MUNICIPAL SOLID WASTE LANDFILL
GAS COLLECTION AND CONTROL SYSTEM (GCCS)

STARTUP, SHUTDOWN, AND MALFUNCTION PLAN

SOUTHEAST COUNTY LANDFILL
Hillsborough County, Florida

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GAS COLLECTION AND CONTROL SYSTEM (GCCS)

STARTUP, SHUTDOWN, AND MALFUNCTION (SSM) PLAN

SOUTHEAST COUNTY LANDFILL
Hillsborough County, Florida

This Startup, Shutdown, and Malfunction (SSM) Plan was prepared by SCS Engineers in order to comply with the requirements of 40 CFR 63.6(e)(3), as this facility is subject to *40 CFR Part 63, Subpart AAAA, the National Emission Standard for Hazardous Air Pollutants (NESHAPs) for Municipal Solid Waste (MSW)Landfills.* The SSM Plan contains all of the required elements set forth within *40 CFR 63.6(e).*

This SSM Plan will be revised if the procedures described herein do not adequately address any malfunction or startup/shutdown events that occur at the facility. A copy of the original plan and all revisions/addenda will be kept on file at the facility for at least five (5) years. The Site/Facility Manager is responsible for assuring that the most recent copy of this SSM Plan is made available to all personnel involved with the landfill gas (LFG) collection and control system (GCCS) at Southeast County Landfill as well as to appropriate regulatory agency personnel for inspection.

Name of Plan Preparer: Daniel R. Cooper, P.E. 1/19/2010
Name Date

Approved:
Plant Manager: Larry Ruiz, P.E. 1/19/2010
Name Date

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REFERENCES

Hillsborough County Southeast County Landfill Mechanical Catalogues
Hillsborough County Southeast County Landfill Title V Operation Permit No. 0570854-006-AV
Hillsborough County Southeast County Landfill Solid Waste Permit O&M Plan

1 Revision History

Add the effective date of the most-recent revision to the list below. Do not overwrite or delete any dates. This is intended to be a complete record of all revisions made to this plan, and assists in making certain that all plan versions are retained for at least five (5) years as required by §63.6(e)(3)(v). Please note that this SSM Plan supersedes any previous version that may have been prepared.

Date of Initial Issuance
January 18, 2010
Revision Dates

2 INTRODUCTION

2.1 Purpose and Scope

The municipal solid waste (MSW) landfill owner or operator of an affected source must develop and implement a written Startup, Shutdown, and Malfunction (SSM) Plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; a program of corrective action for malfunctioning processes; and air pollution control and monitoring equipment used to comply with the relevant standard. The purpose of the SSM Plan is to:

- Ensure that, at all times, the MSW landfill owner or operator operates and maintains the affected source, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards;
- Ensure that MSW landfill owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and
- Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

A glossary of terms used throughout or applicable to this SSM Plan is included in Appendix D.

2.2 Description of SSM Plan

This SSM Plan has been divided into three major sections comprising the major elements related to startup, shutdown, and/or malfunction of a landfill gas (LFG) collection and control system (GCCS) at a MSW landfill. Malfunction events are distinct events when the GCCS is not operating in accordance with NSPS requirements and which result, or have the potential to result, in an exceedance of one or more emission limitations or operational standards under the NSPS. Startup and shutdown events are generally planned events associated with system repair, maintenance, testing, and upgrade, and may or may not be related to or occur in association with a malfunction of the GCCS.

2.3 Site Background

The Southeast Central Landfill is an existing affected source under the Maximum Achievable Control Technology (MACT) rule for MSW landfills, which previously began operating its GCCS on an “exempt” Title V Air Permit basis. New construction commenced on March 11, 2009 and began operating its GCCS on December 16, 2009. As such, this SSM Plan is required

to be implemented for the Southeast County Landfill by January 19, 2009 for compliance with NSPS MACT regulations. This SSM Plan meets or exceeds this requirement

2.4 Management Approval

In accordance with the requirements of 40 CFR 63.6(e)(3)(i), this SSM Plan does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard. The management of the Southeast County Landfill fully understands and acknowledges the SSM Plan requirements of the MACT rule. This SSM Plan has been developed to specifically address these requirements as summarized above.

2.5 Revisions

This SSM Plan will be revised if the procedures described herein do not adequately address any malfunction or startup/shutdown events that occur at the facility. A copy of the original plan and all revisions/addenda will be kept on file at the facility for at least five (5) years. The County is responsible for assuring that the most recent copy of this SSM Plan is made available to all personnel involved with the GCCS at the site as well as to appropriate regulatory agency personnel for inspection.

The table at the front of this document shall be completed upon any future revisions in order to document the most recent version of the Plan.

2.6 Recordkeeping and Reporting

The SSM Plan is included as part of the facility's Part 70 Title V operating permit. However, any revisions made to the SSM Plan do not constitute Title V permit revisions. If the SSM Plan is revised, previous versions must be available at the site for inspection or copying by the Florida Department of Environmental Protection (FDEP) for five years after the revisions are made.

In addition, Hillsborough County is required to submit semiannual SSM Plan reports detailing actions taken during startups, shutdowns, and malfunctions of the affected source that are consistent with the site's SSM Plan. Also, immediate SSM Plan reports are required any time an action is taken during a startup, shutdown, or malfunction that is not consistent with the site's SSM Plan on file. Later sections of this Plan provide further information on startup, shutdown, and malfunction reporting.

2.7 Site Equipment Subject To This SSM Plan

The following components of the GCCS are subject to this SSM Plan:

Table 2-1. GCCS Components Subject to SSM Plan

Collection wells and other collectors
Lateral and header extraction piping
LFG mover equipment
Flame monitoring and recording equipment
Flow monitoring and recording equipment
Flare automated controls
Flare

3 STARTUP PLAN

This section details procedures for the startup of the GCCS to ensure that, at all times, good safety and air pollution control practices are used for minimizing emissions to the levels required by the relevant standards.

Pursuant to the requirements of the NSPS for MSW landfills, a GCCS must be installed and operated when the landfill exceeds a threshold of 50 Mg/year NMOC and meets all the applicable criteria for a controlled landfill.

