreactor until the date the initial or subsequent semiannual compliance report is due for the conventional portion of your landfill.

(2) You may delay submittal of your subsequent semiannual compliance report by no more than 12 months after the due date for submitting the initial semiannual compliance report and performance test results described in 40 CFR 60.757(f) for the bioreactor. The report shall cover the time period since the previous semiannual report for the bioreactor, which would be a period of at least 6 months and no more than 12 months.

(3) After the delayed semiannual report, all subsequent semiannual reports for the bioreactor must be submitted every 6 months on the same date the semiannual report for the conventional portion of the landfill is due.

(g) If you add any liquids other than leachate in a controlled fashion to the waste mass and do not comply with the bioreactor requirements in Sec. 63.1947, 63.1955(c) and 63.1980(c) through (f) of this subpart, you must keep a record of calculations showing that the percent moisture by weight expected in the waste mass to which liquid is added is less than 40 percent. The calculation must consider the waste mass, moisture content of the incoming waste, mass of water added to the waste including leachate recirculation and other liquids addition and precipitation, and the mass of water removed through leachate or other water losses. Moisture level sampling or mass balances calculations can be used. You must document the calculations and the basis of any assumptions. Keep the record of the calculations until you cease liquids addition.

(h) If you calculate moisture content to establish the date your bioreactor is required to begin operating the collection and control system under Sec. 63.1947(a)(2) or (c)(2), keep a record of the calculations including the information specified in paragraph (g) of this section for 5 years. Within 90 days after the bioreactor achieves 40 percent moisture content, report the results of the calculation, the date the bioreactor achieved 40 percent moisture content by weight, and the date you plan to begin collection and control system operation.

## **Other Requirements and Information**

### **Sec. 63.1985 Who enforces this subpart?**

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency as well as the U.S. EPA has the authority to implement and enforce this subpart. Contact the applicable EPA Regional Office to find out if this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are as follows. Approval of alternatives to the standards in Sec. 63.1955. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

### **Sec. 63.1990 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act, 40 CFR part 60, subparts A, Cc, and WWW; 40 CFR part 62, subpart GGG, and subpart A of this part, and this section that follows:

Bioreactor means a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emissions limitation (including any operating limit) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation, (including any operating limit), or work practice standard in this subpart during SSM, regardless of whether or not such failure is permitted by this subpart. Emissions limitation means any emission limit, opacity limit, operating limit, or visible emissions limit.

EPA approved State plan means a State plan that EPA has approved based on the requirements in 40 CFR part 60, subpart B to implement and enforce 40 CFR part 60, subpart Cc. An approved State plan becomes effective on the date specified in the notice published in the Federal Register announcing EPA's approval.

Federal plan means the EPA plan to implement 40 CFR part 60, subpart Cc for existing MSW landfills located in States and Indian country where State plans or tribal plans are not currently in effect. On the effective date of an EPA approved State or tribal plan, the Federal plan no longer applies. The Federal plan is found at 40 CFR part 62, subpart GGG.

Municipal solid waste landfill or MSW landfill means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A municipal solid waste landfill may also receive other types of RCRA Subtitle D wastes (see Sec. 257.2 of this chapter) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a municipal solid waste landfill may be separated by access roads. A municipal solid waste landfill may be publicly or privately owned. A municipal solid waste landfill may be a new municipal solid waste landfill, an existing municipal solid waste landfill, or a lateral expansion.

Tribal plan means a plan submitted by a tribal authority pursuant to 40 CFR parts 9, 35, 49, 50, and 81 to implement and enforce 40 CFR part 60, subpart Cc.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

As stated in Sec. Sec. 63.1955 and 63.1980, you must meet each requirement in the following table that applies to you.

