

ATTACHMENT A

Operation and Maintenance Plan for Particulate Matter

Separation Technologies, LLC

**Feed Flyash Storage Dome Vent (FR103)  
(EU 001, Emission Point a)**

Process Parameters:

1. Source Designators: Flyash Storage Dome
2. Baghouse Manufacturer: IAC
3. Model Name and Number: 56PE-BVI-196; S6 P/N 301-0527
4. Design Flow Rate: 7305 DSCFM
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Air to Cloth Ratio: 5.5:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 100° F.
11. Stack Height Above Ground: ~ 90 ft.
12. Exit Diameter: ~ 14 in.
13. Process Controlled by Collection System: Receipt and storage of unprocessed feed flyash
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Dome Reclaim Pump Vent Filters (FR103A and FR103B)  
(EU 001, Emission Points b and c)**

Process Parameters:

1. Source Designators: Dome Reclaim Pumps A and B (one baghouse per pump)
2. Baghouse Manufacturer: IAC
3. Model Name and Number: 72TB-BVI-25; S6 P/N 301-0524
4. Design Flow Rate: 400 DSCFM
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Air to Cloth Ratio: 1.6:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 100° F.
11. Stack Height Above Ground: ~ 10 ft.
12. Exit Diameter: ~ 8 in.
13. Process Controlled by Collection System: Pumping of feed flyash from dome
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Separators A, B, and C Feed Tank Vent Filters (FR101A, FR101B, FR101C)  
(EU 001, Emission Points d, e, and f)**

Process Parameters:

1. Source Designators: Separator Feed Surge Tanks (3)
2. Baghouse Manufacturer: Z and Z Conveying Technology
3. Model Name and Number: CF 48-41.5(6)-20
4. Design Flow Rates: 2,848 DSCFM (FR101A, Emission Point d)  
1,574 DSCFM (FR101B, Emission Point e)  
1,794 DSCFM (FR101C, Emission Point f)
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Air to Cloth Ratio: 3.8:1 (FR101A, point d), 2.1:1 (FR101B, point e), 2.4:1 (FR101C, point e)
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 100° F.
11. Stack Height Above Ground: ~ 75 ft. (~ 50 ft., point f)
12. Exit Diameter: ~ 14 in.
13. Process Controlled by Collection System: Receiving of feed flyash for separation
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Separator Dust Collector (FR102)  
(EU 001, Emission Point g)**

Process Parameters:

1. Source Designators: Separator Operation
2. Baghouse Manufacturer: Z and Z Conveying Technology
3. Model Name and Number: 100-08(6)-20 PO number 52378
4. Design Flow Rate: 6000 ACFM
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0-6 in W.G.
7. Air to Cloth Ratio: 4.9:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 70° F.
11. Stack Height Above Ground: ~ 35 ft.
12. Exit Diameter: ~ 12 in. x 10 in.
13. Process Controlled by Collection System: Flyash separation and pump loading
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Clean-up Vacuum Vent  
(EU 001, Emission Point h)**

Process Parameters:

1. Source Designators: Clean-up Vacuum
2. Baghouse Manufacturer: Max Vac
3. Model Name and Number: AK15E
4. Design Flow Rate: 400 ACFM
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Air to Cloth Ratio: 3.3:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 70° F.
11. Stack Height Above Ground: ~ 5 ft.
12. Exit Diameter: ~ 6 in.
13. Process Controlled by Collection System: Cleanup of the process building floors
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Ammonia Removal and Dryer System Flyash Surge Bin Vent Filter (FR108)  
(EU 002, Emission Point n)**

Process Parameters:

1. Source Designators: Flyash Surge Bin Vent
2. Baghouse Manufacturer: Z and Z Conveying Technology
3. Model Name and Number: CF 30-41.5(6)-20
4. Design Flow Rate: 2,530 DSCFM
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Bag Material: Polyester
8. Bag Cleaning Conditions: Pulse Jet
9. Outlet Gas Temperature: ~ 100° F.
10. Stack Height Above Ground: ~ 75 ft.
11. Exit Diameter: ~ 14 in.
12. Process Controlled by Collection System: Receipt of ProAsh® to Ammonia Removal System
13. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Ammonia Removal and Dryer System Lime Storage Bin Vent (FR109)**  
**(EU 002, Emission Point o)**

Process Parameters:

1. Source Designators: Lime Storage Silo
2. Baghouse Manufacturer: Filter Technology
3. Model Name and Number: BV-250
4. Design Flow Rate: 400 DSCFM
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Air to Cloth Ratio: 1.6:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 100° F.
11. Stack Height Above Ground: ~ 75 ft.
12. Exit Diameter: ~ 14 in.
13. Process Controlled by Collection System: Loading of Lime Storage Silo
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Dryer Filter (FR106)**  
**(EU 002, Emission Point p)**

Process Parameters:

1. Source Designators: Ammonia Removal System (dryer exhaust)
2. Baghouse Manufacturer: MAC Equipment, Inc.
3. Model Name and Number: 144MCF572-364 Job Number: 108365
4. Design Flow Rate: 20,000 ACFM
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0-6 in W.G.
7. Air to Cloth Ratio: 3.7:1
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 200° F.
11. Stack Height Above Ground: ~ 90 ft.
12. Exit Diameter: ~ 36 in.
13. Process Controlled by Collection System: Ammonia removal and flyash drying
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Silo 4 and Silo 5 Vent Filters (FR104 and FR105)  
(EU 003, Emission Points i and j)**