3.1 How to Identify a GCCS Startup Event

The regulatory definition of "startup" reads as follows:

> **"Startup** means the setting in operation of an affected source or portion of an affected source for any purpose." (§63.2)

GCCS startup operations generally include startup of gas mover equipment, LFG control devices, and any ancillary equipment that could affect the operation of the GCCS (e.g., power supply, air compressors, etc.). In accordance with the requirements of 40 CFR 63.6(e)(3)(i), this SSM Plan does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard.

3.2 What to do When the GCCS is Started-Up

The following provides a summary of typical response actions for startup of the GCCS.

3.2.1 Gas Mover and Collection System

The following activities may have the potential to emit regulated air pollutants to the atmosphere during startup of the collection system portion of GCCS: (1) startup of gas mover equipment; (2) purging of gases trapped within piping system prior to normal operation; (3) repair of system leaks discovered during startup, (4) connection of the leachate collection risers (LCRS) to the GCCS; and (5) all other activities after construction of the system but prior to fulltime operation, which could release HAPs from the collection system. These activities would be subject to the SSM Plan portion of the SSM Plan.

During such activities, work shall progress such that air emissions are minimized to the greatest extent possible by:

- Temporarily capping pipes venting gas if such capping does not impact safety or the effective construction of the system.
- Minimizing surface area allowing gas to emit to the atmosphere to the extent that it does not impact safety or the effective construction of the system.
- Ensuring that other parts of the system, not impacted by the activity, are operating in accordance with the applicable requirements of NSPS.
- Limiting the purging of piping to as short duration as possible to ensure safe combustion of the gas in the control device.

GCCSs, once installed, are "closed" systems designed to prevent the uncontrolled release of LFG to the atmosphere. The network of piping installed at the site connects each extraction point with the control device(s) with no open vents located anywhere in the collection system.

Portions of active collection systems or individual extraction points may be isolated by valves installed in the system from time to time and subsequently opened. Opening these valves shall not be considered a startup of the active collection system, unless such an activity causes the venting of gas to the atmosphere. If the activity results in emissions to the atmosphere, the actions listed above shall be followed.

The operation of the collection system, once installed, shall be consistent with the provisions of the NSPS as well as the GCCS Design Plan, which has been developed and approved for the facility.

3.2.2 Gas Control System

Personnel shall follow the procedures as identified below when starting the respective control systems. Gas control systems operating at MSW landfills normally undergo planned startups. However, flare systems are designed for unattended automatic operation.

A startup checklist for manual and automatic startups is provided on the Startup Report Form included in Appendix B. However, it is recommended that startups be conducted in the automatic mode. System should not be left unattended in Manual mode since safety shutdowns are bypassed.

Additional startup information is included by reference in Appendix C-1 for LFG Specialties Utility Flare System Unit 2162.

3.3 What to Record for All Startup Events

In the event the control device does not restart automatically, the operator shall record the following information on the attached **Startup Report Form** (Appendix B):

- The date and time the startup occurred.
- The duration of the startup.
- The actions taken to affect the startup.
- Whether procedures in this SSM Plan were followed. If the procedures in the SSM Plan were not followed, a **SSM Plan Departure Report Form** (Appendix B) must also be completed.
- If an applicable emission limitation was exceeded, a description of the emission standard that was exceeded or had the potential to be exceeded.

3.4 Whom to Notify at the Facility in Case of a Startup Event

For all startup events the following persons must be notified:

- The Site/Facility Manager, Engineer, or other appropriate Facility Personnel should be notified immediately of the startup.
- The Site/Facility Manager, Engineer, or other appropriate Facility Personnel should be notified within a reasonable timeframe of progress of the diagnosis and resolution of the startup.
- The Site/Facility Manager or Engineer for the site should be notified when the alternative timeframe for startup has been established if it is outside of the timeframes currently allowed by the NSPS for particular compliance elements.
- The **Startup Report Form** must be initially prepared upon startup, or discovery of an automatic startup, and implementation of the SSM Plan. The form must be finalized by the appropriate Facility Personnel on duty upon successful implementation of the SSM Plan and submitted to the Site/Facility Manager or Engineer. The original form should be retained in the Operation files for five (5) years.

3.5 What to Report for a Startup Event

- If the actions taken during the startup **<u>were consistent</u>** with this SSM Plan, file the necessary information in your semi-annual SSM report (*within 30 days following the end of each 6-month period*) with the following information included:

  1. Name and title of Site/Facility Manager or other appropriate Facility Personnel;

2. Certifying signature of the owner/operator or other responsible official (Note that "responsible official" has the same meaning as under the Title V permitting program);
3. Statement that the actions taken during the startup or shutdown were consistent with the SSM Plan; and
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.

- If the actions taken during the startup **were not consistent** with this SSM Plan, but the startup did not result in an exceedance of an applicable emission, the responsible official shall state this in the semi-annual SSM report (*within 30 days following the end of each 6-month period*) with the following information included:

1. Name and title of Site/Facility Manager;
2. Certifying signature of the owner/operator or other responsible official;
3. Statement that the actions taken during the startup were not consistent with the SSM Plan, but the source did not exceed any applicable emissions limit standards;
4. Number, duration, and description of startup events; and
5. 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.

- If the actions taken during a startup **were not consistent** with this SSM Plan, and the startup resulted in an exceedance of an applicable emission standard, the Site/Facility Manager or Other appropriate Facility Personnel must report the actions taken to the enforcing authority (FDEP Southwest District) by telephone or facsimile transmission within two (2) working days after the startup. A letter must then be sent to the enforcing authority within seven (7) working days after the startup. The letter should be sent by certified or registered mail or overnight delivery service, and must include the following information:

1. Name and title of Site/Facility or Other appropriate Facility Personnel;
2. Certifying signature of the owner/operator or other responsible official (Note that "responsible official" has the same meaning as under the Title V permitting program);
3. A copy of the **Startup Report Form**;
4. Detailed explanation of the circumstances of the startup;
5. The reasons the SSM Plan was not adequate; and whether any excess emissions and/or parameter monitoring exceedances is believed to have occurred during the event.
6. A copy of the **SSM Plan Departure Report Form.**
7. Revise the SSM plan within 45 days of the non-conforming event.