**Table 1 of Subpart AAAA of Part 63 Applicability of NESHAP General Provisions to Subpart AAAA**

Part 63 Citation	Description	Explanation
63.1(a)	Applicability: general applicability of NESHAP in this part.	Affected sources are already subject to the provisions of paragraphs (a)(10)- (12) through the same provisions under 40 CFR, Part 60 subpart A.
63.1(b)	Applicability determination for stationary sources	
63.1(e)	Title V permitting	
63.2	Definitions	
63.4	Prohibited activities and circumvention	Affected sources are already subject to the provisions of paragraph (b) through the same provisions under 40 CFR, part 60 subpart A.
63.5(b)	Requirements for existing, newly constructed, and reconstructed sources	
63.6(e)	Operation and maintenance requirements, startup, shutdown and malfunction plan provisions	
63.6(f)	Compliance with non-opacity emission standards	Affected sources are already subject to the provisions of paragraphs (f)(1) and (2)(i) through the same provisions under 40 CFR, part 60 subpart A.
63.10(b)(2)(i)-(b)(2)(v)	General recordkeeping requirements	
63.10(d)(5)	If actions taken during a startup, shutdown and malfunction plan are consistent with the procedures in the startup, shutdown and malfunction plan, this information shall be included in a semi-annual startup, shutdown and malfunction plan report. Any time an action taken during a startup, shutdown and malfunction plan is not consistent with the startup, shutdown and malfunction plan, the source shall report actions taken within 2 working days after commencing such actions, followed by a letter 7 days after the event.	
63.12(a)	These provisions do not preclude the State from adopting and enforcing any standard, limitation, etc., requiring permits, or requiring emissions reductions in excess of those specified.	
63.15	Availability of information and confidentiality.	

**APPENDIX B**

**SSM Plan Revision History**

This SSM Plan will be amended if equipment or processes are added that are not covered under the plan or will be revised within 45 days of non-conforming events if the procedures described herein do not adequately address any malfunction or start-up/shutdown events that occur at the facility. A copy of the original plan and all revisions/addendums will be kept on file at the facility for at least five (5) years.

<b>Date of Revision</b>	<b>Reason For Revision</b>
October 10, 2005	Addition of new combustion device – open flare, update phone numbers on contact list
June 4, 2020	Updates to contact information, removal of the enclosed flare, update to MDEQ/EGLE references

## **APPENDIX C**

### **General NESHAP Recordkeeping Requirements**

## **Recordkeeping Requirements of the Landfill NESHAP**

1. Keep current SSM plan on site
2. Keep previous versions of revised SSM plans for five years
3. Maintain records of the following for each SSM event:
  - a. Occurrence and duration of start-up, shutdown or malfunction of operation (i.e. process equipment)
  - b. Occurrence and duration of each malfunction of the required air pollution control and monitoring equipment
  - c. All required maintenance performed on the air pollution control and monitoring equipment
4. Actions taken during SSM events, when such actions are different from those specified in the SSM plan.
5. Demonstration of conformance of SSM events with site's SSM plan (information needed to demonstrate conformance with the SSM plan may take form of a checklist).
6. Each period during which a CMS is malfunctioning or inoperative.
7. All required measurements needed to demonstrate compliance with a relevant standard (i.e. temperature and flow measurements).
8. All results of performance tests, CMS performance evaluations, and opacity and visible emissions observations.
9. All CMS calibration checks
10. All adjustments and maintenance performed on CMS
11. Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

**APPENDIX D**

**General NESHAP Reporting Requirements**

## **Semi-annual SSM Plan Reports**

(Must be submitted within 30 days of the end of the calendar half - i.e. by July 30 and January 30)

1. Letter report containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy.
2. If actions taken during an SSM event are consistent with procedures specified in the SSM plan, the owner/operator shall state this in the report.
3. If actions taken during an SSM event are not consistent with procedures specified in the SSM plan, but source did not exceed any applicable emissions limitation in the relevant emissions standard, then the semiannual report must include the following:
  - a. Number of malfunctions
  - b. Duration of malfunctions
  - c. Description of malfunctions
4. If the SSM plan was revised during the reporting period, to reflect changes in equipment or procedures at the affected source, this must be reported in the semiannual report.

## **Immediate Notification Reports**

(Triggered if actions taken during an SSM event were not consistent with procedures specified in the SSM plan, AND the source exceeds the relevant emissions standard)

1. Record the actions taken for the event.
2. Report such actions to the Department within 2 working days after commencing actions inconsistent with the plan.
3. Follow up verbal report by a letter within 7 working days after the end of the event, in accordance with 40 CFR 63.10(d)(5).
4. Revise the SSM plan within 45 days of the non-conforming event.

