



Emission Systems O&M Preventive Maintenance Program

This is the preventive maintenance program for emission systems at CWC-Extron, 1085 West Sherman Blvd, Muskegon MI 49441.

The use of equipment checklists is the way all information regarding preventative maintenance observations are carried out.

Maintenance equipment checklists contain the following basic identification information:

Equipment number, description of system to be inspected, frequency of inspection, date of inspection, if the item is ok or needs repair, gage readings, comments section, notification to supervisor if problem, completed sheet checked, clock number of sheet checker and doc no.

Checklists are completed on a daily (some each shift) weekly, monthly, quarterly or semi-annual basis.

Blank equipment checklists are available in the maintenance office, and are stored in the EAM electronic maintenance program.

Procedure:

- The maintenance manager shall assign a supervisor to be responsible for carrying out this procedure.
- The maintenance supervisor will assign personnel to make the preventive maintenance inspections.
- The inspector will review all items and mark with a check in the appropriate box.
- The completed form is turned in to the maintenance supervisor, who will assign or schedule corrective action by use of the EAM computer maintenance program where a work order will be generated. The work order will include the date, repair and man-hours required.
- The supervisor in charge will identify any equipment requiring maintenance and give the completed checklist to the maintenance coordinator.
- The repairs will be carried on the open work order until the work has been completed.
- Completed copies of current year equipment checklists are maintained in the maintenance office and prior year records are held in the records storage area.

CWC Textron Emission Systems O & M Program

PM Schedule	Description	Type	WO Type
5000-E-D-TUE	D - 3RD SHIFT - MR1 - PLANT TOUR - EQUIPMENT SHUTDOWN - D2 THRU D5	Duplicate	Preventive Maintenance
5100-003-D3	D - 1ST SHIFT - MW - FOUNDRY DUST COLLECTOR - D3	Variable	Preventive Maintenance
5510MR-2M	Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA INSPECTION - WK1	Variable	Preventive Maintenance
5512-009	M - 1ST SHIFT - OIL - GREASE CUPOLA FAN SHAFT BEARINGS - 28 DAYS	Variable	Preventive Maintenance
5512-010	Q - 1ST SHIFT - OIL - GREASE CUPOLA FAN MOTOR - WK1	Variable	Preventive Maintenance
5512-2M	M - 3RD SHIFT - MRS - #1 CUPOLA BLOWER - WK2	Variable	Preventive Maintenance
5513-001	Q - 3RD SHIFT - OIL - DROP BOTTOM # 1 CUPOLA EMISSION FAN BEARINGS - WK1	Variable	Preventive Maintenance
5513-2M	Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA EMISSION FAN - WK1	Variable	Preventive Maintenance
5513-003	D - 3RD SHIFT - OIL - #1 CUPOLA EMISSION FAN MOTOR BEARING - D1 THRU D4	Duplicate	Preventive Maintenance
5514-2M	M - 3RD SHIFT - MW - # 1 CUPOLA EMISSION FAN MOTOR INSPECTIONS - WK2	Variable	Preventive Maintenance
5514-001	M - 3RD SHIFT - OIL - CUPOLA ZURN FAN MOTOR GREASING - WK1	Variable	Preventive Maintenance
5515-001	Q - MAINT. / SMF OC - DROP BOTTOM - WET CAP CLEANING - WK1	Variable	Preventive Maintenance
5515-2M	M - 3RD SHIFT - MR5 - # 1 CUPOLA EMISSION DUCT INSPECTIONS - WK2	Variable	Preventive Maintenance
5516-001	BW - 1ST SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION - ODD	Variable	Preventive Maintenance
5516-2M	Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA SCRUBBER INSPECTION - WK1	Variable	Preventive Maintenance
5516-002	Q - MEACHAM - OC - DROP BOTTOM # 1 CUPOLA - DEMISTER PADS INSPECTION - WK2	Variable	Preventive Maintenance
5516M - 8W	6 - 3RD SHIFT - MR - #1 CUPOLA DEMISTER INSPECTION	Variable	Preventive Maintenance
5517-005	BW - 1ST SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION - ODD	Variable	Preventive Maintenance
5517-2M	Q - 3RD SHIFT - MR - #1 CUPOLA SEPARATOR INSPECTION	Variable	Preventive Maintenance
5519-1-2M	M - 3RD SHIFT - EL - #1 CUPOLA STACK BURNER - WK2	Variable	Preventive Maintenance
5600-D	D - 1ST SHIFT - MR - DUST COLLECTORS TOUR - D1 THRU D5	Duplicate	Preventive Maintenance
5765-D-MON	D - 2ND SHIFT - MR - PLANT TOUR EMISSION - D1 THRU D5	Duplicate	Preventive Maintenance
5766-D	W-2ND SHIFT - MR - PLANT TOUR EMISSION	Variable	Preventive Maintenance
5600-010	D - 1ST SHIFT - MR - PLANT TOUR - D1	Variable	Preventive Maintenance
5800-001	M - 1ST SHIFT - OIL - DUST COLLECTORS 1,2,5,6,12,13,17,19,20 GREASING - WK1	Variable	Preventive Maintenance
5819-001	BW - 2ND SHIFT - MW - # 19 DUST COLLECTOR MECHANICAL CHECK - EVEN	Variable	Preventive Maintenance
5819-002	W - 1ST SHIFT - MW - # 19 DUST COLLECTOR MECH. CHECK	Variable	Preventive Maintenance
5819-007	M - BOB MEACHAM - # 19 DUST COLLECTOR PIPE BUILD UP REVIEW	Variable	Autonomous Maintenance
	Updated 1/26/23		

The environmental department will record information daily by using the “Daily Environmental Check Sheet” 811.001 located in our “Power way” document control system and includes:

- Static pressure for venturi scrubber and demister scrubber
- Emission pump pressure
- Magnesium Hydroxide flow rate
- Static pressure readings for dust collectors: #1, #2, #5, #6, #12, #13, #17, #19, #20
- Visible emissions from all sources
- NCC – emission probe readings for #1, #5, #6, #12, #13

And will record on a weekly basis:

- Emission pond visible observations
- Fugitive dust observations

Deviations will be noted and corrective action taken.

