



# Startup, Shutdown, and Malfunction Plan Work Practice Plan

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## **One (1) Regenerative Thermal Oxidizer One (1) Permanent Total Enclosure and Associated Controlled Coating Lines**

Nylok, LLC  
Macomb, Michigan

NTH Project No. 74-180531-01  
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NTH Consultants, Ltd.  
41780 Six Mile Road, Suite 200  
Northville, MI 48168





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**APPENDIX A. Coating Line, PTE, & RTO Startup Recordkeeping Form/Checklist**

**APPENDIX B. Coating Line, PTE, & RTO Shutdown Recordkeeping Form/Checklist**

**APPENDIX C. Coating Line, PTE, & RTO Malfunction Recordkeeping Form**

**APPENDIX D. Work Practice Plan Recordkeeping Form/Checklist**



## **1.0 INTRODUCTION AND REGULATORY BASIS**

Nylok, LLC (Nylok) is an existing coating facility located at 15260 Hallmark Court, Macomb, Michigan. Nylok operates under Renewable Operating Permit (ROP) No. MI-ROP-N5656-2015b and Permit to Install (PTI) No. 133-13D, and is subject to the requirements of 40 CFR Part 63, Subpart M MMM-National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (Subpart M MMM). Nylok uses an emission capture system (permanent total enclosure (PTE)) and an add-on control device (regenerative thermal oxidizer (RTO)) for the control of organic hazardous air pollutants (HAPs) from several coating lines. A continuous parametric monitoring system (CPMS) is used to ensure proper operation of the PTE and RTO.

Pursuant to 40 CFR §63.3893(b) and 40 CFR §63.3900(c) contained in Subpart M MMM, and Special Conditions III.2 and III.3 under flexible group FG-MACT M MMM in the ROP and PTI, Nylok is required to implement and maintain a Work Practice Plan (WPP) and a Startup, Shutdown and Malfunction Plan (SSMP) for the operation of the PTE, RTO and the associated organic HAP controlled coating operations. The purpose of a WPP is to detail practices and procedures that minimize organic HAP emissions from coating operations that use the add-on control operation for compliance with Subpart M MMM. An SSMP is used to detail procedures for operating and maintaining the PTE, RTO, and CPMS during periods of startup, shutdown, and malfunction (SSM). The SSMP also details how Nylok will document preventative measures of PTE, RTO and the associated controlled coating operation equipment malfunctions and/or failures that result in pollutant emissions above the applicable emission limitation of 2.6 lbs organic HAP per gallon of coating solids (2.6 lb/gal). Additionally, the SSMP presents procedures for detecting and correcting these incidents, should they occur.

This document serves as Nylok's WPP and SSMP, and includes the required elements as found in Subpart M MMM, ROP No. MI-ROP-N5656-2015b and PTI No. 133-13D.

Section 2.0 contains process descriptions, and Sections 3.0 and 4.0 contain the SSMP and WPP. Sections 5.0 and 6.0 contain recordkeeping and reporting requirements. Sections 7.0 and 8.0 contain a list of plan revisions and referenced documents.



Appendices A through D of this report include:

- Example forms for recordkeeping of startup events.
- Example forms for recordkeeping of shutdown events.
- Example checklists for startup and shutdown of the coating lines, PTE, and RTO.
- Example recordkeeping form and a checklist for verification of WPP requirements.

## **2.0 EQUIPMENT DESCRIPTION**

As noted in Section 1.0, the organic HAP emitting coating lines are controlled through the use of the PTE that is routed to the RTO. The coating machines are designed to apply coating material onto parts; excess coating material is cycled through the line and reused. Toluene is typically added to the coating materials for dilution.

Results from performance testing at Nylok confirm that the emissions capture system meets the required criteria to be considered a PTE, and that the RTO had sufficient destruction efficiency for compliance with the 2.6 lb/gal limit. The PTE and corresponding ductwork are used to effectively capture the HAP-containing exhaust from the coating lines and route it to the RTO for destruction. Exhaust from the coating lines is drawn into the RTO by a system booster fan. The total exhaust volume entering the RTO is approximately 13,000 standard cubic feet per minute (scfm) and is directed into one (1) of two (2) regenerator columns where the exhaust stream is heated to approximately 1,500 degrees Fahrenheit (°F). The heated exhaust stream exits the regenerator column and flows into the combustion chamber where oxidation of volatile organic compounds (VOCs) and HAPs occurs. The combustion chamber is heated to a minimum of 1,550°F (3-hour average) by the natural gas-fired burner. The VOCs/HAPs in the exhaust stream are oxidized into water vapor (H<sub>2</sub>O) and carbon dioxide (CO<sub>2</sub>). The oxidized gases are then sent to the second regenerator column to transfer heat to the incoming untreated air, lowering the additional energy required for oxidation of the incoming waste gas stream. The exhaust gas stream is then directed through the RTO stack to the atmosphere.