**APPENDIX E**

**Sample NESHAP Report Letters and Notification Forms**



# Startup, Shutdown, and Malfunction Plan Deviation Report

Facility: \_\_\_\_\_ Date Form Completed: \_\_\_\_\_

Unit ID: \_\_\_\_\_

Event:  *appropriate box.*

Startup                       Shutdown                       Malfunction

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Duration: \_\_\_\_\_

Provide detailed explanation of the circumstance of the startup, shutdown, malfunction:

\_\_\_\_\_  
\_\_\_\_\_

Provide description of corrective action:

\_\_\_\_\_  
\_\_\_\_\_

Describe the reasons the Startup, Shutdown, Malfunction Plan was not adequate:

\_\_\_\_\_  
\_\_\_\_\_

Describe proposed revisions to the Startup, Shutdown, Malfunction Plan:

\_\_\_\_\_  
\_\_\_\_\_

Were any excess emissions and/ or parameter monitoring exceedances believed to have occurred during the event:

Yes                       No

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

**Sample Semi-annual Report Letter**  
**(All SSM Events in Compliance with the SSM Plan)**

Date

EGLE – Air Quality Division  
Kalamazoo District Office  
7953 Adobe Road  
Kalamazoo, MI 49009-5026

RE: **Semi-annual Startup, Shutdown, Malfunction (SSM) Plan Report**  
**Forest Lawn Landfill**  
**Renewable Operating Permit No. 199600275**  
**SRN 2407**  
Reporting Period: \_\_\_\_\_ to \_\_\_\_\_

Dear \_\_\_\_\_:

The Forest Lawn Landfill is subject to the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (Landfill NESHAP – 40 CFR 63 Subpart AAAA). The NESHAP requires that a report be submitted on a semiannual basis, a report be submitted to the Administrator discussing the facility’s compliance with the procedures in their SSM Plan, during SSM events (40 CFR 63.10(d)(5)).

The actions taken at the facility during all SSM events, for the reporting period listed above, were consistent with the procedures listed in the SSM Plan at the facility.

During the reporting period listed above, there (were/were not any) revisions made to the SSM Plan at the facility. (If changes were made, state why – revised to reflect new equipment, new contact numbers, etc.).

If you have any questions regarding this Semi-annual SSM Plan Report, please contact me at (List Phone Number).

Sincerely,

XXXXXXXXXXXXXXXXXX  
Forest Lawn Landfill.

**Sample Semi-annual Report Letter  
(One or more SSM Events NOT in Compliance with the SSM Plan)**

Date  
EGLE – Air Quality Division  
Kalamazoo District Office  
7953 Adobe Road  
Kalamazoo, MI 49009-5026

RE: **Semi-annual Startup, Shutdown, Malfunction (SSM) Plan Report**  
**Forest Lawn Landfill**  
**Renewable Operating Permit No. 199600275**  
**SRN 2407**  
Reporting Period: \_\_\_\_\_ to \_\_\_\_\_

Dear \_\_\_\_\_:

The Forest Lawn Landfill is subject to the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (Landfill NESHAP – 40 CFR 63 Subpart AAAA). The NESHAP requires that a report be submitted on a semi-annual basis, a report be submitted to the Administrator discussing the facility's compliance with the procedures in their SSM Plan, during SSM events (40 CFR 63.10(d)(5)).

The actions taken at the facility during one or more SSM events, for the reporting period listed above, were not consistent with the procedures listed in the SSM Plan at the facility. However, the source did not exceed any of the emissions limitations in the Landfill NESHAP during these events. The attached table lists the information that must be submitted in the Semi-annual SSM Plan Report in this instance.

During the reporting period listed above, there were \_\_\_\_ revisions made to the SSM Plan at the facility. (If changes were made, state why – revised to reflect new procedures to address non conforming event (mandatory), new equipment, new contact numbers, etc.).

If you have any questions regarding this Semi-annual SSM Plan Report, please contact met at (List Phone Number).