Dry collectors #1, #5, #6, #12, #13, #17, #19, #20 will be black light tested on a semi-annual basis at summer shutdown and winter shutdown.

An outside contractor at a minimum of once a year will conduct detailed inspections of dust collectors and the cupola emission systems.

Checklists and Plant Map

The pages that follow contain the checklists mentioned above and a plant dust collector map.

Updated: 1/26/23

By: Robert Meacham

KT-MUSKEGON**%****MKG Plant**

PM Code	Job Type
5000-E-D-TUE	PM

Description

D - 3RD SHIFT - MR1 - PLANT TOUR - EQUIPMENT SHUTDOWN - D2 THRU D5

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5000-E-D

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) _____ PUT TWO GARNDER DENVER'S COMPRESSOR IN SEQUENCE

MELTING

2) _____ MAKE SURE CHARGE DOORS ARE SUPPORTED CLOSED

SAND SYSTEM: ENSURE HEATER PACKAGES FOR THE FOLLOWING ARE OFF

3) _____ 211 - MOLD DUMP CONVEYOR

4) _____ 212 - VIB DRUM

CUPOLA BLOWER ROOM

5) _____ SHUTDOWN ZURN FAN

6) _____ LEAVE BEARING WATER ON

7) _____ SHUTDOWN MAGNESIUM HYDROXIDE

TUESDAY WEDSNEDAY THURSDAY FRIDAY

KT-MUSKEGON

%

MKG Foundry

PM Code

Job Type

5100-003 - D3 PM

Description

D - 1st SHIFT - MW - FOUNDRY DRY DUST COLLECTOR - D3

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
01	M5100	SAND SYSTEM		AA-MW	DAILY	1	WEEK	Aug 17, 2011 12:00:00 AM

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

Created - Gundy, Michelle (MKG)(MGUNDY) [08/11/2010 10:29]:

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

DURING OPERATION VISUALLY INSPECTION FOR DRY DUST COLLECTORS # 1, #2, #5, #6, #12, #13, #17:

- 1) ___ CHECK FOR LOOSE FASTENERS
- 2) ___ CHECK DRIVE CONDITION
- 3) ___ CHECK MOTOR FOR HOT OR NOISEY
- 4) ___ CHECK BELTS - GOOD OR SLIPPING OR MISSING # _____
- 5) ___ CHECK SHEAVE WARE
- 6) ___ CHECK BEARING CONDITION, HOT OR NOISEY
- 7) ___ CHECK FOR EXCESSIVE VIBRATION
- 8) ___ CHECK TO SEE IF DUST COLLECTOR IS EMITTING

ANY DISCREPANCIES REPORT TO YOUR SUPERVISOR

REV. 08/10/10

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5510MR-2M	PM

Description

Q - 1ST W/E SHIFT - MR - DROP BOTTOM # 1 CUPOLA INSPECTION - WK1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5510	#1 CUPOLA (WEST)		A	QUARTRLY	3	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5510MR-2M
 A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
 B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
 C) PERFORM THE FOLLOWING TASKS
 INSTRUCTIONS: These checks and tests need to be completed on the cupola which is ready to go back into service. This document is not complete until all three signatures are present.

CUPOLA (down) WEST (#1) _____
 TUYERE
 ALARM CHECK
 YES NO

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____

=====

WATER SYSTEM CHECK AJAX PIN CHECK
 YES | NO YES | NO
 PANEL ALARM CHECK _____ EAST OK _____ WEST OK _____

=====

CUPOLA GOING INTO SERVICE YES | NO

- 1 CAP OPENING AND CLOSING PROPERLY _____
- 2) ZURN FAN OPERATING PROPERLY _____
- 3) OXYGEN SYSTEM WORKING _____

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UPON SUCCESSFUL RE-CERTIFICATION OF THE " OUT-OF-SERVICE" CUPOLA, COMPLETE AND SIGN THIS FORM.

MELTING: _____ MAINTENANCE: _____
 (Melting Supervisors Signature) (Maintenance Supervisors Signature)

 (Skilled Trade Signature)

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type
5512-009	PM

Description

M - 1ST SHIFT - OIL - GREASE CUPOLA FAN SHAFT BEARINGS - 28 DAYS

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5512	#1 Cupola Charge Blower		A	MONTHLY	28	DAYS	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5512-009

- A) COMPLETE PROPER LOCKOUT/TAGOUT
- B) IF ANY DISCRPANCIES ARE GOUND IMMEDIATELY CONTACT YOUR SUPERVISOR
- C) PERFORM THE FOLLOWING TASKS

USING THE LUBE EXPERT GREASE (USE OILS000405) THE CUPOLA BLOWER FAN BEARINGS USING THE ROUTE UNDER "MELTING-CUPOLA BLOWER MONTHLY"

- 1) ____ USING CWC#OILS000405 SHELLGADUS S5 V100 GREASE
- 2) ____ GREASE THE 2 FAN SHAFT BEARINGS.