### **3.0 STARTUP, SHUTDOWN, AND MALFUNCTION PLAN**

For periods during SSM of the PTE, RTO, or related equipment with the potential to interfere with capture or control of emissions, Nylok will follow the requirements in this section for proper operation of the equipment to ensure emissions are minimized. The SSMP is intended to ensure that:

- During times of SSM, Nylok operates and maintains the affected source and air pollution control equipment in a manner consistent with safety and good air pollution control practices; and
- Nylok is prepared to correct malfunctions as soon as it is safe and practicable to do so, in order to minimize excess emissions of HAPs

Startup, Shutdown, and Malfunction are each defined in 40 CFR §63.2 as follows:

*Startup* means the setting in operation of an affected source or portion of an affected source for any purpose.

*Shutdown* means the cessation of operation of an affected source or portion of an affected source for any purpose.

*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.

#### **3.1 Startup and Shutdown**

This section summarizes procedures for startup and shutdown of the PTE, RTO and associated coating lines.



Prior to startup of the organic HAP emitting coating lines, the PTE and RTO must first be started and operating properly. Proper operation of the control system requires that the PTE maintain a negative pressure so that coating line exhaust gases are fully contained within PTE, and that the RTO is brought to a minimum of at least 1,500°F (i.e., the average combustion temperature recorded during the initial performance test) prior to starting the affected coating lines. By obtaining and maintaining proper flow into the PTE and proper combustion temperatures in the RTO, the process will operate within the prescribed organic HAP emission limit of 2.6 lb/gal. Verification that the PTE and RTO are fully operational and functioning properly is critical to ensuring that emissions will be minimized when the coating lines begin operation. After confirming that the PTE, RTO and required monitoring equipment is functioning properly, the coating lines begin the startup process.

The following items and parameters associated with the capture system and RTO will be inspected daily and inspection checks recorded in a maintenance log book, as referenced in Section 8.0 of this SSMP:

- The PTE must be switched on and functioning at an appropriate differential pressure.
  - The pressure drop across the PTE must be at least 0.007 inches of H<sub>2</sub>O.
- The differential pressure will be checked once per shift by the Shift Supervisor during their walk through.
- RTO combustion chamber temperature (in degrees Fahrenheit) recorded in an electronic data collection system from a temperature monitor, and checked once per shift by the Shift Supervisor during their walk through.
- Proper RTO combustion blower and fan operation (per vendor specifications) checked once per shift by Shift Supervisor during walkthrough.

During shutdown, the PTE and RTO must be kept in operation until all affected coating lines have stopped operation. Once all affected coating lines are stopped, the PTE and RTO may be safely shutdown and switched off according to the full list of manufacturer startup, shutdown, and operating procedures, located in the maintenance cabinet by the RTO controller (referenced in Section 8.0 of this document).



Example checklists for startups and shutdowns can be found in Appendices A and B.

### **3.2 Procedures for Identifying a Malfunction**

This section summarizes how operation is monitored and malfunctions are determined.

The temperature of the combustion chamber is a key variable to ensure proper operation of the RTO and sufficient combustion of the exhaust gas stream from each associated coating line. The combustion chamber contains a thermocouple system that continuously monitors and records the temperature of the combustion chamber. Subpart MMMM, ROP No. MI-ROP-N5656-2015b and PTI No. 133-13D require that the average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established during the initial performance test. If the average combustion temperature in any 3-hour period falls below the established temperature, an indicator light will turn on and an alarm will sound. Monitoring and surveillance shall occur on a continuous basis, and shall be documented in the maintenance log book, as referenced in Section 8.0 of this document.

The PTE and other equipment related to the coating lines are also potential points of failure in controlling HAP emissions. If a coating line or the PTE, or both, is found to be malfunctioning, shutdown of the coating line and PTE is necessary; it should be verified whether the problem is isolated to one system. If systemic, the entire system may need to be brought offline. If confined to individual coating lines and the problem can be isolated, it may be possible to continue operating other unaffected coating lines so long as both the PTE and RTO are operating properly.

The Manufacturing Manager will be responsible for the on-going training and follow up of personnel in charge of monitoring the equipment to make sure all processes of the emissions control system are functioning properly.