Sincerely,

XXXXXXXXXX

Forest Lawn Landfill

Att: Description of all Malfunction Events



**Sample Immediate Notification Letter  
(SSM Events NOT in Compliance with the SSM Plan, and Facility  
Experienced Excess Emissions)**

Date

EGLE – Air Quality Division  
Kalamazoo District Office  
7953 Adobe Road  
Kalamazoo, MI 49009-5026

RE: **Forest Lawn Landfill**  
**Renewable Operating Permit No. 199600275**  
**SRN 2407**  
40 CFR 63 Subpart AAAA – Landfill NESHAP  
Immediate Notification Report: Non-conforming SSM Event

Dear \_\_\_\_\_:

The Forest Lawn Landfill is subject to the National Emissions Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills (Landfill NESHAP – 40 CFR 63 Subpart AAAA). 40 CFR 63.10(d)(5) of the NESHAP requires that if actions taken at the facility during a startup, shutdown or malfunction (SSM) event are not consistent with the facility's SSM Plan, and the event results in excess emissions, the Agency must be notified verbally within 2 working days after the actions are taken. A letter must be written within 7 days of the event.

Please consider this letter as the required written report for the SSM event that occurred at the facility on (list date). As required by the NESHAP, a verbal notification was made to (give name of agency, person talked to) on (list date).

In accordance with the NESHAP, the following information is required in the letter report for this event:

***Record the actions taken for the event:***

Describe what occurred, what was done, and how it differed from the SSM plan actions.

***Describe excess emissions:***

Discuss the type of emission, and where it came from

**Revise the SSM plan within 45 days of the non-conforming event:**

Give a date by which the SSM plan will be revised.

If you have any questions regarding this Immediate Notification Report, please contact met at (List Phone Number).

Sincerely,

XXXXXXXXXX

Forest Lawn Landfill

**Michigan Department of Environment, Great Lakes and Energy – Air  
Quality Division  
Responsible Official Certification Form EQP 5736**



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION

**RENEWABLE OPERATING PERMIT  
REPORT CERTIFICATION**

*Authorized by 1994 P.A. 451, as amended. Failure to provide this information may result in civil and/or criminal penalties.*

Reports submitted pursuant to R 336.1213 (Rule 213), subrules (3)(c) and/or (4)(c), of Michigan's Renewable Operating Permit (ROP) program must be certified by a responsible official. Additional information regarding the reports and documentation listed below must be kept on file for at least 5 years, as specified in Rule 213(3)(b)(ii), and be made available to the Department of Environment, Great Lakes, and Energy, Air Quality Division upon request.

Source Name \_\_\_\_\_ County \_\_\_\_\_

Source Address \_\_\_\_\_ City \_\_\_\_\_

AQD Source ID (SRN) \_\_\_\_\_ ROP No. \_\_\_\_\_ ROP Section No. \_\_\_\_\_

Please check the appropriate box(es):

**Annual Compliance Certification (Pursuant to Rule 213(4)(c))**

Reporting period (provide inclusive dates): From \_\_\_\_\_ To \_\_\_\_\_

1. During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the ROP.

2. During the entire reporting period this source was in compliance with all terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference, **EXCEPT** for the deviations identified on the enclosed deviation report(s). The method used to determine compliance for each term and condition is the method specified in the ROP, unless otherwise indicated and described on the enclosed deviation report(s).

**Semi-Annual (or More Frequent) Report Certification (Pursuant to Rule 213(3)(c))**

Reporting period (provide inclusive dates): From \_\_\_\_\_ To \_\_\_\_\_

1. During the entire reporting period, **ALL** monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred.

2. During the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred, **EXCEPT** for the deviations identified on the enclosed deviation report(s).

**Other Report Certification**

Reporting period (provide inclusive dates): From \_\_\_\_\_ To \_\_\_\_\_

Additional monitoring reports or other applicable documents required by the ROP are attached as described:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete

\_\_\_\_\_  
Name of Responsible Official (print or type) Title Phone Number

\_\_\_\_\_  
Signature of Responsible Official Date