ENVIRONMENTAL COMPLIANCE PLAN (OPERATION & MAINTENANCE PLAN)

Star Packaging Corporation
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September 12, 2011

file: SPC OM-3 2011

HISTORY

The most recent air permit for Star Packaging Corp. (SPC), Permit No. 0570293-023-AV includes Specific Condition No. A.15, which is reproduced below:

A.15. Operation and Maintenance Plan. The permittee shall operate and maintain the RTO according to the oxidizer manufacturer's "Environmental Compliance Plan" dated June 24, 2011, or any subsequent revision approved by the EPC.

That plan has been updated herein in order to help insure proper operation of the RTO.

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SECTION 1

POLLUTION SOURCES

General

SP operates a flexographic printing facility. The presses print single or multiple colors on polyethylene film for use as packaging for other manufacturers. The inks used in the printing operation contain solvents which are classified as volatile organic compounds (VOC's).

The facility includes the following sources of VOC emissions:

1. Ink Room
   * where inks are stored and blended

2. Press Rooms
   * cut inks are stored in containers in this area for use in the presses

   * solvent containers for use in cutting the ink to the correct viscosity

   * presses dry the ink and create fugitive emissions

3. Storage Tanks
   * above ground tanks are vented to atmosphere when filling or removal of solvent takes place

4. Oxidizer Control System
   * stack typically emits approximately 1% of the VOC's delivered to the RTO, although it's allowed to emit up to 10% in the permit

5. Miscellaneous
   * Rollers for the presses are cleaned with waste solvent

SECTION 2

RTO VOC CONTROL SYSTEM

General

The RTO was manufactured by Anguil Environmental Systems, Inc. It is designed to treat up to 15,000 cfm of VOC laden air at a rate of up to 200 lb/hr of VOC's. Natural gas is the combustion source.

Operation and Maintenance

Overview

The oxidizer combustion temperature is set at the control panel. The PLC monitors the chamber temperature and adjusts the gas feed to maintain the set point. The PLC monitors a variety of pressure and temperature controls as well as status of key components. Alarms are automatic when set point failures occur or components malfunction.

Maintenance

Routine maintenance is performed by trained SP personnel. Maintenance is broken down into daily, weekly, monthly and quarterly requirements. The following pages show the maintenance checklists.

Daily (Visual)

1. Inspect RTO for visual or audible problems
2. Check temperature settings

Weekly (Visual)

1. Inspect RTO for visual or audible problems
2. Check temperature settings
3. Observe ductwork and connections
4. Inspect connections from presses to exhaust system

(Daily/Weekly check sheet example on following page.)

Monthly/Quarterly preventive maintenance requirements on following pages.

DAILY/WEEKLY VISUAL INSPECTION SHEETS

DATE: Sunday (MM/DD/YY) thru Saturday (MM/DD/YY)

	WEEKLY INSPECTION :	DAILY VISUAL INSPECTIONS :				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1.) Incinerator					
	2.) Air Compressor					
	3.) Chiller					
	Comments:					

MONTHLY RTO PREVENTIVE MAINTENANCE

DATE: _____ PERFORMED BY: _____

PLEASE CHECK-OFF AND INITIAL EACH ITEM AS THEY ARE COMPLETED IN THE SPACE PROVIDED. LIST OTHER WORK WHICH MAY HAVE BEEN PERFORMED OR WHICH MAY NEED TO BE PERFORMED ON BOTTOM OR BACK OF THIS SHEET.

RTO

1. Inspect all system drive belts for wear and proper tension. _____
2. Inspect integrity of ductwork (at each Press). _____
3. Inspect integrity of RTO ductwork. _____
4. Inspect and lubricate all damper actuator arms. _____
5. Lubricate, as required, all DRIVE AND FAN motor bearings. _____
6. Inspect SYSTEM FAN for overall performance. _____
7. Inspect COMBUSTION AIR FAN overall performance. _____
8. Clean and inspect Inlet Filter. (Replace as needed) _____

QUARTERLY RTO PREVENTIVE MAINTENANCE

DATE: _____ PERFORMED BY: _____

PLEASE CHECK-OFF AND INITIAL EACH ITEM AS THEY ARE COMPLETED IN THE SPACE PROVIDED. LIST OTHER WORK WHICH MAY HAVE BEEN PERFORMED OR WHICH MAY NEED TO BE PERFORMED ON BOTTOM OR BACK OF THIS SHEET.