### **3.3 Corrective Procedures for Malfunction or Failure Events**

Should a malfunction or failure occur (i.e. 3-hour average RTO combustion temperature readings fall below the minimum established operating temperature and/or air flow into the PTE falls



below the minimum pressure drop), the following steps shall be taken to resolve the issue as soon as practical:

- When the temperature indicator light turns on for the combustion chamber, the Shift Supervisor shall manually adjust the temperature so that it is at or above the minimum established operating temperature for the combustion chamber;
- Coating of parts will cease upon a low temperature alarm. The coating lines will be shut down, and remain shut down until the combustion chamber has increased to the required established operating temperature;
- The Shift Supervisor will note the total length of time that the 3-hr average combustion chamber temperatures fall below the minimum established operating temperature in an electronic data collection system, and notify the Manufacturing Manager of the malfunction;
- The cause of the alarm will be investigated;
- It may be necessary to begin shutdown procedures to minimize emissions. Prior to restarting the coating lines, necessary corrective actions identified will be completed.

Corrective actions may include, but are not limited to:

- Inspecting the PTE for air leaks.
- Sealing off defective portions of the PTE if the problem can be isolated to allow for a restart of coating lines that are not affected by the problem.
- Replacing or repairing portions of the PTE and RTO as necessary, such as RTO heat exchange media.
- Replacing defective sensors if they are found to be triggering false alarms.

Records of maintenance events, and date and time of occurrence will be documented in the maintenance log book. An example form for records of corrective actions taken during times of malfunction, and date and time of occurrence can be found in Appendix C.

Critical items for replacement shall be listed in the Replacement Parts List log book (referenced in Section 8.0 of this document), and records of items shall be updated and maintained as necessary. Records shall be kept in the RTO maintenance locker.





Nylok will keep records of each SSM in accordance with Section 5.0 of this document. Such records will be reported to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and U.S. Environmental Protection Agency (EPA), as specified in Section 6.0 of this document.

#### **4.0 WORK PRACTICE PLAN**

As specified in 40 CFR §63.3893(b), ROP No. MI-ROP-N5656-2015b and PTI No. 133-13D, for each coating operation using the emission rate with add-on controls option, Nylok is required to develop and implement a WPP. The WPP is intended to minimize the organic HAP emissions from the storage, mixing and conveying of coatings, thinners and/or other additives, and cleaning materials used in, and waste materials generated by, the controlled coating operation(s). All coatings, solvents, catalysts, and waste materials shall be stored, handled, and disposed of in an acceptable manner in compliance with applicable rules and regulations in order to minimize the generation of fugitive emissions. The Production Manager will ensure that necessary equipment and procedures are in place, and that employees are properly trained on the following:

- Organic HAP containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be stored in closed containers.
  - Drums and containers shall be inspected to ensure that they are properly secured and show no signs of deterioration, and are closed to prevent spillage.
  - Inspection techniques and schedules will be selected and closely followed. Inspections shall be documented in the Maintenance Logbook, as referenced in Section 8.0 of this document.
- Spills of organic HAP containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be minimized. In order to minimize spills, Nylok employees will:
  - Transfer and capture waste materials using funnels, hoses, etc.
    - Prior to transferring, verify that the receiving container has sufficient capacity for the material being transferred and overfilling does not occur.
  - Properly label containers.



- Store drums and other containers securely so that they are not tipped, moved, or otherwise accidentally spilled. Proper storage also includes secondary containment.
  - Secondary containment should include spill pallets and a diked storage area. The secondary containment must be able to contain 100 percent of the volume of the largest container. Diked storage areas must be made of a material impervious to the chemicals stored therein.
- Be properly equipped to handle organic HAP containing material - splash shields, safety goggles, and gloves resistant to the material being handled should be used.
- Move organic HAP containing material from one location to another with care and caution at all times.
- Ensure that pallets holding drums or other containers be balanced at all times. Moving a pallet that is top heavy or weighted down to one side may result in a spill.
- Have spill control equipment readily available when transferring materials.
  - If a spill does occur, the Shift Supervisor must be notified immediately. The spill must be cleaned up as soon as possible. Procedures outlined in Nylok's Spill Prevention, Control, and Countermeasures Plan (SPCC) and Pollution Incident Prevention Plan (PIP) must be followed. The SPCC and PIP plans are located in the Plant Manager's Office, as referenced in Section 8.0 of this document.
- Safely deliver drums and other containers for off-site transfer and disposal to the loading docks.
- Monitor loading operations to ensure that all drums and containers are properly handled, to ensure that the integrity of the containers is not compromised, and to facilitate proper spill response (if needed).
- Verify that equipment to contain and clean spills is readily available in locations where material is being handled and transferred (e.g. secondary containment berms, appropriate sorbent materials, booms, etc.)
- Train employees involved in using organic HAP containing materials how to minimize, contain, and safely deal with spills.