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type							
5512-010	PM							
Description								
Q - 1ST SHIFT - OIL - GREASE CUPOLA FAN MOTOR - WK1*								
Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5512	#1 Cupola Charge Blower		A	QUARTRLY	12	WEEK	
Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed		
Task Instructions								
5512-010 A) COMPLETE PROPER LOCKOUT/TAGOUT B) IF ANY DISCRPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR C) PERFORM THE FOLLOWING TASK 1. USING CWC#OILS000405 SHELL GADUS S5 V100 GREASE 2. USING A MANUAL GREASE GUN ON THE VOLUME SETTING INSERT 11 PUMPS FROM THE GUN INTO EACH OF THE MOTOR BEARINGS (2). 3. GREASE IN IAW (SEE ATTACHED DOCUMENT)								

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type							
5512-2M	PM							
Description								
M - 3RD SHIFT - MR5 - # 1 CUPOLA BLOWER - WK2								
Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5512	#1 Cupola Charge Blower		A	MONTHLY	1	MONTH	
Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed		
Task Instructions								
5512-2M								
A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE								
B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.								
C) PERFORM THE FOLLOWING TASKS								
1)___ Check All Dampers For Smooth Opening & Closing								
2)___ Check All Ducting For Excess Wear								
3)___ Check Blower For Excess Vibration								
4)___ Check Damper Cylinder Shaft Clevis & Pin For Excess Wear								
5)___ Check Inlet Damper For Build Up On Screen								
6)___ Check Inlet Damper For Proper Opening & Closeing								
7)___ Check Mounts Bolts For Blower Motor								
8)___ Keep Blower Room Cleaned Out At All Times								
9)___ CHECK EXPANSION RUBBER FOR CRACKS, DEFECTS, TIGHT INSTALLATION								

KT-MUSKEGON % **MKG Melting**

PM Code	Job Type
5513-001	PM

Description

M - 3rd SHIFT - OILER - # 1 CUPOLA EMISSION FAN BEARINGS

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5513	# 1 Cupola Emission Fan		AA-OIL	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) PERFORM THE FOLLOWING TASKS
 - 1) ___ DRAIN OIL AND FILL WITH NEW, SHOULD BE MID-LEVEL ON SIGHT GLASS

TAKES OILS00046

KT MUSKEGON % MKG Melting

PM Code	Job Type
5513-2M	PM

Description

Q - 3rd SHIFT - MR - # 1 CUPOLA EMISSION FAN

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5513	# 1 Cupola Emission Fan		AA-MR	QUARTRLY	1	N/A	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) ___ Check Boots On Incoming & Out Going Sides Of Fan
- 2) ___ Check Ducting To Staack
- 3) ___ Check Fan Bearings, Mount Bolts
- 4) ___ Check Fan For Vibration
- 5) ___ Check Fan Runner For Build Up On Blades
- 6) ___ Check Guillotine Blades & Guides
- 7) ___ Check Guillotine Cylinder,Hoses.
- 8) ___ Check Louver Coupling, Bearings & Linkage
- 9) ___ Check Louvers & Louver Action
- 10) ___ Check Oil Level & Water Flow
- 11) ___ Check Spray Nozzles To Fan & Drains Are Open

KT-MUSKEGON**%****MKG Melting**

PM Code	Job Type
5513-003	PM

Description

D - 3RD SHIFT - OIL - #1 CUPOLA EMISSION FAN MOTOR BEARING - D1 THRU D4

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5513	#1 Cupola Emission Fan - ZURN FAN		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5513-003

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS
 - 1) ___ CHECK OIL IN SIGHT GLASS FOR 2 BEARINGS, OIL SHOULD BE MID-LEVEL. TAKES "TELLUS S2 M 46" (OILS0046)THERE ARE 4 SIGHT GLASSES IN TOTAL FOR BLOWER BEARINGS.

TAKES "TELLUS S2 M 46" (OILS0046)

MONDAY TUESDAY WEDSNEDAY THURSDAY FRIDAY

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5514-2M	PM

Description

M - 3RD SHIFT - MW - # 1 CUPOLA EMISSION FAN MOTOR INSPECTIONS - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5514	#1 Cupola Emission Fan Motor		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5514-2M

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

- C) PERFORM THE FOLLOWING TASKS
 - 1)___ Check Coupling Bolts & Hub
 - 2)___ Check Motor Mount Bolts

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5514-001	PM

Description

6MTH - 3RD SHIFT - OIL - CUPOLA ZURN FAN MOTOR GREASING - WK1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5514	#1 Cupola Emission Fan Motor		A	6-MONTH	6	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5514-001

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) ___ GREASE 1200 HP ZURN FAN MOTOR TAKES 10 PUMPS CWC (USE: OILS8950)

2) ___ MAKE SURE FLOW THROUGH PLUG IS OPEN BEFORE GREASING AND PLUG IS REINSTALLED AFTER GREASING

KT-MUSKEGON % MKG Melting

PM Code Job Type

5515-001 PM

Description

Q - MAINT. / SMF OC - DROP BOTTOM - WET CAP CLEANING - WK1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5515	#1 Cupola Emission Duct - VENTURI - WET CAP		A	QUARTRLY	3	MONTH	