1. Lubricate Blower Fan Bearings per manufactures specifications _____
2. Lubricate Motor Bearings per manufactures specifications _____
3. Inspect Fan Wheel for excessive vibration _____
4. Clean and Inspect Inlet Filter _____
   (Replace as needed)
5. Inspect all system drive belts for wear and proper tension. _____
   (Tighten or Replace as necessary)
6. Inspect System Inlet and Dilution Dampers for free movement _____
7. Inspect linkage for binding, slippage, wear and corrosion _____
   (Clean, adjust and lubricate or replace as needed)
8. Inspect integrity of Duct Work _____

NOTES: _____

_____

_____

_____

_____

SECTION 3

SYSTEM BALANCING

An annual inspection is completed by Anguil Environmental Systems on the oxidizer control system and the press scavenging systems. The inspection is intended to compare the RTO to factory specs and guidelines. The scavenging system inspection is intended to insure optimum capture of VOC.

The oxidizer annual inspection includes the following:

1. Mechanical

An external and internal visual inspection of the RTO and mechanical components is performed. This includes: ductwork, doors, dampers, linkage, heat exchanger(s), fan and motor assembly, burners, stack, and observation ports.

2. Electrical

The electrical components are visually inspected and electronically tested to insure that they are functioning properly. This includes: switches, lights, relays, timers, controllers, recorders, motors, starters, actuators, disconnects, and wiring.

3. Process Control Loops

The temperature and pressure control loops are inspected and tested to verify correct operation and sequence. This includes: visual inspection and testing of the burner controllers, actuators, thermocouples, pressure switches and variable speed drive. Also evaluated are the alarm and shut-down circuits.

4. Scavenging System

Each press is equipped with up to three exhaust fans to remove VOC laden air. The fans discharge to a common plenum which goes to the RTO. The RTO fan pulls from the common plenum and is larger in capacity than the cumulative press fans capacity. This creates a negative pressure in the plenum, thus preventing VOC losses from the plenum. The scavenging system is inspected in the annual inspection.

System Setup Procedure - Operator instructions for startup and shutdown are included on the following two pages.

Regenerative Thermal Oxidizer
Start-up Sequence

The Regenerative Thermal Oxidizer is dependent on Compressed Air provided by the Plant Compressed Air System

Once Compressed Air has been provided the System may now be started.

The Operating Sequence is as follows:

Start System: Press the Start Button on the Human Machine Interface (HMI)
At this time the system will go through an Auto-Start-Up Sequence as follows:

Start Fans
Check Safeties
Monitor Pressures

Once the Combustion Fan, Combustion Airflow Proving, System Fan Air Flow Proving, as well as the Oxidizer Poppet Valve Switching has been established, the system will automatically continue its start-up sequence and will be displayed on the "HMI" as follows:

Burner pre-ignition requirements check
System Purge
Burner Lighting
System heating
Burner on heating to Operating Temperature
Burner at Operating Temperature System Ready in 600 Seconds
Oxidizer Ready

The System is now online.

Shut-down Sequence

The system Shut-Down Sequence is performed automatically as follows:

Shut-Down: At the “HMI” Control Press the Shut-Down Pushbutton.
At this time the RTO will begin its Shut-Down Sequence as follows:

System will go offline Disabling Press Operations
Burner will be shut-off
Fan motors will continue operating until the burner chambers have reached a safe Shut-down temperature, determined by the manufacturer, of 500°F
System will now Shut-off.

SECTION 4

EMPLOYEE TRAINING

Employee training is divided into two categories:
1. Environmental Awareness
2. Equipment O&M

Environmental Awareness

Concern for the environment through conservation of VOC sources is a routine part of employee training.
SPC provides employees an opportunity on a periodic basis to attend onsite seminars regarding VOC emissions, sources, permitting requirements, environmental costs, and future considerations. Key personnel also attend seminars and meetings offered by the Flexible Packaging Association.

Equipment O&M

Larry Priede, head of maintenance at SPC, has been trained by Anguil Environmental in the operation and maintenance of the RTO incinerator. Mr. Priede has trained additional SPC employees regarding the O&M procedures on the RTO.

The primary press suppliers have provided training regarding press maintenance to Larry Priede and to other production personnel.

Documentation of recent training is provided by the letter included on the following page.

This letter is the latest available at the time of this permit application.

