# TEST REPORT COMPLIANCE EMISSION TEST MAT ASPHALT, LLC ASPHALT PLANT DRUM MIXER BAGHOUSE CHICAGO, ILLINOIS

Prepared For:

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# **REVIEW AND CERTIFICATION**

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature:	for Maility	Date:	January 11, 2019
Name:	Steve Flaherty, QSTI	Title:	District Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature: _	Hy H. Tyle	_ Date: _	January 11, 2019
Name:	Henry M. Taylor, QSTO	Title:	Quality Assurance Manager



# 1.0 SUMMARY OF TEST PROGRAM AND RESULTS

#### 1.1 TEST PROGRAM OBJECTIVES

Montrose Air Quality Services, LLC (Montrose) was contracted by MAT Asphalt, LLC to perform a compliance emission test at their facility located in Chicago, Illinois.

The test was conducted to determine the concentration and emission rate of particulate matter (PM) as well as the opacity of visible emissions (VE) from the asphalt plant drum mixer baghouse stack. The purpose of the test was to demonstrate compliance with the testing requirements of Illinois Environmental Protection Agency (IEPA) Construction Permit No. 17070024 (I.D. No. 031600QKI).

The test was conducted in accordance with the sampling and analytical procedures presented in Test Plan No. 024AS-473273-PP-68 dated August 23, 2018. A summary of the test program is presented in Table 1-1.

TABLE 1-1 SUMMARY OF TEST PROGRAM

Date	Source	Activity/ Pollutants	Test Methods	No. of Runs	Run Duration
12/11/18	Baghouse Stack	Compliance/PM, VE	1, 2, 3, 4, 5, 9	3	60 Minutes

#### 1.2 TEST PROGRAM PARTICIPANTS

A list of project participants is included below:

#### **Facility Information**

#### **Testing Company Information**

Testing Firm:Montrose Air Quality Services, LLCContact:Mr. Steve FlahertyTitle:District ManagerTelephone:847-487-1580 Ext. 12417Email:sflaherty@montrose-env.com

Mr. Joseph Haughey of MAT Asphalt, LLC coordinated the test and monitored process operations during testing. Mr. Steve Flaherty, Mr. Rob Burton, and Mr. Alan Morales of Montrose performed the test. Mr. Steve Flaherty was the onsite field test supervisor and qualified source testing individual for the test.



### 1.3 SUMMARY OF TEST RESULTS

The test results are detailed in Section 4.0 of this document. The test results indicate that PM and VE were within their respective permit compliance limits. A summary of the test results is presented in Table 1-2.

TEST RUN NO. TEST DATE TEST TIME	:	1 12/11/18 08:00-09:15	3 12/11/18 12:32-13:39	4 12/11/18 14:10-15:15	Average	Permit Compliance Limit
Particulate Matte	r					
Concentration, gr/	dscf	0.0177	0.0221	0.0210	0.0203	0.04
Emission rate, lb/h		4.41	5.04	4.97	4.81	30.59
Emission rate, lb/t	on	0.0148	0.0170	0.0166	0.0161	
TEST RUN NO.	:	1	2	3		
TEST DATE	:	12/11/18	12/11/18	12/11/18		Compliance
TEST TIME	:	08:05-09:05	10:05-11:05	12:40-13:40	Average	Limit
TEST TIME	:				Average	
Visible Emission Opacity, Highest 6	-	1.0	0.8	0.4	0.7	20

TABLE 1-2 SUMMARY OF COMPLIANCE TEST RESULTS



# 2.0 SOURCE DESCRIPTION

## 2.1 FACILITY AND SOURCE DESCRIPTION

The compliance test was conducted on the baghouse stack at the MAT Asphalt, LLC asphalt plant in Chicago, Illinois for PM and VE determination. The source is a 400 ton/hr Natural Gas/Distillate Oil-Fired Drum Mix Asphalt Plant Mixer controlled by a Baghouse with Knockout Box and Fabric Filter.

#### 2.2 SAMPLING LOCATIONS

The sampling location and number of sampling points were as follows:

Sampling Location	Stack Diameter (inches)	Port Location Upstream from Disturbance (inches)	Port Location Downstream from Disturbance (inches)	No. of Ports	Sampling Points per Port	Total Points
Baghouse Stack	60.5	84	300	2	12	24

## 2.3 OPERATING CONDITIONS AND PROCESS DATA

Plant personnel established the test conditions and collected all applicable process and control equipment operating data.



# 3.0 TEST METHOD DETAILS

#### 3.1 LIST OF TEST METHODS

Testing was conducted pursuant to the following procedures:

- Code of Federal Regulations, Title 40, Part 60 (40 CFR 60), Appendix A, USEPA Methods 1, 2, 3, 4, 5, and 9
- Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source Specific Methods

#### 3.1.1 Sampling Locations (USEPA Method 1)

The sampling point locations were determined following the procedural requirements of USEPA Method 1. The sampling location and number of sampling points are provided in Subsection 2.2.

#### 3.1.2 Volumetric Flow Rate (USEPA Method 2)

Gas velocity and volumetric flow rate were determined following USEPA Method 2 procedures. Velocity traverses were performed using a Type-S pitot tube. Temperature measurements were conducted using a digital read-out meter and a chromel-alumel (Type-K) thermocouple.

#### 3.1.3 Molecular Weight (USEPA Method 3)

The stack gas molecular weight was determined following USEPA Method 3. Gas samples were collected in 16-liter Tedlar bags using an integrated bag collection system. The samples were analyzed for oxygen ( $O_2$ ) and carbon dioxide ( $CO_2$ ) concentrations using an Orsat analyzer.

