Appendix O&M Plan
Operation and Maintenance Plan

Emission Unit No.: 001 – Filter/Receiver Baghouse

Operation and Maintenance Plan for Particulate Control: [Rule 62-296.700, F.A.C.]

A) Process Parameters:

1. Source Designators: Filter/Receiver Baghouse
2. Baghouse Manufacturer: F.L. Schmidt
3. Model Name and Number: 398FR12(6)
4. Design Flow Rate: 25,000 DSCFM
5. Efficiency Rating at Design Capacity: 0.03 gr/dscf
6. Pressure Drop: 0" – 6" of water
7. Air to Cloth Ratio: 4:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: N/A
10. Bag Cleaning Cycle: Jet Pulse
11. Gas Flow Rate: 25,000 DSCFM
12. Gas Temperatures: inlet - Ambient; outlet - Ambient.
13. Stack Height Above Ground: 200 ft.
14. Exit Diameter: 6.25 ft^2
15. Exit Velocity: 80 f.p.s.
16. Water Vapor Content: 15%
17. Process Controlled by Collection System: Transfer of material from charging vessels to silos
18. Material Handling Rate: 881 tons per hour
19. Operation Schedule: 8760 hours/yr.

B) The following observations, checks and operations apply to this source and shall be conducted on the schedule specified:

<u>Daily (when in operation)</u>

1. Check cleaning system.
2. Check all valves and dampers.
3. Observe stack (visual).
4. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
5. Note any unusual occurrence in the process being ventilated.
6. Observe indicators on control panel.
7. Assure that dust is being removed from system.

<u>Weekly (when in operation)</u>

1. Check and record pressure drop.

2. Check accuracy of all indicating equipment.
3. Check drive components on fan.
4. Check packing glands.
5. Operate all damper valves (isolation, by-pass, etc.).
6. Check bag cleaning sequence to see that all valves are opening and closing properly.
7. Check pressure drop indicating equipment for plugged lines.
8. Check compressed air lines, including line oilers and filters.

Monthly

1. Check cleaning mechanism moving parts.
2. Check all drive belts and chains for wear and tension.
3. Spot check for bag leaks and holes.
4. Inspect fans for corrosion, blade wear, and material build-up.
5. Check all hoses and clamps.
6. Inspect housing for corrosion.
7. Spot check bag condition inside bag collectors.

Quarterly

1. Inspect baffle plate for wear.
2. Thoroughly inspect bags.
3. Check duct for dust build-up.
4. Observe damper valves for proper seating.
5. Check gaskets on all doors.
6. Inspect paint.
7. Check screw conveyor flighting.

Annually

1. Check all bolts.
2. Check welds.
3. Inspect hopper for wear.
4. Check airlock rotor for wear.

C) Records:

Records of inspections, maintenance, and performance parameters shall be retained for a minimum of five years and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request. [Rules 62-213.440(1)(b)2.b., F.A.C.]

Emission Unit Nos.: 006 and 007 – Two Interstitial Silo Baghouses

Operation and Maintenance Plan for Particulate Control: [Rule 62-296.700, F.A.C.]

A) Process Parameters:

1. Source Designators: Interstitial Silo No. 1 and Interstitial Silo No. 2 baghouse
2. Baghouse Manufacturer: F.L. Schmidt Airtech
3. Model Name and Number: 48DS8FM
4. Design Flow Rate: 1790 DSCFM
5. Efficiency Rating at Design Capacity: 0.03 gr/dscf
6. Pressure Drop: 0" – 6" of water
7. Air to Cloth Ratio: 4.3:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: N/A
10. Bag Cleaning Cycle: Jet Pulse
11. Gas Flow Rate: 1790 DSCFM
12. Gas Temperatures: inlet - Ambient; outlet - Ambient.
13. Stack Height Above Ground: 191 ft.
14. Exit Diameter: 0.97 ft^2
15. Exit Velocity: 37 f.p.s.
16. Water Vapor Content: 15%
17. Process Controlled by Collection System: transfer of material to and from the interstitial silos
18. Material Handling Rate: 881 tons per hour
19. Operation Schedule: 8760 hours/yr.