- Organic HAP containing coatings, thinners and/or other additives, cleaning materials, and waste materials must be conveyed from one location to another in closed containers or pipes.
- Mixing vessels which contain organic-HAP-containing coatings and other materials must be closed except when adding to, removing, or mixing the contents.
- Emissions of organic HAP must be minimized during cleaning of storage, mixing, and conveying equipment.
  - Employees involved in using organic HAP containing material will be trained in how to effectively and efficiently store, clean, mix, and convey materials and equipment properly.

An example checklist is attached to this document in Appendix D that can be used to confirm conformance with this WPP and describe proper actions taken.

## **5.0 RECORDKEEPING REQUIREMENTS**

This section covers various recordkeeping requirements related to the WPP and SSMP. Example forms/checklists for recordkeeping can be found in Appendices A through D of this document. Records will either be kept electronically or hardcopy.

### **5.1 Work Practice Plan Recordkeeping**

Pursuant to 40 CFR §63.3893, Nylok will keep a record of the WPP on file, and will keep documentation that the WPP is implemented on a continuous basis through use of recordkeeping forms and a checklist (example found in Appendix D of this document). Inspections of the facility to determine that the WPP is being implemented will be conducted on a weekly basis. Records that employees have been trained on work practices will be maintained.

### **5.2 SSM Recordkeeping**

The following records are related to the PTE, RTO and associated controlled coating lines and will be maintained for a period of five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report or record:



- Pursuant to 40 CFR §63.6(e)(3)(v), Nylok will maintain a current SSMP at the facility, and will make the plan available upon request for inspection and copying by the Administrator. If the SSMP is revised, Nylok will maintain each previous (i.e., superseded) version of the SSMP at the facility, and will make each such previous version available for inspection and photocopying by EGLE and U.S. EPA for a period of five (5) years after revision of the plan.
- Pursuant to 40 CFR §63.10(b)(2)(i) – (xiv):
  - Documentation of the occurrence and duration of each startup or shutdown of the PTE, RTO and/or associated coating lines when the event causes an exceedance of the applicable organic HAP emission limit of 2.6 lb/gal. (40 CFR §63.10(b)(2)(i))
  - Documentation of the occurrence and duration of each malfunction of the PTE, RTO and/or associated coating lines. (40 CFR §63.10(b)(2)(ii))
  - Maintenance performed on the PTE and RTO. (40 CFR §63.10(b)(2)(iii))
  - Documentation of the actions taken during periods of startup or shutdown when the applicable emission limit was exceeded, and when actions taken during periods of SSM are inconsistent with the actions specified in the SSMP for the PTE, RTO and associated coating lines. (40 CFR §63.10(b)(2)(iv))
  - Information necessary to demonstrate compliance with the provisions of the SSMP when actions taken during SSM are consistent with the provisions of the SSMP. (40 CFR §63.10(b)(2)(v))
  - Documentation of each period during which a continuous parameter monitoring system (CPMS) (i.e. the temperature monitor, flow measuring device or pressure drop monitor) is malfunctioning or inoperative. (40 CFR §63.10(b)(2)(vi))
  - Required measurements needed to demonstrate compliance with Subpart M (including 15-minute averages of CPMS data, raw performance testing and evaluations measurements that support data that Nylok is required to report). (40 CFR §63.10(b)(2)(vii))
  - Performance test results and CPMS performance evaluations. (40 CFR §63.10(b)(2)(viii))
  - Measurements that may be necessary to determine the conditions of performance tests and performance evaluations. (40 CFR §63.10(b)(2)(ix))



- Calibration checks, adjustments, and maintenance associated with CPMS calibration checks. (40 CFR §63.10(b)(2)(x) and (xi))
- Information demonstrating the compliance status with applicable requirements associated with a waiver of recordkeeping or reporting requirements, if a waiver has been granted. (40 CFR §63.10(b)(2)(xii))
- Documentation supporting compliance with initial notifications and notifications of compliance status. (40 CFR §63.10(b)(2)(xiv))