Hillsborough County must retain documentation of the conversation with FDEP or fax regarding the 2-day notification, the 7-day letter, and proof of receipt by FDEP of the 7-day letter in the site's files for a minimum of five years. If the actions taken during startup were not consistent with this SSM Plan, the SSM Plan must be revised. The revised SSM Plan shall include the new actions to be taken for startup of the GCCS during similar startup events. If the revisions to the SSM Plan alter the scope of the process activities at Hillsborough County Solid Waste Management Facility or otherwise modify the applicability of any emission limit, work practice requirement, or other requirement in the MACT rule and/or the NSPS, the revised SSM Plan is not effective until written notice has been provided to the permitting authority describing the SSM Plan revision(s). The revised SSM Plan shall be included in the next semiannual SSM Plan Report.

4 Shutdown Plan

This section details procedures for the shutdown of the GCCS to ensure that, at all times, good engineering, safety and air pollution control practices are used for minimizing emissions to the levels required by the relevant standards.

Pursuant to the requirements of the NSPS for MSW landfills, a GCCS cannot be removed unless the landfill meets all the applicable criteria for removal of collection and control system in *40 CFR 60, Subpart WWW.*

4.1 How to Identify a GCCS Shutdown Event

The regulatory definition of "shutdown" reads as follows:

> **"Shutdown** means the cessation of an affected source or portion of an affected source for any purpose." (§63.2)

GCCS shutdown events generally include shutdown of the gas collection system, the gas control system, and any ancillary equipment that could affect the operations or monitoring of the GCCS. There are two general types of shutdown events, those that are initiated manually by an operator (e.g. for purposes of system maintenance) and those that are initiated automatically by the control system in response to certain monitored conditions. Each of these types of shutdown events is discussed below. In accordance with the requirements of 40 CFR 63.6(e)(3)(i), this SSM Plan does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard. Operational exceptions are identified in the Title V permit modification and GCCS Design Plan.

Table 4-1. Potential Events Necessitating Shutdown of the GCCS

Control Device Maintenance, Repair, or Cleaning
Addition of New GCCS Components
Extraction Well Raising
Movement of LFG Piping to Accommodate New Components or Filling Operations
Source Testing
Gas Mover Equipment Maintenance, Repair, or Cleaning
Gas Processing Treatment System Equipment Maintenance, Repair, or Cleaning
Ancillary Equipment (e.g., compressors, etc.) Maintenance, Repair, or Cleaning
New Equipment Testing and Debugging
Shutdown and Subsequent Startup to Address Malfunctions or Other Occurrences
Planned Electrical Outages

Table 4-1. (continued)

Power generation equipment maintenance, repair, and cleaning
Other Site-Specific Shutdown Events

4.1.1 Manual Shutdowns

Table 4-1 includes events that may necessitate a shutdown of the GCCS at a MSW Landfill. This list should not be considered exhaustive. In the event a manual shutdown is required, the procedures specified in Section 4.2 for manual shutdowns should be followed and documented.

4.1.2 Automatic Shutdowns

The GCCS may automatically shutdown one or more of its components in response to monitored conditions that fall outside of set-point ranges. In these instances, the shutdown is completely automatic, and there are no shutdown steps that need to be taken by facility personnel. Personnel will need to evaluate the cause of the shutdown and initiate corrective action as needed with a goal of restarting the system in a safe and timely manner.

Some events that may cause the GCCS to shutdown automatically are listed in Table 4-2 below. This list should not be considered exhaustive.

Table 4-2. Potential Causes of Automatic Shutdowns of the GCCS

Loss of gas flow to the flare
High inlet gas temperature
Flame sensor detects loss of flame
Elevated flame arrestor temperature
High liquid level in knockout pot
Loss of power from the grid
Treatment system component shutdowns
Power generation equipment shutdowns

4.2 Actions to Take When The GCCS Is Shutdown

4.2.1 Collection System

GCCSs, once installed, are “closed” systems designed to prevent the uncontrolled release of LFG to the atmosphere. The network of piping installed at the site connects each extraction point with the control device(s) with no open vents located anywhere in the collection system.

Portions of active collection systems or individual extraction points may be isolated by valves installed in the system from time to time. Periodic or occasional closing of individual valves on

the active collection system for valid operational reasons shall not be considered a shutdown of the overall GCCS for purposes of this Plan.

4.2.1.1 Gas Control System – Automatic Shutdown

Automatic shutdowns of the flare system (including the blower and other related equipment) do not involve any operator interaction. Therefore, there is no procedure to be followed for an automatic shutdown, and no need to document whether established procedures were or were not followed. A shutdown report shall be generated for each automatic shutdown. These reports should indicate that the event that occurred was an automatic shutdown. No procedures checklist need be completed.

4.2.1.2 Gas Control System – Manual Shutdown

Personnel shall follow the procedures identified in this section when shutting down the respective control devices. Control devices operating at MSW landfills normally undergo planned shutdown for the various events listed above.

Control device shutdown procedures for Manual Shutdown are located Appendix C-2 and included on the **Shutdown Report Form**, (Appendix B).

4.3 What To Record For All Shutdown Events

The operator should record the following information on the attached **Shutdown Report Form (Appendix B):**

- The date and time the shutdown occurred
- The duration of the shutdown
- The actions taken to effect the shutdown
- Whether procedures in this SSM Plan were followed. If the procedures in the plan were not followed, a **SSM Plan Departure Report Form** must also be completed
- If an applicable emission limitation was exceeded, a description of the emission standard that was exceeded or had the potential to be exceeded

4.4 Whom to Notify at the Facility in Case of a Shutdown Event

- The Site/Facility Manager, Engineer, or other designated personnel should be notified immediately of the shutdown.

- The Site/Facility Manager, Engineer, or other designated personnel should be notified within a reasonable timeframe of progress of the diagnosis and resolution of the shutdown.

- The Site/Facility Manager, Engineer, or other appropriate personnel should be notified when the alternative timeframe for shutdown has been established if it is outside of the timeframes currently allowed by the NSPS for particular compliance elements.

- The **Shutdown Report Form** should be initially prepared upon shutdown, or discovery of an automatic shutdown, and implementation of the SSM Plan. The form should be finalized by the operator on duty upon successful implementation of the SSM Plan and submitted to the Site/Facility Manager or other appropriate Personnel. The original form should be retained in the landfill files for five (5) years.

4.5 What to Report for a Shutdown Event

- If the actions taken during the shutdown **were consistent** with this SSM Plan, file the necessary information in your semi-annual SSM report (*within 30 days following the end of each 6-month period*) with the following information included:

  1. Name and title of Site/Facility Manager.
  2. Certifying signature of the owner/operator or other responsible official (Note that "responsible official" has the same meaning as under the Title V permitting program.
  3. Statement that the actions taken during the shutdown were consistent with the SSM Plan; and
  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.