B) The following observations, checks and operations apply to this source and shall be conducted on the schedule specified:

<u>Daily (when in use)</u>

1. Check cleaning system.
2. Check all valves and dampers.
3. Observe stack (visual).
4. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
5. Note any unusual occurrence in the process being ventilated.
6. Observe indicators on control panel.
7. Assure that dust is being removed from system.

<u>Weekly (when in use)</u>

1. Check and record pressure drop.
2. Check accuracy of all indicating equipment.
3. Check drive components on fan
4. Check packing glands.
5. Operate all damper valves (isolation, by-pass, etc.).

6. Check bag cleaning sequence to see that all valves are opening and closing properly.
7. Check pressure drop indicating equipment for plugged lines.
8. Check compressed air lines, including line oilers and filters.

Monthly

1. Check cleaning mechanism moving parts.
2. Check all drive belts and chains for wear and tension.
3. Spot check for bag leaks and holes.
4. Inspect fans for corrosion, blade wear, and material build-up.
5. Check all hoses and clamps.
6. Inspect housing for corrosion.
7. Spot check bag condition inside bag collectors.

Quarterly

1. Inspect baffle plate for wear.
2. Thoroughly inspect bags.
3. Check duct for dust build-up.
4. Observe damper valves for proper seating.
5. Check gaskets on all doors.
6. Inspect paint.
7. Check screw conveyor flighting.

Annually

1. Check all bolts.
2. Check welds.
3. Inspect hopper for wear.
4. Check airlock rotor for wear.

C) Records:

Records of inspections, maintenance, and performance parameters shall be retained for a minimum of five years and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request. [Rule 62-213.440(1)(b)2.b., F.A.C.]

Emission Unit No.: 002 – Truck Loading Station No. 1

Operation and Maintenance Plan for Particulate Control: [Rule 62-296.700, F.A.C.]

A) Process Parameters:

1. Source Designators: Truck Loading Baghouse
2. Baghouse Manufacturer: DCL
3. Model Name and Number: CFM 330-1F14
4. Design Flow Rate: 2000 DSCFM
5. Efficiency Rating at Design Capacity: 0.03 gr/dscf
6. Pressure Drop: 0" – 6" of water
7. Air to Cloth Ratio: 7.3:1
8. Bag Weave: Non-woven
9. Bag Material: Spun Bond Filter
10. Bag Cleaning Conditions: N/A
11. Bag Cleaning Cycle: Jet pulse
12. Gas Flow Rate: 2000 DSCFM
13. Gas Temperatures: inlet - Ambient; outlet - Ambient.
14. Stack Height Above Ground: 40 ft.
15. Exit Diameter: 0.63 ft
16. Exit Velocity: 64 f.p.s.
17. Water Vapor Content: 15%
18. Process Controlled by Collection System: loading of trucks
19. Material Handling Rate: 300 tons per hour
20. Operation Schedule: 8760 hours/yr.

B) The following observations, checks and operations apply to this source and shall be conducted on the schedule specified:

<u>Daily (when in use)</u>

1. Check cleaning system.
2. Check all valves and dampers.
3. Observe stack (visual).
4. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
5. Note any unusual occurrence in the process being ventilated.
6. Observe indicators on control panel.
7. Assure that dust is being removed from system.

<u>Weekly (when in use)</u>

1. Check and record pressure drop
2. Check accuracy of all indicating equipment.
3. Check drive components on fan.
4. Check packing glands.
5. Operate all damper valves (isolation, by-pass, etc.).

6. Check bag cleaning sequence to see that all valves are opening and closing properly.
7. Check pressure drop indicating equipment for plugged lines.
8. Check compressed air lines, including line oilers and filters.

Monthly

1. Check cleaning mechanism moving parts.
2. Check all drive belts and chains for wear and tension.
3. Spot check for bag leaks and holes.
4. Inspect fans for corrosion, blade wear, and material build-up.
5. Check all hoses and clamps.
6. Inspect housing for corrosion.
7. Spot check bag condition inside bag collectors.

Quarterly

1. Inspect baffle plate for wear.
2. Thoroughly inspect bags.
3. Check duct for dust build-up.
4. Observe damper valves for proper seating.
5. Check gaskets on all doors.
6. Inspect paint.
7. Check screw conveyor flighting.