### **5.3 Additional Recordkeeping Requirements for the CPMS**

In addition to complying with the requirements specified above, additional records and information are required for the CPMS:

- Required CPMS measurements (including data recorded from unavoidable breakdowns and out-of-control periods). (40 CFR §63.10(c)(1))
- The dates and times during each period where the CPMS was inoperative. (40 CFR §63.10(c)(5))
- The dates and times during each period where the CPMS was out of control. (40 CFR §63.10(c)(6))
- The nature and cause of any malfunctions (if known). (40 CFR §63.10(c)(10))
- The corrective action taken or any adopted preventive measures. (40 CFR §63.10(c)(11))
- The nature of the repairs and/or adjustments to the CPMS during inoperative or out of control periods. (40 CFR §63.10(c)(12))
- The total process operating time during the reporting period. (40 CFR §63.10(c)(13))

Additionally, pursuant to 40 CFR §63.3968, Nylok will operate the CPMS and collect facial velocity or differential pressure and RTO temperature data at all times when the controlled coating operations are operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments). Nylok will not use facial velocity or differential pressure and RTO temperature data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. Nylok will use the data collected during other periods in calculating the data averages for



determining compliance with the facial velocity or differential pressure and RTO temperature operating limits.

#### **5.4 Response Actions Consistent with the SSMP**

Pursuant to 40 CFR §63.6(e)(3)(iii), records demonstrating compliance with the requirements of the SSMP will be kept when actions taken in response to process or control system SSM events comply with the requirements of the plan. Records will include the following:

- Confirmation that an SSM event of the PTE, RTO and/or associated coating lines occurred. Records for startups and shutdowns are only required when the applicable emission limit was exceeded.
- The duration of the SSM event. Records for startups and shutdowns are only required when the applicable emission limit was exceeded.
- Confirmation that actions in response to the SSM event conformed to the applicable requirements of the SSMP.
- The actions taken for the SSM event.

#### **5.5 Response Actions Inconsistent with the SSMP**

Pursuant to 40 CFR §63.6(e)(3)(iv), records will be maintained of actions taken in response to process or control system SSM events that are inconsistent with the requirements of the SSMP and when the applicable emission limit was exceeded.

### **6.0 REPORTING REQUIREMENTS**

This section covers various reporting requirements related to the WPP and SSMP.

#### **6.1 Work Practice Reporting**

Pursuant to 40 CFR §63.3963(e), if the WPP was not implemented on a continuous basis and documentation was not kept showing that it was being implemented (as required by 40 CFR §63.3930(k)), a deviation from work practice standards will be reported. For each deviation from work practice standards, a description of the deviation, the date and time period of the deviation, and the actions taken to correct the deviation will be reported in the semiannual compliance



report, as specified in 40 CFR §63.3920(a)(7)(xiii). If Nylok did achieve work practice standards, a statement noting such will be reported in the semiannual report required in 40 CFR 63.3963(f).

## **6.2 SSM Reporting**

Pursuant to 40 CFR §63.3920(a)(7), if there was a deviation from the emission limit of 2.6 lb/gal due to a SSM event, the semiannual compliance report must contain the following information:

- The beginning and ending dates of each compliance period during which the 12-month rolling organic HAP emission rate exceeded the emission limit.
- The calculations used to determine the 12-month rolling organic HAP emission rate for each compliance period in which a deviation occurred. The calculations of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month; the calculation of the total volume of coating solids used each month; the calculation of the mass of organic HAP emission reduction each month by the PTE and RTO; the calculation of the total mass of organic HAP emissions each month; and the calculation of the 12-month rolling organic HAP emission rate must be provided.
- The date and time that each malfunction started and stopped.
- A brief description of the CPMS.
- The date of the latest CPMS certification or audit.
- The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks (if applicable).
- The date, time, and duration that each CPMS was out-of-control, including the information in 40 CFR §63.8(c)(8).
- The date and time period of each deviation from an operating limit (i.e. RTO combustion temperature and PTE facial velocity or differential pressure); date and time period of any bypass of the add-on control device (if applicable); and whether each deviation occurred during a period of SSM or during another period.
- A summary of the total duration of each deviation from an operating limit and each bypass of the add-on control device (if applicable) during the semiannual reporting period, and the total duration as a percent of the total source operating time during that semiannual reporting period.



- A breakdown of the total duration of the deviations from the operating limits and bypasses of the add-on control device (if applicable) during the semiannual reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
- A summary of the total duration of CPMS downtime during the semiannual reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that semiannual reporting period.
- A description of changes in the CPMS, controlled coating operation, PTE, or RTO since the last semiannual reporting period.
- A statement of the cause of each deviation.