- If the actions taken during the shutdown **were not consistent** with this SSM Plan, but the shutdown did not result in an exceedance of an applicable emission, the responsible official shall state this in the semi-annual SSM report (*within 30 days following the end of each 6-month period*) with the following information included:

  1. Name and title of Site/Facility Manager;
  2. Certifying signature of the owner/operator or other responsible official;
  3. Statement that the actions taken during the shutdown were not consistent with the SSM Plan, but the source did not exceed any applicable emissions limit standards;
  4. Number, duration, and description of shutdown events; and
  5. 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.

- If the actions taken during a startup **were not consistent** with this SSM Plan, and the shutdown resulted in an exceedance of an applicable emission standard, the

Site/Facility Manager or Other appropriate Hillsborough County Facility Personnel must report the actions taken to the enforcing authority by telephone or facsimile transmission within two (2) working days after commencing the actions that were inconsistent with the plan. A letter must then be sent to the enforcing authority within seven (7) working days after the startup or shutdown. The letter should be sent by certified or registered mail or overnight delivery service, and must include the following information:

1. Name and title of Site/Facility Manager;
2. Certifying signature of the owner/operator or other responsible official (Note that "responsible official" has the same meaning as under the Title V permitting program. See previous corporate guidance on this topic.);
3. A copy of the **Shutdown Report Form**;
4. Detailed explanation of the circumstances of the shutdown;
5. The reasons the SSM Plan was not adequate; and whether any excess emissions and/or parameter monitoring exceedances is believed to have occurred during the event.
6. A copy of the **SSM Plan Departure Report Form.**
7. Revise the SSM plan within 45 days of the non-conforming event.

Hillsborough County must retain documentation of the conversation with FDEP or fax regarding the 2-day notification, the 7-day letter, and proof of receipt by FDEP of the 7-day letter in the site's files for a minimum of five years. If the actions taken during startup were not consistent with this SSM Plan, the SSM Plan must be revised. The revised SSM Plan shall include the new actions to be taken during similar GCCS shutdown events in the future. If the revisions to the SSM Plan alter the scope of the process activities at Hillsborough County Solid Waste Management Facility or otherwise modify the applicability of any emission limit, work practice requirement, or other requirement in the MACT rule and/or the NSPS, the revised SSM Plan is not effective until written notice has been provided to the permitting authority describing the SSM Plan revision(s). The revised SSM Plan shall be included in the next semiannual SSM Plan Report.

5 Malfunction Plan

5.1 How to Identify a GCCS Malfunction

The regulatory definition of "malfunction" reads as follows:

> **"Malfunction** means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions." (§63.2, revised 5/30/03)

The following list includes events that may constitute a malfunction of the GCCS at Southeast County Landfill. The cause of these events should be investigated immediately in order to determine the best course of action to correct the malfunction. Each of these malfunctions could have multiple causes that need to be evaluated and possibly considered. It is the intent of this SSM Plan to include all possible causes for the specific malfunction events. Common malfunction events for LFG collection and control systems are listed in Table 5-1.

Table 5-1. Potential Malfunction Events

Possible Malfunction	Potential Resulting Emission Limitation Exceedance [citation]
Gas Mover/Power Generation Equipment Malfunction with resulting loss of LFG flow	GCCS downtime of greater than 5 days [60.755(e)]
Loss of Electrical Power	GCCS downtime of greater than 5 days [60.755(e)]
Loss of Flame at the Flare	Control device downtime of greater than 1 hour with free venting of LFG [60.755(e)]
Malfunction of Flow Measuring/Recording Device	Failure to record flow [60.756(c)(2)(i)]
Collection Well and Pipe Failures	Failure to route collected gases to the control device. [60.753(e)]
Condensate Pump Failure (resulting in gas collection line blockage)	Failure to route collected gases to the control device. [60.753(e)]

Table 5-1. (continued)

Possible Malfunction	Potential Resulting Emission Limitation Exceedance [citation]
Loss of flame-sensing instrument at flare tip.	Failure to monitor presence of pilot light or flare flame [60.756(c)(1)]
Failure of flare continuous-flame-presence recorder	Failure to continuously record the presence of a flame or pilot light [60.758(c)(4)]
Loss of air compressor	GCCS downtime of greater than 5 days [60.755(e)]
Loss of electricity	Multiple, including possibly:
	• Failure to record flow [60.756(c)(2)(i)]
	• Failure to route collected gases to the control device. [60.753(e)]
	• Failure to continuously record the presence of a flame or pilot light [60.758(c)(4)]

If the occurrence does not result in an exceedance of an applicable emission limitation contained in the NSPS or MACT rules, **it is <u>not</u> required to be corrected in accordance with this SSM Plan**, although use of the plan may still be advisable.

Malfunctions should be considered actionable under this SSM Plan whether they are discovered by the MSW landfill owner or operator during normal operations or by a regulatory agency during compliance inspections.

The operator should follow all the corrective action, notification, record keeping, and reporting procedures described herein in case of malfunction of the GCCS. The various malfunction reference sections of this SSM Plan are provided in Table 5-2 below:

Table 5-2. Malfunction Procedure Reference

Possible Malfunction	Section
Loss of LFG Flow/Gas Mover Malfunction	5.3
Loss of Electrical Power	5.4
Low Temperature Conditions at Control Device	5.5
Loss of Flame at the Control Device	5.6
Malfunction of Flow Monitoring/Recording Device	5.7
Malfunction of Flame Monitoring/Recording Device	5.8
Collection Well and Pipe Failures	5.9
Possible Malfunction	**Section**
Other Control Device Malfunctions	5.10

5.2 Actions To Take When The GCCS Malfunctions - All Malfunctions

- Determine whether the malfunction has caused an exceedance, or has the potential to cause an exceedance, of any applicable emission limitation contained in the NSPS/EG or MACT.

- Identify whether the malfunction is causing or has caused excess emissions to the atmosphere. If excess emissions are occurring, take necessary steps to reduce emissions to the maximum extent possible using good air pollution control practices and safety procedures.

- Contact the Site/Facility Manager for the site immediately and proceed with the malfunction diagnosis and correction procedures described in Appendix A ("Common Causes and Response Actions for GCCS Malfunctions") for each specific malfunction.