Material List Equipment Part Description Bin QTY Available QTY Needed

Task Instructions

5515-001

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
 - B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
 - C) PERFORM THE FOLLOWING TASKS
-
- 1) CUPOLA WATER DISCHARGE AT THE STACK CHECK THE PIPING, AIR EMISSION DISCHARGE PIPE, DEMISTER PADS AND VENTURI WATER FLOW

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5515-2M	PM

Description

M - 3RD SHIFT - MR5 - # 1 CUPOLA EMISSION DUCT INSPECTIONS - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5515	#1 Cupola Emission Duct - VENTURI - WET CAP		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5515-2M

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

- C) PERFORM THE FOLLOWING TASKS
 - 1) ___ CHECK / CLEAN OUT LONG TROUGH OF ANY DEBRIS
 - 2) ___ CHECK DUCTING FOR SIGNS OF HOT SPOTS
 - 3) ___ CHECK DUCTING EXPANSION JOINTS FOR WORN BOOTS = CAP
 - 4) ___ CHECK CAP DRAIN FOR EXCESS WEAR
 - 5) ___ CHECK CAP CABLE & CABLE SHEAVES FOR WEAR
 - 6) ___ CHECK CAP STOPS
 - 7) ___ CHECK CAP PIVOT PINS & BUSHINGS
 - 8) ___ CHECK CAP CYLINDER : ROD END, CLEVIS PINS & BUSHINGS
 - 9) ___ CHECK CAP CYLINDER : FOR BLOW BY & CONDITION OF AIR LINES = CONE
 - 10) ___ WHEN CUPOLA IS DOWN FROM OUTSIDE ONLY DO A VISUAL CHECK AT THE INSPECTION COVER - CHECK CONE UPPER SPRAY NOZZLES FOR WEAR
 - 11) ___ WHEN CUPOLA IS DOWN FROM OUTSIDE ONLY DO A VISUAL CHECK AT THE INSPECTION COVER - CHECK CONE OVERTOP OF CUPOLA & MOUNT STRAPS

Organization KT-MUSKEGON
Job Type PM
Assign To %

WORK ORDER

Location
Report Date Mar 2, 2023
Page # 17

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5516-001

BW - 1ST SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION - ODD

PM

M5516 #1 Cupola Scrubber

Scheduled End Date: Mar 18, 2023 12:00:00 AM
Created By: MDONSELAR
Work Order Class: BIWEEKLY
Assigned to code: AA-MR
Assigned to name: Machine Repair

EMP ID _____
DATE _____
HOURS _____

Requested By: _____

Tasks

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) Check All Boots & Ducting For Worn Spots

2) Check Cone For Excess Wear

3) Check Cone For Proper SetTING

4) Check Scrubber For Build Up

5) Check Scrubber For Excess Wear

BW - 1ST SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION - ODD

Part	Desc	Materials	Bin	Requested Qty	Qty on-hand
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KT-MUSKEGON

%

MKG Melting

PM Code	Job Type
5516-2M	PM

Description

Q - 3rd SHIFT - MR - # 1 CUPOLA SCRUBBER INSPECTION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5516	# 1 Cupola Scrubber		AA-MR	QUARTRLY	1	N/A	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) ___ Check All Boots & Ducting For Worn Spots
- 2) ___ Check Cone For Excess Wear
- 3) ___ Check Cone For Proper Setting
- 4) ___ Check Scrubber For Build Up
- 5) ___ Check Scrubber For Excess Wear

KT-MUSKEGON % MKG Melting

PM Code Job Type

5516-002 PM

Description

Q - MEACHAM - OC - DROP BOTTOM # 1 CUPOLA - DEMISTER PADS INSPECTION - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
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27	M5516	#1 Cupola Scrubber		A	QUARTRLY	1	N/A	
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Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5516-002

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

1) _____ Check pads are lying down in the grid framework with no gaps larger than 1 inch between pads

2) _____ Check iron angle braces are in good condition

A) _____ Not broken

B) _____ Still attached to the wall

C) _____ Located in the proper position holding down the demister pads from movement.

3) _____ Check the underside of the demister pads

A) _____ Are the water sprays contacting the bottom of the pads

B) _____ Are all spray heads spraying water

4) _____ Any other issues noted about the pads or water system report back to Bob Meacham

KT-MUSKEGON % **MKG Melting**

PM Code	Job Type
5516M-8W	PM

Description

6 - 3rd SHIFT - MR - # 1 CUPOLA DEMISTER INSPECTION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5516	# 1 Cupola Scrubber		AA-MR	G-MONTH	6	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

MANNING : 1 ON BURNER / 1 ON WATCH / 1 ON CLEANING

TO COMPLETE THIS TASK THE FOLLOWING IS REQUIRED:
 RENTAL OF STEAM JENNIE FROM REDI RENTAL, [REF. P.O. # 72387]
 INCLUDE 150 FOOT OF STANDARD HIGH PRESSURE HOSE FROM REDI RENTAL

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

- 1) ___ CHECK DEMISTER PADS TO ENSURE THEY ARE SECURLY FASTENED
- 2) ___ CHECK INSIDE DEMISTER TO ENSURE THERE IS NO DEBRIS - CAREFULLY REMOVE IF FOUND
- 3) ___ VISUALLY INSPECT NOZZLES FOR DAMAGE

Organization KT-MUSKEGON
Job Type PM
Assign To %

WORK ORDER

Location
Report Date Mar 2, 2023
Page # 18

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5517-005

BW - 1ST SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION - ODD

PM

M5517 #1 Cupola Separator - Demister - VENTURI

Scheduled End Date: Mar 18, 2023 12:00:00 AM
Created By: MDONSELAR
Work Order Class: BIWEEKLY
Assigned to code: AA-MR
Assigned to name: Machine Repair