Pursuant to 40 CFR §63.3920(c), if there was an SSM event, the following reports will be submitted:

- If actions taken were consistent with the SSMP, information specified in 40 CFR §63.10(d) (as noted in Section 6.3) will be included in the semiannual compliance report.
- If actions taken were not consistent with the SSMP, an SSM report as described below will be submitted:
  - Describe the actions taken during the event in a report delivered by facsimile, telephone, or other means to EGLE and U.S. EPA within two (2) working days after starting actions that are inconsistent with the SSMP.
  - Submit a letter to EGLE and U.S. EPA within seven (7) working days after the end of the event, unless alternative arrangements have been made with EGLE and U.S. EPA as specified in 40 CFR §63.10(d)(5)(ii). The letter must contain the information specified in 40 CFR §63.10(d)(5)(ii).

### **6.3 Response Actions Consistent with the SSMP**

Pursuant to 40 CFR §63.10(d)(5)(i), if actions taken during a startup or shutdown (and the startup or shutdown causes the source to exceed the emission limit) or malfunction (including actions taken to correct a malfunction) are consistent with the procedures in the SSMP, the information will be included in an SSM report. The report will include the following information:





- Actions taken to minimize emissions during the SSM events (this may be done in checklist form, and if actions taken are the same for each event, there will only be one checklist)
- Number of events
- Duration of each event
- Brief description of each type of malfunction which occurred and which caused or may have caused an exceedance in the emission limit

Reports are only required if a startup or shutdown caused an exceedance in the emission limit, or if a malfunction occurred. The SSM report shall consist of a letter containing the following information:

- Name of responsible official
- Title of responsible official
- Signature of responsible official

The report shall be submitted to EGLE and U.S. EPA semiannually.

#### **6.4 Response Actions Inconsistent with SSMP**

Pursuant to 40 CFR §63.10(d)(5)(ii), if actions taken during SSM events are inconsistent with the requirements of the SSMP, the information will be reported to U.S. EPA and EGLE by telephone, facsimile, or other means within two (2) working days of beginning the response actions. Follow-up notification will be provided to U.S. EPA and EGLE by letter within seven (7) days of completing the response actions. The letter will include the following information:

- Name of owner
- Title of owner
- Signature of responsible official
- An explanation of the SSM event
- An explanation of the reasons for not following the SSMP
- An explanation of whether excess emissions may have occurred, and actions taken to minimize emissions
- An explanation of whether CPMS exceedances may have occurred.



**7.0 PLAN REVISIONS**

Pursuant to 40 CFR §63.6(e)(3)(vii) and (viii), the WPP and SSMP will be revised to address revision requests required by U.S. EPA or EGLE due to a determination by U.S. EPA or EGLE that any of the following apply to the plan:

- A SSM event that is not addressed in the plan has occurred.
- Fails to provide operation of the facility in a manner consistent with the general duty to minimize emissions during SSM events.
- The provisions for correcting malfunctioning process or emission control equipment are inadequate.
- The plan will be revised to address a malfunction event that occurs and is not addressed or that is inadequately addressed by the plan within 45 days of the occurrence of the event.

Copies of the Written Plans

Pursuant to 40 CFR §63.6(e)(3)(v), a current copy of the plans shall be kept onsite for the life of the PTE, RTO and controlled coating lines, and be available for inspection upon request. Any previous versions will be kept on file and available for inspection for five years from the date of revision.

**Table 7-1. Revision History**

Date Issued	Revision #	Revised by	Summary of Changes
3/28/2016	0	Not Applicable	Original Version
9/19/2019	1	NTH Consultants, Ltd.	<ul style="list-style-type: none"> <li>• Updated to current ROP and PTI versions</li> <li>• Updated State of Michigan department name change from Michigan Department of Environmental Quality (MDEQ) to EGLE</li> <li>• Removed Appendix E – Vendor Specified Corrective Actions for RTO Malfunctions</li> <li>• Minor changes</li> </ul>



## 8.0 REFERENCED DOCUMENTS

Table 8-1 contains a listing of referenced documents in this WPP and SSMP and their locations.