- Site-specific malfunction and/or troubleshooting procedures are contained in the documents or appendices referenced below. Personnel shall follow these procedures when addressing a malfunction of a collection system or control device.

- If the procedures in this SSM Plan do not address or adequately address the malfunction that has occurred, the operator should attempt to correct the malfunction with the best resources available. The Site/Facility Manager and Hillsborough County Landfill Operations Personnel should be notified of this situation immediately. Complete a **SSM Plan Departure Report Form** (Appendix B) as discussed in Section 5.14. The SSM Plan must be updated to better address this type of malfunction.

- Notify the Site/Facility Manager of the progress of the diagnosis and correction procedures and status of the malfunction as soon as practicable.

- **If the GCCS malfunction cannot be corrected within the time frame specified in the NSPS/EG, notify the Site/Facility Manager for the site and proceed to shutdown the control device and/or the process(es) venting to the flare control device, if this has not already occurred automatically**.

- If the GCCS malfunction cannot be corrected within the time frame allowed by the NSPS/EG rule for each specific malfunction, define the appropriate alternative timeframe for corrective action that is reasonable for the type of repair or maintenance that is required to correct the malfunction.

- If the GCCS malfunction cannot be corrected within alternative timeframe for corrective action specified above, notify the Site/Facility Manager for the site and conduct the appropriate record keeping and reporting required for deviations of the MACT rule and Title V permit.

- Once the malfunction is corrected, notify the Site/Facility Manager for the site as soon as the system is operational.

- Complete the **Malfunction Report Form** (Appendix B) after the malfunction diagnosis and correction procedures are completed.

- If the procedures in this SSM Plan do not address or adequately address the malfunction that has occurred, the operator should note the circumstances and the actual steps taken to correct the malfunction in the **Malfunction Report Form** (Appendix B). This SSM Plan will need to be revised based on this information, as described in Section 5.13 below.

- Follow procedures in Sections 5.13 through 5.15, as appropriate, to adequately document, notify, and report the malfunction and corrective action.

5.3 Loss of LFG Flow/Gas Mover Malfunction

- Follow the procedures in Section 5.2, above.

- Check to see if the control device has shutdown. If control device has shutdown, make sure that gas mover equipment has shutdown to prevent free venting of LFG. Attempt to restart control device to determine if system will remain operational.

- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.

- If the malfunction cannot be corrected within 5 days, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting if the malfunction cannot be corrected within the established timeframe.

5.4 Loss of Electrical Power

- Follow the procedures in Section 5.2, above.

- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in **Appendix A**.

- If the malfunction cannot be corrected within the time frame allowed by the NSPS/EG rule, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting if malfunction cannot be corrected within the established timeframe.

5.5 Low Temperature Conditions at the Control Device

- Follow the procedures in Section 5.2, above.

- Check to see if the control device has shutdown. If control device has shutdown, make sure that gas mover equipment has shutdown to prevent free venting of LFG. Attempt to restart control device to determine if system will remain operational.

- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.

- If the malfunction causes the GCCS to go off-line and cannot be corrected within the time frame allowed by the NSPS/EG rule, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting if the malfunction cannot be corrected within the established timeframe.

5.6 Loss of Flame at the Control Device

- Follow the procedures in Section 5.2, above.

- Check to see if the control device has shutdown. If control device has shutdown, make sure that gas mover equipment has shutdown to prevent free venting of LFG. Attempt to restart control device to determine if system will remain operational.

- If system will not restart, follow also the procedures in Section 5.3.

- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.

- If the malfunction cannot be corrected within the time frame allowed by the NSPS/EG rule, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting.

5.7 Malfunctions of Flow Monitoring/Recording Device

- Follow the procedures in Section 5.2, above.
- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.
- If the malfunction cannot be corrected in the time frame allowed by the NSPS/EG rule, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting.

5.8 Malfunctions of Flame Monitoring/Recording Device

- Follow the procedures in Section 5.2, above.
- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.
- If the malfunction cannot be corrected within 15 minutes, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting.

5.9 Collection Well and Pipe Failures

- Follow the procedures in Section 5.2, above.
- Follow also the procedures in Section 5.3, above.
- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.
- If the malfunction causes the entire GCCS to go off-line and cannot be corrected within 5 days, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting.

5.10 Other Control Device Malfunctions

- Follow the procedures in Section 5.2, above.

- Check to see if the control device has shutdown. If control device has shutdown, make sure that gas mover equipment has shutdown to prevent free venting of LFG. Attempt to restart control device to determine if system will remain operational.

- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.

- If the malfunction causes the entire GCCS to go off-line and cannot be corrected within 5 days, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting.

5.11 Malfunctions of Field Monitoring Equipment

- Follow the procedures in Section 5.2, above.

- Verify that malfunction of monitoring equipment will cause a deviation of the NSPS/EG requirements for wellhead and/or surface emissions monitoring.

- Conduct diagnostic procedures to identify the cause of the malfunction.

- Repair the device or obtain replacement device to complete the monitoring as required by the NSPS/EG.

- Conduct proper calibration procures before use of the device for NSPS/EG compliance monitoring.

- If the malfunction cannot be corrected so that the monitoring equipment can be used for the purposes required by the NSPS/EG rule, follow the procedures under Section 5.2 above to establish an appropriate alternative timeframe for corrective action and complete necessary record keeping and reporting.

5.12 Malfunction of the Automatic Spark Igniter System Size

- Follow the procedures in Section 5.2, above.

- Check to see if the sparking mechanism has shutdown, perform diagnostics and shut the valve if necessary to prevent free venting of LFG. Attempt to restart control device to determine if system will remain operational.

- Conduct diagnostic procedures to identify the cause of the malfunction. Potential causes and response actions for this type of malfunction are listed in Appendix A.

5.13 What to Record for a Malfunction

The operator must record the following information on the attached **Malfunction Report Form**:

- The date and time the malfunction occurred.
- The duration of the malfunction.
- A description of the affected equipment.
- The cause or reason for the malfunction (if known).
- The actions taken to correct the malfunction (checklist).
- Whether the procedures in this SSM Plan were followed. If the procedures in the plan were not followed, a **SSM Plan Departure Report Form** must also be completed.
- A description of the emission standard that was exceeded or had the potential to be exceeded.