EMP ID _____
DATE _____
HOURS _____

Requested By: _____

Tasks

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- C) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) Check All Boots & Ducting For Worn Spots
- 2) Check All Emission Drain Lines To Pond For Leaks & Worn Sections
- 3) Check Mount Bolts For Motors & Pumps
- 4) Check Packing Glands For Leakage
- 5) Check Pump Pressure Should Be At 55 To 60 P.S.I.
- 6) Check Separator For Plugged Screens
- 7) Check Sheaves, Vee Belts For Wear & Alignment
- 8) Check Sub Pumps
- 9) CHECK DEMISTER PADS TO ENSURE THEY ARE SECURLY FASTENED
- 10) CHECK INSIDE DEMISTER TO ENSURE THERE IS NO DEBRIS - CAREFULLY REMOVE IF FOUND
- 11) VISUALLY INSPECT NOZZLES FOR DAMAGE

BW - 1ST SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION - ODD

Part	Desc	Materials	Bin	Requested Qty	Qty on-hand
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KT-MUSKEGON % **MKG Melting**

PM Code Job Type
 5517-2M PM

Description

Q - 3rd SHIFT - MR - # 1 CUPOLA SEPARATOR INSPECTION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5517	# 1 Cupola Separator [Demister]		AA-MR	QUARTRLY	1	N/A	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) PERFORM THE FOLLOWING TASKS

NOTE: CUPOLA BOTTOM MUST BE DROPPED FOR THESE TASKS TO BE STARTED.

- 1) ___ Check All Boots & Ducting For Worn Spots
- 2) ___ Check All Emission Drain Lines To Pond For Leaks & Worn Sections
- 3) ___ Check Mount Bolts For Motors & Pumps
- 4) ___ Check Packing Glands For Leakage
- 5) ___ Check Pump Pressure Should Be At 55 To 60 P.S.I.
- 6) ___ Check Separator For Plugged Screens
- 7) ___ Check Sheaves, Vee Belts For Wear & Alignment
- 8) ___ Check Sub Pumps

KT-MUSKEGON % MKG Melting

PM Code	Job Type
5519-1-2M	PM

Description

M - 3RD SHIFT - EL - # 1 CUPOLA STACK BURNER - WK2

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
27	M5510	#1 CUPOLA (WEST)		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5519-1-2M

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

- B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

- C) PERFORM THE FOLLOWING TASKS
 - 1) ___ Check All Panel Indicator Lights
 - 2) ___ Check Burner Ignition
 - 3) ___ Check Burner Modulation
 - 4) ___ Check Combustion Blower
 - 5) ___ Check Maxon Valve Operation
 - 6) ___ Check Modulation Of Combustion Air
 - 7) ___ Check Purge Cycle
 - 8) ___ Check Spark Plug Connections
 - 9) ___ Check Thermocouple Signal At Barber Colman Unit
 - 10) ___ Check Vent Valve
 - 11) ___ Check All Wire Connections At Stack Burner And Main Controls

KT-MUSKEGON

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MKG Maintenance

PM Code	Job Type
5600-D	PM

Description

D - 1ST SHIFT - MR - DUST COLLECTORS TOUR - D1 THRU D5

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
44	M5800	ENVIRONMENTAL		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

5600-D

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR

C) PERFORM THE FOLLOWING TASKS

Cleaning Rm - #1 & #2 DUST COLLECTORS - Visually Check For Stack Emissions And Leaks (If Visible Emissions Contact Your Supervisor)

1) Record #1 Manometer Reading:

Mon____ Tue____ Wed____ Thurs____ Fri____ (If <5.0 - >12.0 Contact Your Supervisor)

2) Check #1 Air Pulse Unit Operation - Record Inlet Air Pressure

Mon____ Tue____ Wed____ Thurs____ Fri____

3) Record #2 Manometer Reading:

Mon____ Tue____ Wed____ Thurs____ Fri____ (If <3.0 - >10.0 Contact Your Supervisor)

4) Check #2 Air Pulse Unit Operation - Record Inlet Air Pressure

Mon____ Tue____ Wed____ Thurs____ Fri____

5) MELT/ CLEANING ROOM - #5 DUST COLLECTOR Manometer Readings: (If <3.0 - >10.0 Contact Your Supervisor)

Mon____ Tue____ Wed____ Thurs____ Fri____

6) KNOCK / OFF - #6 DUST COLLECTOR Visually Check For Stack Emissions And Leaks

Mon____ Tue____ Wed____ Thurs____ Fri____ (If Visible Emissions Contact Your Supervisor)

7) Record #6 Manometer Reading: (If <5.0 - >12.0 Contact Your Supervisor)

Mon____ Tue____ Wed____ Thurs____ Fri____

8) Check #6 Air Pulse Unit Operation - Record Inlet Air Pressure Mon____ Tue____ Wed____ Thurs____ Fri____

9) #7 BOND BIN - SHAKER - NOTE*** DOES NOT HAVE A MANOMETER

Check TO ENSURE SHAKE DOWN OPERATION AND Visually Check For Stack Emissions And Leaks

Mon____ Tue____ Wed____ Thurs____ Fri____ (If Visible Emissions Contact Your Supervisor)