**Table 8-1. Referenced Documents**

<b>Referenced Document</b>	<b>Location</b>
Maintenance log book	RTO Maintenance Cabinet
Replacement parts list log book	RTO Maintenance Cabinet
RTO start-up/shutdown & operating procedures	RTO Maintenance Cabinet
Adhesive Department Inspection Log	RTO Maintenance Cabinet
SPCC and PIP Plans	Plant Manager's Office

# APPENDIX



// Coating Line, PTE, & RTO Startup  
Recordkeeping Form/Checklist

**Appendix A**  
**Nylok, LLC**  
**Coating Line, PTE, and RTO Startup Recordkeeping Form / Checklist**

This report pertains to **startup** of Regenerative Thermal Oxidizer (RTO) and Permanent Total Enclosure (PTE).

Startup event initiated on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

Startup event concluded on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

The total duration of this startup event was: \_\_\_\_\_  
(Hours: Minutes)

Attached to this form is a checklist that summarizes the approved startup procedures referenced in Nylok's Startup, Shutdown, and Malfunction Plan (SSMP). The operational steps that have been checked document that the detailed startup procedures were followed.

Were all actions associated with this startup event in conformance with the SSMP? Yes / No (circle one). Describe the actions below, whether consistent or inconsistent with the SSMP.

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Were there any exceedances of an emission limit? Yes / No (circle one). If yes, please list/describe. If any actions were not consistent with the SSMP and an emission limit was exceeded, an immediate SSM report is required.

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Notes/Recommendations:

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The following signature certifies the accuracy of this record to the best of my knowledge:

_____	_____	_____	_____
(Name)	(Title)	(Signature)	(Date)



**Appendix A**  
**Nylok, LLC**  
**Coating Line, PTE, and RTO Startup Recordkeeping Form / Checklist**

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(Signature of Shift Leader or Designee)

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(Date)

# APPENDIX



// Coating Line, PTE, & RTO Shutdown  
Recordkeeping Form/Checklist



**Appendix B**  
**Nylok, LLC**  
**Coating Line, PTE, and RTO Shutdown Recordkeeping Form / Checklist**

This report pertains to **shutdown** of Regenerative Thermal Oxidizer (RTO) and Permanent Total Enclosure (PTE).

Shutdown event initiated on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

Shutdown event concluded on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

The total duration of this shutdown event was: \_\_\_\_\_  
(Hours: Minutes)

Attached to this form is a checklist that summarizes the approved shutdown procedures referenced in Nylok's Startup, Shutdown, and Malfunction Plan (SSMP). The operational steps that have been checked document that the detailed shutdown procedures were followed.

Were all actions associated with this shutdown event in conformance with the SSMP? Yes / No (circle one). Describe the actions below, whether consistent or inconsistent with the SSMP.

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Were there any exceedances of an emission limit? Yes / No (circle one). If yes, please list/describe. If any actions were not consistent with the SSMP and an emission limit was exceeded, an immediate SSM report is required.

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Notes/Recommendations:

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The following signature certifies the accuracy of this record to the best of my knowledge:

\_\_\_\_\_

(Name) (Title) (Signature) (Date)

**Appendix B**  
**Nylok, LLC**  
**Coating Line, PTE, and RTO Shutdown Recordkeeping Form / Checklist**

<b>Shutdown Checklist</b>	<b>Initials</b>
Verify that all coating lines connected to control system are off for 15 minutes prior to shutting down RTO.	
Put RTO into "Bottle Up" mode.	
Shut down RTO for maintenance or repair only.	
<b>Operators Notes:</b>	

**Appendix B**  
**Nylok, LLC**  
**Coating Line, PTE, and RTO Shutdown Recordkeeping Form / Checklist**

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(Signature of Shift Leader or Designee)

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(Date)

# APPENDIX



// Coating Line, PTE, & RTO

Malfunction Recordkeeping Form

**Appendix C**  
**Nylok, LLC**  
**Coating Line, PTE, and RTO Malfunction Recordkeeping Form**

This report pertains to **malfunction** of Regenerative Thermal Oxidizer (RTO) and Permanent Total Enclosure (PTE).

Malfunction event occurred on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

Malfunction event concluded on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

The total duration of this malfunction was: \_\_\_\_\_  
(Hours: Minutes)

The Nylok SSMP must be adhered to for correcting the cause of the malfunction. Describe the malfunction, the automated and/or operator response, the potential cause of the malfunction, and the corrective actions taken:

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Time that affected coating line(s) were turned off: \_\_\_\_\_

Time that RTO was turned off (if applicable): \_\_\_\_\_

Were all actions associated with this malfunction event in conformance with the SSMP? Yes / No (circle one). If no, an immediate SSM report is required. Describe the actions below, whether consistent or inconsistent with the SSMP.