5.14 Whom to Notify at the Facility in Case of a Malfunction

- The Site/Facility Manager shall be notified immediately of the malfunction.
- The Site/Facility Manager shall be notified within a reasonable timeframe of progress of the diagnosis and corrective action of the malfunction.
- The Site/Facility Manager and Hillsborough County Landfill Operations shall be notified when the alternative timeframe for corrective action has been established if it is outside of the timeframes currently allowed by the NSPS for particular compliance elements.
- The Site/Facility Manager and Hillsborough County Landfill Operations shall be notified if the malfunction cannot be corrected within the timeframe allowed by the NSPS rule or the alternate timeframe established under this SSM Plan. Notification should also occur if the malfunction that occurred is not addressed by the current SSM Plan.
- The **Malfunction Report Form** shall be initially prepared upon discovery of the malfunction and implementation of the SSM Plan. The form shall be finalized by the operator on duty upon successful implementation of the SSM Plan and submitted to

the Site/Facility Manager. The original form must be retained in the landfill files for five (5) years.

5.15 What to Report for a Malfunction Event

- If the actions taken during the malfunction **were consistent** with this SSM Plan, file the necessary information in your semi-annual SSM report (*within 30 days following the end of each 6-month period*) with the following information included:

  1. Name and title of Site/Facility Manager or other appropriate personnel;
  2. Certifying signature of the owner/operator or other responsible official. (Note that "responsible official" has the same meaning as under the Title V permitting program. See previous corporate guidance on this topic.)
  3. Statement that the actions taken during the malfunction were consistent with the SSM Plan; and
  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.

- If the actions taken during the malfunction **were not consistent** with this SSM Plan, but the malfunction did not result in an exceedance of an applicable emission, the responsible official shall state this in the semi-annual SSM report (*within 30 days following the end of each 6-month period*) with the following information included:

  1. Name and title of Site/Facility Manager or other Hillsborough County landfill operations personnel;
  2. Certifying signature of the owner/operator or other responsible official;
  3. Statement that the actions taken during the malfunction were not consistent with the SSM Plan, but the source did not exceed any applicable emissions limit standards;
  4. Number, duration, and description of malfunction events; and
  5. 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.

- If the actions taken during a malfunction **were not consistent** with this SSM Plan, and the malfunction resulted in an exceedance of an applicable emission standard, (see items listed under Step 1 above), the Site/Facility Manager or Other appropriate Facility Personnel must report the actions taken to the enforcing authority by telephone or facsimile (FAX) transmission within two (2) working days after commencing the actions that were inconsistent with the plan. A letter must then be sent to the enforcing authority within seven (7) working days after the malfunction. The letter should be sent by certified or registered mail or overnight delivery service, and must include the following information:

1. Name and title of Site/Facility Manager or other Hillsborough County landfill operations personnel;
2. Certifying signature of the owner/operator or other responsible official. (Note that "responsible official" has the same meaning as under the Title V permitting program. See previous corporate guidance on this topic.);
3. A copy of the **Malfunction Report Form**;
4. Detailed explanation of the circumstances of the malfunction;
5. The reasons the SSM Plan was not adequate; and whether any excess emissions and/or parameter monitoring exceedances is believed to have occurred during the event.
6. A copy of the **SSM Plan Departure Report Form.**
7. Revise the SSM Plan within 45 days of the non-conforming event.

Hillsborough County shall retain documentation of the conversation with FDEP or fax regarding the 2-day notification, the 7-day letter, and proof of receipt by FDEP of the 7-day letter in the site's files for a minimum of five years. If the actions taken during startup were not consistent with this SSM Plan, the SSM Plan must be revised. The revised SSM Plan shall include the new actions to be taken for startup of the GCCS during similar startup events. If the revisions to the SSM Plan alter the scope of the process activities at Hillsborough County Solid Waste Management Facility or otherwise modify the applicability of any emission standard, work practice requirement, or other requirement in the MACT rule and/or the NSPS, the revised SSM Plan is not effective until written notice has been provided to the permitting authority describing the SSM Plan revision(s). The revised SSM Plan shall be included in the next semiannual SSM Plan Report.

APPENDIX A

Common Causes and Response Actions for GCCS Malfunctions

(Appendix A represents a summary of possible causes and response actions for GCCS malfunctions. The list is not considered to be exhaustive. The list of response actions is not intended to be a sequence of events that are to be implemented in order. Certain malfunction incidents may or may not be associated with the listed "common causes" nor will the "common response actions" be appropriate in all instances. Site-specific evaluation of the malfunctions and development of specific response actions is recommended in all cases.)

EQUIPMENT	PURPOSE	MALFUNCTION EVENT	COMMON CAUSES	TYPICAL RESPONSE ACTIONS
LFG Collection and Control System				
Blower or Other Gas Mover Equipment	Applies vacuum to wellfield to extract LFG and transport to control device	Loss of LFG Flow/Blower Malfunction	-Flame arrestor fouling/deterioration -Automatic valve problems -Blower failure (e.g., belt, motor, impeller, coupling, seizing, etc.) -Loss of power -Extraction piping failure -Condensate knock-out problems -Extraction piping blockages -Pneumatic pump failure -Air compressor failure -Condensate trapped in pipe headers.	-Repair breakages in extraction piping -Clean flame arrestor -Repair blockages in extraction piping -Verify automatic valve operation, compressed air/nitrogen supply -Notify power utility, if appropriate -Provide/utilize auxiliary power source, if necessary -Repair Settlement in Collection Piping - Repair Blower -Activate back-up blower, if available -Clean knock-up pot/demister -Drain knock-out pot -Repair pneumatic pump(s) -Repair air compressor -Repair air lines/condensate force main piping -Drain condensates
Extraction Wells and Collection Piping	Conduits for extractions and movement of LFG flow	Collection well and pipe failures	-Break/crack in header, lateral, or extraction well piping -Leaks at wellheads, valves, flanges, test ports, seals, couplings, etc. -Collection piping blockages -Problems due to settlement (e.g. pipe separation, deformation, development of low points) -Pneumatic pump failure -Air compressor failure	-Repair leaks or breaks in lines or wellheads -Follow procedures for loss of LFG flow/blower malfunction -Repair blockages in collection piping -Repair settlement in collection piping -Re-install, repair, or replace piping Repair pneumatic pump -Repair air compressor -Repair air lines/condensate force main piping