KT-MUSKEGON**%****MKG Maintenance**

Task Instructions

10) #11 BOND RECEIVER - NOTE*** DOES NOT HAVE A MANOMETER

Inspect RECEIVER For Misc. Failures such as Loose Fasteners, Missing Guards, Etc. Check Air Pulse Unit Operation. Visually Check For Stack Emissions And Leaks

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

11) ACS VACUUM - #12 DUST COLLECTOR Visually Check For Stack Emissions And Leaks (If Visible Emissions Contact Your Supervisor)

Record #12 Manometer Reading:

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If <14.0 - >20.0 Contact Your Supervisor)

Check #12 Air Pulse Unit Operation - Record Inlet Air Pressure (Operating Pressure 85 - 100 Psi, Adjust Regulator If Necessary)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

12) ___ FINAL BLAST - #13 DUST COLLECTOR Visually Check For Stack Emissions And Leaks (If Visible Emissions Contact Your Supervisor)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

Record #13 Manometer Readings: (IF <5.0 - >13.0 Contact Your Supervisor)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

Check #13 Air Pulse Unit Operation - Record Inlet Air Pressure (Operating Pressure 85 - 100 Psi, Adjust Regulator If Necessary)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

13)#17 SHAKEOUT DUST COLLECTOR

Inspect Collector For Misc. Failures (Loose Fasteners, Missing Guards, Etc.) Check Air Pulse Unit Operation - Record Inlet Air Pressure:

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

14)#19 DUST COLLECTOR - Record #19 Manometer Reading:

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If <2.0 - >10.0 Contact Your Supervisor)

Check #19 Air Pulse Unit Operation - Record Inlet Air Pressure

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

15) ___ VIBRA DRUM - #20 DUST COLLECTOR Visually Check For Stack Emissions And Leaks

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

Record #20 Manometer Readings: (IF <2.0 - >10.0 Contact Your Supervisor)

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___ (If Visible Emissions Contact Your Supervisor)

16) Check #20 Air Pulse Unit Operation - Record Inlet Air Pressure (Operating Pressure 85 - 100 Psi, Adjust Regulator If Necessary)

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MKG Maintenance

Task Instructions

Mon ___ Tue ___ Wed ___ Thurs ___ Fri ___

****Were Any Air Pressure Gauges Readjusted? Yes ___ No ___ IF YES MAINT.SUPV NOTIFY EHS**

****Were Any Manometer Readings Out-Of-Spec? Yes ___ No ___ IF YES MAINT. SUPV NOTIFY EHS**

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5765-D-MON	PM

Description

D - 2ND SHIFT - MR - PLANT TOUR EMISSION - D1 THRU D5

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

- 5765-D**
- A) COMPLETE PROPER LOCKOUT / TAGOUT
 - B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR
 - C) PERFORM THE FOLLOWING TASKS
 - 1) _____ KAISER ROOM CHECK THE HEATER AND FAN ONLY
 - 2) _____ CHECK AJAX FURNACE HYDRAULIC OIL LEVEL
 - 3) _____ CHECK AJAX FURNACE TILT CYLINDERS FOR LEAKS
 - A) VERIFY TILT VALVE IS WORKING PROPERLY
 - B) VERIFY HYD. SYS FOR TILT IS WORKING PROPERLY
 - C) VERIFY PIVOT POINTS FOR TILT ARE LUBRICATED
 - 4) _____ CHECK CUPOLA EMISSION WATER, DRAINS, AND COOLING WATER..
 - 5) _____ CHECK EMISSION STACK FOR LEAKS,WEAR OR VIBRATIONS.
 - 6) _____ CHECK EMISSION PUMP ROOM FOR PROPER TEMP (WINTER MONTHS)7) _____ CHECK EMISSION PIT SUMP PUMP
 - 8) _____ LISTEN FOR LOOSE/SQUEALING BELTS
 - 9) _____ VISUAL CHECK OF EMISSION PUMP FOR LEAKING MECH. SEAL
 - 10) _____ CHECK EMISSION PUMP DISCHARGE PRESURE AT HEADER SHOULD BE 70+
 - 11) _____ CHECK PUMP AMP DRAW AT ELC. PANEL SHOULD BE = 62 AMPS +/- 2 AMPS
 - 12) _____ HEATERS AND PUMP PITS FOR EXCESS WATER.
 - 13) _____ IN ZURN FAN ROOM - RECORD THE AMP READING ON THE LOG _____
 - 14) _____ CHECK TO MAKE SURE VENTURI PANEL IS POWERED ON (LOCATED IN BLOWER ROOM) BUMP OPEN BUTTON TO MAKE SURE VENTURI IS WORKING.
 - 15) _____ Check Ajax Bac Operation Of Pumps, Fans, Water Flow.
 - 16) _____ Check Bac Chemicals.
 - 17) _____ Check Ceramic Tower And Tuyere Pumps.
 - 18) _____ MAG. HYDROXIDE ROOM - CHECK PUMP OPERATION AND TANK LEVEL
 - RECORD MAG. HYDROXIDE FLOW METER READING :
 - Mon. G.P.M. _____ Tue. G.P.M. _____ Wed. G.P.M. _____ Thur. G.P.M. _____ Fri. G.P.M. _____
 - _____ (If No Reading Contact Your Supervisor)
 - 19) _____ Check Bond System. Check For Leaks, Bad Boosters Etc.- Make Sure You Have Spare Boosters Built Up For New Sand System.
 - 20) _____ Check Pond Water Level. POND SHOULD AT/AROUND THE 5TH PIN
CHECK PROPANE VAPORIZERS
 - 21) _____ RECORD LINE PRESSURE.
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI Fri. _____ PSI (If Below 50psi, Contact Your Supervisor