Was there any CPMS malfunctioning or inoperative? Yes / No (circle one). If yes, please list/describe dates and times, nature and cause of malfunctions (if known), corrective actions taken or any adopted preventative measures, and nature of repairs/adjustments to CPMS during inoperative and out of control periods.

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List/describe the exceedances that occurred (or believed to have occurred) due to this malfunction:

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**Appendix C**  
**Nylok, LLC**  
**Coating Line, PTE, and RTO Malfunction Recordkeeping Form**

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Notes/Recommendations:

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The following signature certifies the accuracy of this record to the best of my knowledge:

\_\_\_\_\_

(Name)

\_\_\_\_\_

(Title)

\_\_\_\_\_

(Signature)

\_\_\_\_\_

(Date)

# APPENDIX



// Work Practice Plan Recordkeeping  
Form/Checklist

**Appendix D**  
**Nylok, LLC**  
**Work Practice Plan Recordkeeping Form / Checklist**

This report pertains to **work practices** for storage, mixing, conveying, disposal, and use of organic Hazardous Air Pollutants (HAPs).

Inspection of work practice procedures initiated on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

Inspection of work practice procedures concluded on: \_\_\_\_\_  
(Month/Day/Year, Hours: Minutes)

Attached to this form is a checklist that summarizes the approved work practices referenced in Nylok's Work Practice Plan (WPP). The operational steps that have been checked document that the detailed work practices were followed.

Were all procedures detailed in this document implemented in conformance with the WPP? Yes / No (circle one). If no, describe the inconsistencies below. If any work practices were not implemented, a description of the deviation, the date and time period of the deviation, and the actions taken to correct the deviation must be reported in the semiannual compliance report.

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Notes/Recommendations:

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The following signature certifies the accuracy of this record to the best of my knowledge:

\_\_\_\_\_

(Name) (Title) (Signature) (Date)



**Appendix D**  
**Nylok, LLC**  
**Work Practice Plan Recordkeeping Form / Checklist**

<b>Work Practice Plan Checklist</b>	<b>Initials</b>
The Manufacturing Manager will ensure that <u>necessary equipment and procedures are in place, and employees are properly trained</u> on all of the following:	
All organic HAP containing coatings, thinners and/or other additives, cleaning materials, and waste materials stored in closed containers.	
Drums and containers are inspected to ensure that they are properly secured and show no signs of deterioration, and are closed to prevent spillage.	
Inspection techniques and schedules are closely followed. All inspections documented in the Maintenance Logbook, stored in the RTO Maintenance Cabinet.	
Transfer and capture waste materials using funnels, hoses, etc. as a means of preventing spills.	
Prior to transferring, verify that the receiving container has sufficient capacity for the material being transferred and overfilling does not occur.	
All containers properly labeled.	
Drums and other containers stored securely so that they are not tipped, moved, or otherwise accidentally spilled.	
Secondary containment includes spill pallets, a diked storage area, and can contain 100 percent of the volume of the largest container.	
Diked storage areas are made of a material impervious to the chemicals stored therein.	
Splash shields, safety goggles, and gloves resistant to the material being handled are used.	
Organic HAP containing material moved from one location to another with care and caution.	
Pallets holding drums or other containers are balanced at all times.	
Spill control equipment is readily available when transferring any materials.	
If a spill occurs, the Shift Supervisor is notified immediately. The spill is cleaned up as soon as possible. Procedures outlined in Nylok's Spill Prevention, Control, and Countermeasures Plan (SPCC) and Pollution Incident Prevention Plan (PIP) are followed.	
Drums and other containers delivered safely for off-site transfer and disposal to the loading docks.	
Loading operations monitored to ensure that all drums and containers are properly handled, the integrity of the containers is not compromised, and to facilitate proper spill response (if needed).	
Equipment to contain and clean spills is readily available in locations where material is being handled and transferred (e.g. secondary containment berms, appropriate sorbent materials, booms, etc.)	
Organic HAP containing coatings, thinners and/or other additives, cleaning materials, and waste materials conveyed from one location to another in closed containers or pipes.	
Mixing vessels which contain organic HAP containing coatings and other materials are closed except when adding to, removing, or mixing the contents.	

**Appendix D**  
**Nylok, LLC**  
**Work Practice Plan Recordkeeping Form / Checklist**

Organic HAP containing material and associated equipment is effectively and efficiently stored, cleaned, mixed, and conveyed.	
<b>Inspector's Notes:</b>	

\_\_\_\_\_  
(Signature of Shift Leader or Designee)

\_\_\_\_\_  
(Date)