EQUIPMENT	PURPOSE	MALFUNCTION EVENT	COMMON CAUSES	TYPICAL RESPONSE ACTIONS
LFG Collection and Control System				
Blower or Other Gas Mover Equipment And Control Device	Collection and control of LFG	Loss of electrical power	- Force majeure/Act of God (e.g., lightning, flood, earthquake, etc.) -Area-wide or local blackout or brown-out -Interruption in service (e.g. blown service fuse) -Electrical line failure -Breaker trip -Transformer failure -Motor starter failure/trip -Overdraw of power -Problems in electrical panel -Damage to electrical equipment from on-site operations	-Check/reset breaker -Check/repair electrical panel components -Check/repair transformer -Check/repair motor starter -Check/repair electrical line -Test amperage to various equipment -Contact electricity supplier -Contact/contract electrician -Provide auxiliary power (if necessary)
LFG Control Device	Combusts LFG	Low and high temperature conditions at control device	-Problems with temperature - monitoring equipment -Problems/failure of -thermocouple and/or thermocouple wiring -Change of LFG flow -Change of LFG quality -Problems with air louvers -Problems with air/fuel controls -Change in atmospheric conditions	-Check/repair temperature monitoring equipment -Check/repair thermocouple and/or wiring -Follow procedures for loss of flow/blower malfunction
LFG Control Device	Combusts LFG	Loss of Flame	-Problems/failure of thermocouple -Loss/change of LFG flow -Loss/change of LFG quality -Problems with air/fuel controls -Problems/failure of flame sensor -Problems with temperature monitoring equipment	-Check/repair temperature monitoring equipment -Check/repair thermocouple -Follow procedures for loss of flow/blower malfunction -Check/adjust air/fuel controls -Check/adjust/repair flame sensor -Check/adjust LFG collectors

EQUIPMENT	PURPOSE	MALFUNCTION EVENT	COMMON CAUSES	TYPICAL RESPONSE ACTIONS
LFG Collection and Control System				
Flow Monitoring/ Recording Device	Measures and records gas flow from collection system to control	Malfunctions of Flow Monitoring/Recording Device	-Problems with orifice plate, pitot tube, or other in-line flow measuring device -Problems with device controls and/or wiring -Problems with chart recorder	-Check/adjust/repair flow measuring device and/or wiring -Check/repair chart recorder -Replace paper in chart recorder
Flame Presence/Heat Sensing Device	Indicates continuous presence of a flame at the control device	Malfunctions of Flame Presence/Heat Sensing Device	-Problems with thermocouple or ultraviolet beam sensor -Problems with device controls and/or wiring	-Check/adjust/repair thermocouple or ultraviolet beam sensor -Check/adjust/repair controller and/or wiring -Check/adjust/repair electrical panel components
Control Device	Combusts LFG	Other Control Device Malfunctions	-Control device smoking (i.e. visible emissions) -Problems with pilot light system -Problems with thermocouple -Problems with flame arrester -Alarmed malfunction conditions not covered above -Unalarmed conditions discovered during inspection not covered above	-Site-specific diagnosis procedures -Site-specific responses actions based on diagnosis -Clean pitot orifice -Clean/drain flame arrestor -Refill propane supply -Check/repair pilot sparking system
Condensate Management System	Manages condensate	Failure of condensate sumps	- Electrical failure - Mechanical failure of air compressor for pneumatic condensate sump pumps - Pump failure	- Check/adjust/repair electrical supply or connections - If pneumatic pumps, diagnose pump controls, etc., and air compressor per manufacturer's instructions and repair or replace as appropriate. Procure temporary air compression capacity if needed. - Check/adjust/repair pumps per manufacturer's instructions

APPENDIX B

SSM Plan Reporting Forms

HILLSBOROUGH COUNTY SOUTHEAST COUNTY LANDFILL - STARTUP REPORT FORM

This form is used to document actions taken during any startup **of any portion of the gas collection and control system**. If any of the steps taken are **not consistent with this procedure**, document the variations on a "SSM Plan Departure Form" and follow the reporting requirements in the SSM plan.

☐ Flare ☐ Collection System

1. Beginning of Startup Event	Date: Time:
2. End of Startup Event	Date: Time:
3. Duration of Startup Event (hours):	
4. Description of Affected Equipment:	
5. Cause/Reason for Startup:	
6. Name of person completing this form (please print):	
7. Date completed:	
8. Type of Shutdown (check one):	☐ Manual ☐ Automatic

- If this is an automatic startup, skip sections 9 and 10 below and go to section 11.
- If this is a manual startup, the procedure listed in section 9 be should be followed. Check off the steps completed and continue on to section 10.

9. STARTUP PROCEDURE CHECKLIST	Check if procedure was followed

10. Did the actual steps taken vary from the procedure specified above? ☐ YES ☐ NO
If response is "Yes," proceed to section 11 below. If "No," stop.

11. Did this startup result in an exceedance of any applicable emission limitation? ☐ YES ☐ NO
If response is "Yes," proceed to section 12 below. If "No," stop.

12. Describe the emission standard that was exceeded below. Complete a "SSM Plan Departure Report Form." Notify the appropriate regulatory agency verbally or by fax within 2 working days after commencing the actions that an event inconsistent with the SSM Plan and which resulted in an exceedance of an applicable emission limitation has occurred. Follow up in writing to the agency within working 7 days after the end of the event.

This form is intended to satisfy the recordkeeping requirements of 40 CFR 63.6(e)(3)(iii) and (iv) and 63.10(b)(2).

HILLSBOROUGH COUNTY SOUTHEAST COUNTY LANDFILL - SHUTDOWN REPORT FORM

This form is used to document actions taken during any shutdown **of any portion of the gas collection and control system**. If any of the steps taken are **not consistent with this procedure**, document the variations on a "SSM Plan Departure Form" and follow the reporting requirements in the SSM plan.

☐ Flare ☐ Collection System

1. Beginning of Shutdown Event	Date:	Time:
2. End of Shutdown Event	Date:	Time:
3. Duration of Shutdown Event (hours):		
4. Description of Affected Equipment:		
5. Cause/Reason for Shutdown:		
6. Name of person completing this form (print):		
7. Date completed:		
8. Type of Shutdown (check one):	☐ Manual	☐ Automatic

- If this is an automatic shutdown, skip sections 9 and 10 below and go to section 11.
- If this is a manual shutdown, the procedure listed in section 9 below should be followed. Check off the steps completed and continue on to section 10.