Task Instructions

22) _____ IS PROPANE PUMP OPERATING YES _____ NO _____ RECORD PSI
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI Fri. _____ PSI (If Below
80psi, Contact Your Supervisor)

23) _____ IF PUMP IS NOT OPERATING - WILL PUMP OPERATE IN HAND ? YES _____ NO _____

24) _____ RECORD TUYERE PUMP PRESSURE (Desired PSI 65 - 85)
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI
Fri _____ PSI

25) _____ RECORD MARLEY TOWER PUMP PRESSURE (Desired PSI 28-32)
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI
Fri _____ PSI

26) _____ RECORD THE WET CAP PUMP PRESSURE (Desired PSI 55-70)
Mon _____ PSI Tue _____ PSI Wed _____ PSI Thur. _____ PSI
Fri _____ PSI

27) #5 Dust Collector - Ductile Collector (Range 3.0 - 10.0)
_____ #1 MANOMETER READINGS M _____ T _____ W _____ Th _____ F _____

MONDAY TUESDAY WEDSNEDAY THURSDAY FRIDAY

_____ _____ _____ _____ _____
28) Was Supervisor notified of all out of spec. readings? Yes _____ No _____

KT-MUSKEGON % **MKG Plant**

PM Code Job Type
 5766-D PM

Description

W - 2nd SHIFT - MR - PLANT TOUR EMISSION

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		AA-MR	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

DAILY PM - 2nd Shift, MACHINE REPAIR REVISED ON : 2/22/06, 1/17/06,
 INSTRUCTION :

- INITIAL COMPLETED TASKS ON THE LINE PROVIDED, ON FRONT OF PM
 - a. @ BOOKED HOURS - ENTER YOUR CLOCK NUMBER AND DATE COMPLETED
 - b. @ REMARKS AREA - TO BE REVIEWED BY SUPERVISION
- DOCUMENT NON-EMERGENCY ISSUES / Write COMPLETED Repairs Starting With - DONE INITIAL
- 1) ___ 1250HP - CENTAC COMPRESSOR: CHECK COOLING WATER OPERATION & RECORD HOUR METER READING : _____
- 2) ___ 700HP - CENTAC COMPRESSOR: CHECK COOLING WATER OPERATION & RECORD HOUR METER READING : _____
- 3) ___ CHECK KAISER COMPRESSORS FOR; PROPER OIL LEVEL, AIR FILTER CONDITION & RECORD HOUR METERS : # 64 _____ #65 _____
- 4) ___ CHECK AJAX FURNACE HYDRAULIC OIL LEVEL.
- 5) ___ CHECK AJAX FURNACE TILT CYLINDERS FOR LEAKING.
- 6) ___ Check Cupola Emission Water, Drains, And Cooling Water.
- 7) ___ RECORD OPERATING CUPOLA EMISSION SYSTEM MANOMETER READINGS.
 OPERATING CUPOLA NO. _____ HIGH _____ LOW _____
 (If No Reading Contact Your Supervisor)
 - Diffenence Between HIGH & LOW Reading _____ , [IF Difference is greater than (13) Contact Your MAINTENANCE SUPERVISOR ' IMMEDIATELY ' .
- 8) ___ IN Zurn Fan ROOM - " At-Start-Of-Shift " : Record Vibration & amp. Readings on log sheet
 RECORD NORTH BEARING (MILS) _____
 RECORD SOUTH BEARING (MILS) _____ [RANGE LESS THAN 2.0 MILS]
- 9) ___ Check Ajax Bac's Operation Of Pumps, Fans, Water Flow.
- 10) ___ Check Bac Chemicals.
- 11) ___ Check Ceramic Tower And Tuyere Pumps.
- 12) ___ Check Emission Pit Sump Pump.
- 13) ___ Check Emission Pond Water Chemicals.
- 14) ___ MAG. HYDROXIDE ROOM - CHECK PUMP OPERATION AND TANK LEVEL
 - RECORD MAG. HYDROXIDE FLOW METER READING : G.P.M. _____
 (If No Reading Contact Your Supervisor)
- 15) ___ Check Bond System Over Daily. Check For Leaks, Bad Boosters Etc.
 - Make Sure You Have Spare Boosters Built Up For New Sand System.
- 16) ___ Check New Sand System Over Daily. Check For Leaks, Bad Boosters Etc.
- 17) ___ Check Pond Water Level.
- CHECK PROPANE VAPORIZERS
- 18) ___ IS PROPANE PUMP OPERATING YES ___ NO ___
- 19) ___ IF PUMP IS NOT OPERATING - WILL PUMP OPERATE IN HAND ? YES ___ NO ___
- 20) ___ RECORD LINE PRESSURE. _____ PSI (If Below 45 psi, Contact Your Supervisor)
- 21) ___ RECORD TUYERE PUMP PRESSURE _____ PSI , (Desired PSI)

KT-MUSKEGON % MKG Plant

Task Instructions

- 22) _____ RECORD MARLEY TOWER PUMP PRESSURE _____ PSI, (Desired PSI)
- 23) _____ RECORD WET COLLECTOR PUMP PRESSURE _____ PSI, (Desired PSI)

KT-MUSKEGON % **MKG Plant**

PM Code	Job Type
5600-010	PM

Description

D - 1st SHIFT - MR - PLANT TOUR - D1

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5600	GENERAL PLANT		AA-MR	DAILY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed

Task Instructions

- A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
- B) PERFORM THE FOLLOWING TASKS
- C) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.
- 1) _____ CHECK EMISSION STACK FOR LEAKS, WARE OR VIBRATIONS.
- 2) _____ CHECK EMISSION PUMP ROOM FOR PROPER TEMP (WINTER MONTHS)
- 3) _____ HEATERS AND PUMP PITS FOR EXCESS WATER.
- 4) _____ CHECK POND LEVEL (NO MORE 15" BELOW BAIL).
- 5) _____ CHECK KAISER COMP ROOM, HEATER, OIL AND FLOOR, WATER, FILTERS CLEAN AS NECESSARY.
- 6) _____ CHECK BOND SILO AND WATCH FOR PROPER CYCLE FILL BLOW

REVISIONS:
NEW 09/13/11 REQ #134

KT-MUSKEGON % MKG Maintenance

PM Code	Job Type							
5800-001	PM							
Description								
M - 1ST SHIFT - OIL - DUST COLLECTORS 1,2,5,6,12,13,17,19 GREASING - WK1								
Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
44	M5800	ENVIRONMENTAL		A	MONTHLY	1	MONTH	
Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed		
Task Instructions								
<p>5800-001</p> <p>A) COMPLETE PROPER LOCKOUT/ TAGOUT PROCEDURE</p> <p>B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR</p> <p>C) PERFORM THE FOLLOWING TASKS</p> <p>1) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #1 DUST COLLECTOR (M5801)</p> <p>2) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER ON #2 DUST COLLECTOR (M5802)</p> <p>3) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #5 DUST COLLECTOR (M5805)</p> <p>4) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #6 DUST COLLECTOR (M5806)</p> <p>5) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 2 AUGER BEARINGS ON #12 DUST COLLECTOR (M5812)</p> <p>6) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER ON #13 DUST COLLECTOR (M5813)</p> <p>7) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER ON #17 DUST COLLECTOR (M5817)</p> <p>8) _____ GREASE THE 2 PILLOW BLOCK BEARINGS FOR THE BLOWER AND THE 4 AUGER BEARINGS ON #19 DUST COLLECTOR (M5819)</p>								

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5819-001	PM

Description	
BW - 2ND SHIFT - MW - # 19 DUST COLLECTOR MECHANICAL CHECK - EVEN	

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5819	# 19 SAND SYSTEM DUST COLLECTOR 90,000 CFM		A	BIWEEKLY	2	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions						
<p>5819-001</p> <p>A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR. C) PERFORM THE FOLLOWING TASKS</p> <p>1) _____ CHECK AUGER EAST BELTS (CWC# BEVE3081) AND WEST CHAIN FOR TENSION</p> <p>2) _____ CHECK AUGER SHEAVES AND SPROCKET FOR WEAR</p> <p>3) _____ CHECK BLOWER BELTS FOR TENSION AND WEAR</p> <p>4) _____ CHECK BLOWER AND MOTOR SHEAVES FOR WEAR</p> <p>5) _____ CHECK BLOWER AND LOUVER BOOTS (SEALS) FOR WEAR</p>						

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5819-002	PM

Description

W - 1ST SHIFT - MW - # 19 DUST COLLECTOR MECH. CHECK

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5819	# 19 SAND SYSTEM DUST COLLECTOR 90,000 CFM		A	WEEKLY	1	WEEK	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5819-002

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE
 B) PERFORM THE FOLLOWING TASKS
 C) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR

- 1) _____ CHECK DRIVE BELTS ON EAST END OF AUGER
- 2) _____ CHECK BEARING ON EST END OF AUGER FOR NOISE OR CHATTER
- 3) _____ CHECK CHAIN ON WEST END OF AUGER FOR TIGHTNESS
- 4) _____ CHECK BEARING ON WEST END OF AUGER
- 5) _____ CHECK AIR LOCKS (TWO) FOR NOISE OR VIBRATION
- 6) _____ CHECK BELTS ON BLOWER FOR LOOSE OR DAMAGE OR NOISE (BEVE0850)
- 7) _____ CHECK BEARINGS TEMP ON BLOWER
- 8) _____ CHECK SEALS FROM DUST COLLECTOR TO BLOWER AND LOUVER SEALS OR BOOTS
- 9) _____ CHECK FOR STACK VIBRATION

KT-MUSKEGON % MKG Plant

PM Code	Job Type
5819-007	AUT

Description

M - BOB MEACHAM - # 19 DUST COLLECTOR PIPE BUILD UP REVIEW

Cost Code	Equipment	Description	Location	Assigned to	Class	Freq	UOM	Deactivated
79	M5819	# 19 SAND SYSTEM DUST COLLECTOR 90,000 CFM		A	MONTHLY	1	MONTH	

Material List	Equipment	Part	Description	Bin	QTY Available	QTY Needed
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Task Instructions

5819-007

A) COMPLETE PROPER LOCKOUT / TAGOUT PROCEDURE

B) IF ANY DISCREPANCIES ARE FOUND IMMEDIATELY CONTACT YOUR SUPERVISOR.

C) PERFORM THE FOLLOWING TASKS

- 1) ___ OPEN ACCESS DOORS ON #19 DC
- 2) ___ CHECK FOR MATERIAL BUILD UP IN PIPE
- 3) ___ CHECK FOR MATERIAL BUILD UP CHOP GATE
- 4) ___ REPORT RESULTS TO BOB MEACHAM