October 12, 2010

MR. GLENN GOERING
DIRECTOR OF OPERATIONS
STAR PACKAGING CORPORATION

Subject: Regenerative Thermal Oxidizer Training

This is to certify that on September 29, 2010 a review of the Start-up and Shut-down procedures was held with the following Maintenance personnel in attendance:

1. Klaus Brus

The class consisted of explaining and demonstrating the proper Start-up and Shut-down procedures of our regenerative thermal oxidizer as well as procedures to be followed in the event of an emergency Shut-down or power failure

Sincerely,

Larry Priede
Supervisor of Maintenance
Press and Laminations Departments

SECTION 5

EMERGENCY PROCEDURES

Emergency response numbers are posted at visible locations within the plant. The following writeup is the plant's "RTO Emergency Procedure".

RTO EMERGENCY PROCEDURE

The following emergency response numbers are for oxidizer related problems and are to be handled as follows:

CONTACT:

Klaus Brus	Cell: 377-7931	
Larry Priede	Cell: 731-2858	
Ram Services	Office: 884-1500	Cell: 486-0676

The above listed employees of SPC are on 24 hour call for any and all problems that may occur due to a RTO failure at SPC .

NOTE: Ram Services IS NOT to be called unless authorized by Larry Priede or Glenn Goering

In addition to the above page, if for any reason, the RTO were to shut down, all above employees are instructed to report to Larry Priede, who in turn will report to Glenn Goering the exact problem of the RTO and estimated down time.

Mr. Goering will then call EPC and report immediately.

APPENDIX A

SPARE PARTS LIST

RECOMMENDED COMPONENTS		
COMPONENT	**QUANTITY USED**	**ANGUIL STANDARD PART NUMBER**
BASE, FIREYE	1	BA002
BOOT, AUBURN	2	BO002
CONNECTOR-CLIP, RAJAH	2	CN001
FLEX JOINT, MCM, 6D X 6L	1	FJ006
GASKET, FLAT, 1/8 X 1 STRIP & STICK	2	GS014
GASKET, FLAT, 1/8 X 1 STRIP & STICK	2	GS014
GASKET, MCMASTER C., 2"	2	GS038
GASKET, MCMASTER C., 4"	1	GS042
GASKET, MCMASTER C., 6"	3	GS044
ETHERNET MODEM, AB	1	PL081
T/C MODULE, 4 CH, AB	1	PL086
MICROLOGIX 1400, AB	1	PL088
MICROLOGIX, AB	3	PL092
ALLEN BRADLEY	1	PL131
16-POINT RELAY, AB	1	PL166
PV PLUS COMPACT 1000	2	PL214
REGULATOR, EQUIMETER, 2"	1	RE013
REG. BRYAN DONKIN, 2" NPT	1	RE094
REG. BRYAN DONKIN, 2" NPT	1	RE094
SWITCH, PRESSURE, DWYER, 1950-1-2F	2	SW006
SWITCH, PRESSURE, DWYER, 1950-00-2F	1	SW014
SWITCH, PRESSURE, DWYER, 1950-10-2F	1	SW026

RECOMMENDED COMPONENTS		
COMPONENT	**QUANTITY USED**	**ANGUIL STANDARD PART NUMBER**
SWITCH PRES, DWYER 1950G, 4-20" WC	1	SW051
SWITCH PRES, DWYER 1950G, 4-20" WC	1	SW051
SWITCH PRES, DWYER 1950G, 4-20" WC	1	SW051
SWITCH, PRESSURE, DWYER, 1950-02-2S	1	SW052
SWITCH,MERCOID-DWYER	1	SW110
TRANSFORMER, IGNITION, DONGAN	1	TR011
VALVE, ASCO, 2" NPT	1	VA188
VALVE, BF, 1-1/2", ECLIPSE	1	VA033
VALVE, BF, 1-1/2", ECLIPSE	1	VA033
VALVE, ECLIPSE, 6" BF	1	VA043
VALVE, ON/OFF, ASCO, 2"	1	VA178
VALVE, ON/OFF, ASCO, 2"	1	VA178
VALVE, ASCO, 2" NPT	1	VA188
VALVE, ASCO, 2" NPT	1	VA188
VALVE, BF, 1-1/2", ECLIPSE	1	VA033
VALVE, ECLIPSE, 6" BF	1	VA043
VALVE, ON/OFF, ASCO, 2"	1	VA178
VALVE, ON/OFF, ASCO, 2"	1	VA178
VALVE, ASCO, 2" NPT	1	VA188
VALVE, ASCO, 2" NPT	1	VA188

Actual spare parts inventory is currently being evaluated. The preceding two pages are included in hard-copy versions only of this application and include additional listing of potential spare parts inventory.