9. SHUTDOWN PROCEDURE CHECKLIST	Check if procedure was followed

10. Did the actual steps taken vary from the procedure specified above? ☐ YES ☐ NO
If response is "Yes," proceed to section 11 below. If "No," stop.

11. Did this shutdown result in an exceedance of any applicable emission limitation? ☐ YES ☐ NO
If response is "Yes," proceed to section 12 below. If "No," stop.

12. Describe the emission standard that was exceeded below. Complete a "SSM Plan Departure Report Form." Notify the appropriate regulatory agency verbally or by fax within 2 working days after commencing the actions that an event inconsistent with the SSM Plan and which resulted in an exceedance of an applicable emission limitation has occurred. Follow up in writing to the agency within working 7 days after the end of the event.

This form is intended to satisfy the recordkeeping requirements of 40 CFR 63.6(e)(3)(iii) and (iv) and 63.10(b)(2).

HILLSBOROUGH COUNTY SOUTHEAST COUNTY LANDFILL - MALFUNCTION REPORT FORM

This form is used to document actions taken during a malfunction **of any portion of the gas collection and control system**. If any of the steps taken are **not consistent with this procedure**, document the variations on a "SSM Plan Departure Form" and follow the reporting requirements in the SSM plan.

☐ Flare ☐ Collection System

1. Beginning of Malfunction Event	Date:	Time:
2. End of Malfunction Event	Date:	Time:
3. Duration of Malfunction Event (hours):		
4. Description of Affected Equipment:		
5. Cause/Reason for Malfunction:		
6. Name of person completing this form (please print):		
7. Date completed:		

Follow the procedure listed below for each malfunction. This form is to be used to document the actions taken during each malfunction. Check off the steps completed.

8. MALFUNCTION PROCEDURE CHECKLIST	Check if procedure was followed

9. Did the actual steps taken vary from the procedure specified above? ☐ YES ☐ NO
If response is "Yes," proceed to box 10 below. If "No," stop.

10. Did this malfunction result in an exceedance of any applicable emission limitation? ☐ YES ☐ NO
If response is "Yes," proceed to box 11 below. If "No," stop.

11. Describe the emission standard that was exceeded below. Complete a "SSM Plan Departure Report Form." Notify the appropriate regulatory agency verbally or by fax within 2 working days after commencing the actions that an event inconsistent with the SSM Plan and which resulted in an exceedance of an applicable emission limitation has occurred. Follow up in writing to the agency within working 7 days after the end of the event.

This form is intended to satisfy the recordkeeping requirements of 40 CFR 63.6(e)(3)(iii) and (iv) and 63.10(b)(2).

HILLSBOROUGH COUNTY SOUTHEAST COUNTY LANDFILL - SSM PLAN DEPARTURE REPORT FORM

1. Type of Event:	☐ Startup	☐ Shutdown	☐ Malfunction
2. Date:	Time:	Duration:	
3. Provide detailed explanation of the circumstances of the startup, shutdown, or malfunction:*			
4. Provide description of corrective actions taken:*			
5. Describe the reasons the SSM Plan was not followed:*			
6. Describe any proposed revisions to the SSM Plan:*			
7. Name (print):			
8. Title			

*Use additional sheets if necessary.

Note: If the event documented in this form was a malfunction and if the SSM plan needs to be revised to address the particular type of malfunction that occurred, the revision of the SSM plan must be made within 45 days of the event.

- This form is intended to assist in meeting the recordkeeping and reporting requirements of 40 CFR 63.6(e)(3)(iv).

APPENDIX C

SSM PROCEDURES

APPENDIX C-1

Manual Startup Procedures for Utility Flare and Gas Mover System

(See LFG Specialties User Manual for Utility Flare System Unit #2162)

APPENDIX C-2

Manual Shutdown Procedure for Utility Flare

Manual Shutdown Procedure for Utility Flare

In the event that the flare and associated blower(s) equipment must be shutdown manually the following procedure shall be followed:

- Manually depress the emergency stop plunger on the front of the flare control panel or deenergize the electrical service to the flare control panel. Turning the panel power selector switch to the off position or terminating electrical service to the panel can accomplish this task.
- Verify that the flare fail/safe valve is in the closed position. This valve must close to ensure there are no uncontrolled emissions from the flare stack.
- Verify that the continuous flare pilot is no longer operating.
- Verify that the pneumatic pumps at the nearest condensate pump station to the flare station are operable. If electrical service has been deenergized the air compressor, which services the pneumatic pumps, must remain in operation.
- Implement proper lock-out/tag-out procedures on electrical equipment, panel boxes and valves per Hillsborough County's standards.

APPENDIX D

Glossary

GLOSSARY OF COMMON TERMS AND ACRONYMS

Affected Source - A source of air pollution subject to the requirements of the MACT rule.

Control Device - A flare or other device used to burn the collected landfill gas and destroy or reduce the air pollutants present in the gas prior to being released into the environment.

Deviation - Variation from the set procedures outlined in this SSM Plan. If a deviation occurs, then a SSM Plan Deviation Report Form must be completed.

Gas Mover - A landfill gas blower or compressor used to apply vacuum to the landfill gas wells and extract gas from the wellfield and landfill. The gas mover is also used to send the collected gas to the control device such as a flare or burner.

GCCS - Gas Collection and Control System. The GCCS consists of all parts of the landfill gas system including wells, wellheads, gas collectors, piping, condensate sumps, valves, blowers, and the flare.

LFG - Landfill Gas. Gas created by the decomposition of municipal solid waste that consists primarily of methane and carbon dioxide.

MACT - Maximum Achievable Control Technology. A set of federally mandated rules written to control and reduce the emission of hazardous air pollutants (HAPs) from various industrial sources of air pollution, including certain landfill facilities.

Malfunction - Any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded.

NSPS - New Source Performance Standards for MSW landfills. A set of federally mandated rules that require certain landfills to control the emission of non-methane organic compounds (NMOC) found in landfill gas.

Shutdown - The cessation of the operation of the GCCS or portion of the GCCS for any purpose.

SSM Plan - Startup, Shutdown, and Malfunction Plan. A plan required for certain landfills under the MACT rule to ensure that the GCCS is operated and maintained properly during periods of startup, shutdown, and malfunction.

Startup - The setting in operation of the GCCS or portion of the GCCS for any purpose.

Utility Flare - A control device that combusts landfill gas in a vertical stack.