Annually

1. Check all bolts.
2. Check welds.
3. Inspect hopper for wear.
4. Check airlock rotor for wear.

C) Records:

Records of inspections, maintenance, and performance parameters shall be retained for a minimum of five years and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request. [Rule 62-213.440(1)(b)2.b., F.A.C.]

Emission Unit No.: 003 – Truck and Railcar Loading Station No. 2

Operation and Maintenance Plan for Particulate Control: [Rule 62-296.700, F.A.C.]

A) Process Parameters:

1. Source Designators: Truck and Railcar Loading Baghouse
2. Baghouse Manufacturer: DCL
3. Model Name and Number: CFM 330-1F14
4. Design Flow Rate: 2000 DSCFM
5. Efficiency Rating at Design Capacity: 0.03 gr/dscf
6. Pressure Drop: 0" – 6" of water
7. Air to Cloth Ratio: 7.3:1
8. Bag Weave: Non-woven
9. Bag Material: Spun Bond Filter
10. Bag Cleaning Conditions: Jet pulse
11. Bag Cleaning Cycle: Optional
12. Gas Flow Rate: 2000 DSCFM
13. Gas Temperatures: inlet - Ambient; outlet - Ambient.
14. Stack Height Above Ground: 40 ft.
15. Exit Diameter: 0.63 ft
16. Exit Velocity: 64 f.p.s.
17. Water Vapor Content: 15%
18. Process Controlled by Collection System: loading of trucks and railcars
19. Material Handling Rate: 300 tons per hour
20. Operation Schedule: 8760 hours/yr.

B) The following observations, checks and operations apply to this source and shall be conducted on the schedule specified:

<u>Daily (when in use)</u>

1. Check cleaning system.
2. Check all valves and dampers.
3. Observe stack (visual).
4. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
5. Note any unusual occurrence in the process being ventilated.
6. Observe indicators on control panel.
7. Assure that dust is being removed from system.

<u>Weekly (when in use)</u>

1. Check and record pressure drop
2. Check accuracy of all indicating equipment.
3. Check drive components on fan.
4. Check packing glands.
5. Operate all damper valves (isolation, by-pass, etc.).

6. Check bag cleaning sequence to see that all valves are opening and closing properly.
7. Check pressure drop indicating equipment for plugged lines.
8. Check compressed air lines, including line oilers and filters.

Monthly

1. Check cleaning mechanism moving parts.
2. Check all drive belts and chains for wear and tension.
3. Spot check for bag leaks and holes.
4. Inspect fans for corrosion, blade wear, and material build-up.
5. Check all hoses and clamps.
6. Inspect housing for corrosion.
7. Spot check bag condition inside bag collectors.

Quarterly

1. Inspect baffle plate for wear.
2. Thoroughly inspect bags.
3. Check duct for dust build-up.
4. Observe damper valves for proper seating.
5. Check gaskets on all doors.
6. Inspect paint.
7. Check screw conveyor flighting.

Annually

1. Check all bolts.
2. Check welds.
3. Inspect hopper for wear.
4. Check airlock rotor for wear.

C) Records:

Records of inspections, maintenance, and performance parameters shall be retained for a minimum of five years and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request. [Rule 62-213.440(1)(b)2.b., F.A.C.]

Emission Unit Nos.: 011 and 012 – Barge Surge Vessel and Charging Vessels Baghouse Nos. 1 and 2

Operation and Maintenance Plan for Particulate Control: [Rule 62-296.700, F.A.C.]

A) Process Parameters:

1. Source Designators: One Barge Surge Vessel Baghouse and One Charging Vessel Baghouse
2. Baghouse Manufacturer: DCE
3. Model Name and Number: Dalamatic DLM V20/10F5
4. Design Flow Rate: 1400 DSCFM
5. Efficiency Rating at Design Capacity: 0.03 gr/dscf
6. Pressure Drop: 0" – 6" of water
7. Air to Cloth Ratio: 8:1
8. Bag Material: Felt
9. Bag Cleaning Conditions: Jet pulse
10. Bag Cleaning Cycle: Optional
11. Gas Flow Rate: 1400 DSCFM
12. Gas Temperatures: inlet - Ambient; outlet - Ambient.
13. Stack Height Above Ground: 30 ft.
14. Exit Diameter: 0.71 ft
15. Exit Velocity: 40 f.p.s.
16. Water Vapor Content: 15%
17. Process Controlled by Collection System: loading surge vessel and charging vessels
18. Material Handling Rate: 440 tons per hour
19. Operation Schedule: 3460 hours/yr.