Process Parameters:

1. Source Designators: Silos 4 and 5 Loading
2. Baghouse Manufacturer: Z and Z Conveying Technology
3. Model Name and Number: CF 36-41.5(6)-20
  
4. Design Flow Rate: 2,120 DSCFM (FR104, Emission Point i)  
1,593 DSCFM (FR105, Emission Point j)
  
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Air to Cloth Ratio: 2.8:1 (FR104, point i), 2.1:1 (FR105, point i)
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 100° F.
11. Stack Height Above Ground: ~ 180 ft.
12. Exit Diameter: ~ 14 in.
13. Process Controlled by Collection System: Loading of separated flyash into silos
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

**Silo 4 and Silo 5 Truck Loadout Vent Filters (FR104A and FR105A)  
(EU 003, Emission Points k and l)**

Process Parameters:

1. Source Designators: Silo Nos. 4 and 5 Truck Loading
2. Baghouse Manufacturer: DCL, Inc.
3. Model Name and Number: CFM330-114
4. Design Flow Rate: 1600 DSCFM (each baghouse)
5. Efficiency Rating at Design Capacity: 99.95%
6. Pressure Drop: 0 - 6 in W.G.
7. Air to Cloth Ratio: 2.1:1 (each baghouse)
8. Bag Material: Polyester
9. Bag Cleaning Conditions: Pulse Jet
10. Outlet Gas Temperature: ~ 100° F.
11. Stack Height Above Ground: ~ 25 ft.
12. Exit Diameter: ~ 8 in.
13. Process Controlled by Collection System: Loadout of flyash into trucks
14. Operation Schedule: 24 hrs./day; 7 days/wk.; 52 wk./yr.

The following observations, checks and operations apply to each baghouse and shall be conducted **for each baghouse** on the schedule specified and recorded accordingly:

Daily (during operation)

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

Weekly (during operation)

1. Check compressed air lines and associated equipment.

Monthly

1. Check cleaning mechanism moving parts.
3. Check all drive belts and chains for wear and tension.
4. Check all hoses clamps and fittings for rust, corrosion, wear, or damage.
5. Check accuracy of differential pressure gauges .

Quarterly

1. Check the bag/filter cleaning sequence for proper operation.
2. Observe the bags/filters for proper tension as applicable and signs of possible failure and replace as necessary.
3. Inspect the exhaust system for any material buildup or damage to the duct and repair or replace as necessary.
4. Inspect housing for corrosion.
5. Inspect the fans for corrosion, material build-up, loose belts, and general deterioration.

Annually

1. Check all screws, bolts, welds, belts, and hoses.
2. Inspect all moving parts and lubricate as needed.
3. Internally inspect the baghouse for wear or material build-up.
4. Check all compressed air lines for proper operation.
5. Check the cleaning cycle for proper operation.
6. Inspect the power supply and all piping and tubing.

**Records:**

Records of inspections and maintenance shall include a date and time of the inspection and/or maintenance performed. The records shall be retained for a minimum of two years and shall be made available to the Environmental Protection Commission of Hillsborough County upon request.

ATTACHMENT B

Selective Catalytic Oxidizer Plan

Separation Technologies, LLC

The following observations, checks and operations apply to the Selective Catalytic Oxidizer and shall be conducted on the schedule specified and recorded accordingly:

Daily (during operation)

1. Check and record the differential pressure drop across the ammonia catalytic oxidation system.
2. Check and record the temperature across the ammonia catalytic oxidation system

Weekly (during operation)

1. Perform a visual check of the ammonia catalytic oxidation system in an effort to identify any equipment malfunctions (i.e. leaks, improper airflows, burner operation, etc.). Any noted malfunctions and the corrective action taken shall be recorded.

Every Six Months

1. Inspect the gas train
2. Check all motor intakes for buildup of debris or material, clean as required
3. Inspect the process ductwork
4. Visually inspect the outside of Oxidizer
5. Visually inspect the expansion joints on oxidizer system
6. Visually inspect the flame for proper combustion.
7. Check the lubrication of all fan bearings
8. Check that all equipment guards, doors, and safety tags are in place and are properly attached
9. Clean out all sensing lines and ports to the transmitters and switches. Replace if necessary.
10. Check for cracks and clean the spark igniter on the burner
11. Leak test natural gas piping connections with bubble solution

Annually

1. Visually inspect the inside of oxidizer
2. Take a catalyst sample and send it for testing
3. Check the pressure gauges and replace if necessary
4. Check all thermocouples for accurate sensing and replace if necessary
5. Check the UV Sensor and clean sensor site tube. Replace if necessary
6. Clean the site glass and replace if necessary
7. Check the bolt tightness on the oxidizer access doors
8. Check all of the transmitters for proper operation
9. Test all safeties by tripping each component individually to ensure all components are working correctly
10. Re-gasket and reseal all access doors with new gasketing, if necessary
11. Cycle all valves, check all limits, and check all strokes of actuators for correct setup
12. Check vibration levels on all fans

**Records:**

Records of inspections and maintenance shall include a date and time of the inspection and/or maintenance performed. The records shall be retained for a minimum of two years and shall be made available to the Environmental Protection Commission of Hillsborough County upon request.