B) The following observations, checks and operations apply to this source and shall be conducted on the schedule specified:

<u>Daily (when in use)</u>

1. Check cleaning system.
2. Check all valves and dampers.
3. Observe stack (visual).
4. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
5. Note any unusual occurrence in the process being ventilated.
6. Observe indicators on control panel.
7. Assure that dust is being removed from system.

<u>Weekly (when in use)</u>

1. Check and record pressure drop
2. Check accuracy of all indicating equipment.
3. Check drive components on fan.
4. Check packing glands.

5. Operate all damper valves (isolation, by-pass, etc.).
6. Check bag cleaning sequence to see that all valves are opening and closing properly.
7. Check pressure drop indicating equipment for plugged lines.
8. Check compressed air lines, including line oilers and filters.

Monthly

1. Check cleaning mechanism moving parts.
2. Check all drive belts and chains for wear and tension.
3. Spot check for bag leaks and holes.
4. Inspect fans for corrosion, blade wear, and material build-up.
5. Check all hoses and clamps.
6. Inspect housing for corrosion.
7. Spot check bag condition inside bag collectors.

Quarterly

1. Inspect baffle plate for wear.
2. Thoroughly inspect bags.
3. Check duct for dust build-up.
4. Observe damper valves for proper seating.
5. Check gaskets on all doors.
6. Inspect paint.
7. Check screw conveyor flighting.

Annually

1. Check all bolts.
2. Check welds.
3. Inspect hopper for wear.
4. Check airlock rotor for wear.

C) Records:

Records of inspections, maintenance, and performance parameters shall be retained for a minimum of five years and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request. [Rule 62-213.440(1)(b)2.b., F.A.C.]

Emission Unit No.: 021 – Ship Loading Baghouse

Operation and Maintenance Plan for Particulate Control: [Rule 62-296.700, F.A.C.]

A) Process Parameters:

1. Source Designators: Ship Loading (controlled by a portable baghouse that is rented from a third party company as needed or a baghouse on the ship)
2. Baghouse Manufacturer: Various
3. Model Name and Number: Various
4. Design Flow Rate: 48,179 DSCFM (maximum)
5. Efficiency Rating at Design Capacity: 0.03 gr/dscf
6. Pressure Drop: 0 - 17 inches of water
7. Air to Cloth Ratio: 9.6:1 (maximum)
8. Bag Material: polyester, felt, or similar material
9. Bag Cleaning Conditions: Jet pulse
10. Bag Cleaning Cycle: Various
11. Gas Flow Rate: 48,179 DSCFM (maximum)
12. Gas Temperatures: inlet - Ambient; outlet - Ambient.
13. Stack Height Above Ground: Various
14. Exit Diameter: Various
15. Exit Velocity: Various
16. Water Vapor Content: Ambient
17. Process Controlled by Collection System: Ship Loading
18. Material Handling Rate: 300 tons/hour
19. Operation Schedule: 2500 hours/yr.

B) The following observations, checks and operations apply to this source and shall be conducted on the schedule specified:

<u>Daily (When onsite)</u>

1. Check and record pressure drop.
2. Check cleaning system.
3. Check all valves and dampers.
4. Observe stack (visual).
5. Walk through system listening for proper operation (audible leaks, proper fan and motor functions, bag cleaning systems, etc.).
6. Note any unusual occurrence in the process being ventilated.
7. Observe indicators on control panel.
8. Assure that dust is being removed from system.

C) Records:

Records of inspections, maintenance, and performance parameters shall be retained for a minimum of five years and shall be made available to the Department or Environmental Protection Commission of Hillsborough County upon request. [Rule 62-213.440(1)(b)2.b., F.A.C.]