#### 3.1.4 Moisture Content (USEPA Method 4)

The stack gas moisture content was determined in conjunction with the USEPA Method 5 sampling train in accordance with USEPA Method 4, Section 16.1.

#### 3.1.5 Particulate Matter Determination (USEPA Method 5)

PM was determined following the procedures described in USEPA Method 5 - Determination of Particulate Emissions from Stationary Sources.

#### 3.1.5.1 Sampling Apparatus

The PM sampling train met design specifications established by the USEPA and consisted of the following:

- Nozzle Borosilicate glass with sharp, tapered leading edge.
- Probe With a heating system capable of maintaining a probe exit temperature of 248 °F ± 25 °F.
- Pitot Tube Type-S attached to probe for monitoring stack gas velocity.



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- Heated Filter Holder Borosilicate glass with a 4-in. Teflon frit filter support and a silicone rubber gasket. The holder design provides a positive seal against leakage from the outside or around the filter. A quartz-fiber filter meeting the specifications in USEPA Method 5 was installed in the filter holder. The filter holder was heated to 248 °F ± 25 °F. A thermocouple was placed in the back half of the filter support in direct contact with the sample stream.
- Draft Gauge Inclined manometer with a readability of 0.01-in. H<sub>2</sub>O in the 0 to 10-in. range.
- Impingers Four impingers connected in series with glass ball joints. The first, third, and fourth impingers were of the Greenburg-Smith design, but modified by replacing the standard tip with a ½-in. I.D. glass tube extending to within ½-in. of the bottom of the impinger flask. The second impinger was of the Greenburg-Smith design with a standard tip.
- Metering System Apex Model 522, vacuum gauge, leak-free pump, thermometers capable of measuring temperature to within 5 °F, dry gas meter with ± 2 percent accuracy, and related equipment as required to maintain an isokinetic sampling rate and to determine sample volume.

#### 3.1.5.2 Sampling Procedures

Approximately 200 grams of silica gel was weighed and placed in a sealed impinger prior to each test run. Quartz-fiber filters were initially heated to 248 °F  $\pm$  25 °F for 2 to 3 hours, desiccated for at least 2 hours, and tare weighed to the nearest 0.1 mg on an analytical balance. The sampling train was set up with the probe as shown in Figure 3-1. The first and second impingers each contained 100 milliliters (mL) of deionized/distilled water, the third impinger was initially empty, and the fourth impinger contained silica gel.

The sampling train was leak-checked at the sampling site prior to each test run by plugging the inlet to the nozzle and pulling a 15-in. Hg vacuum, and at the conclusion of the test by plugging the inlet to the nozzle and pulling a vacuum equal to the highest vacuum reached during the test run.

The pitot tube and lines were leak-checked at the test site prior to and at the conclusion of each test run. The check was made by blowing into the impact opening of the pitot tube until 3 or more inches of water was recorded on the manometer and then capping the impact opening and holding it for 15 seconds to assure it was leak-free. The static pressure side of the pitot tube was leak-checked by the same procedure, except suction was used to obtain the 3-in. H<sub>2</sub>O manometer reading. Crushed ice was placed around the impingers to keep the temperature of the gases leaving the last impinger at 68 °F or less.

During sampling, stack gas and sampling train data were recorded at each sampling point and whenever significant changes occurred in stack flow conditions. Isokinetic sampling rates were set throughout the sampling period with the aid of a calculator.

#### 3.1.5.3 Sample Recovery Procedures

After sampling was completed, the sampling train was moved carefully from the test site to the cleanup area. The sample fractions were recovered as follows:

Container 1 - The filter was removed from its holder, placed in a petri dish, and sealed.



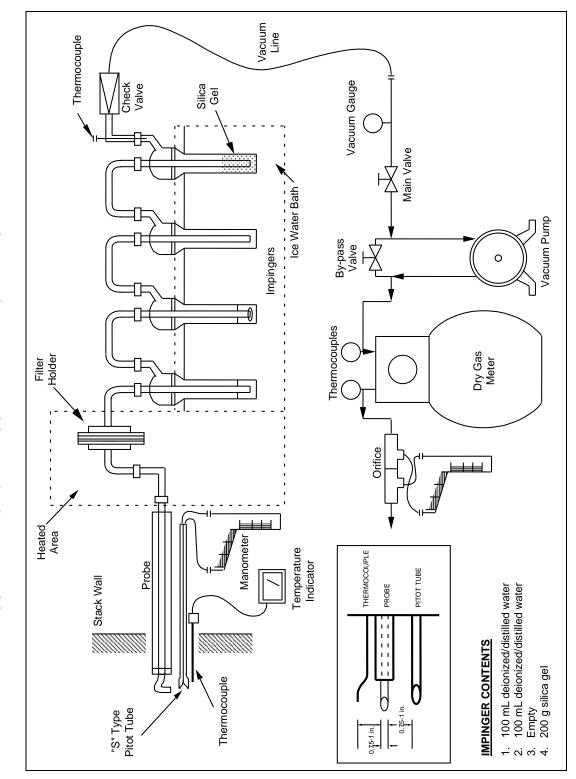


FIGURE 3-1 USEPA METHOD 5 PARTICULATE MATTER SAMPLING TRAIN



Container 2 - PM was removed from the probe with the aid of a brush and acetone rinsing. Loose PM and acetone washings from all sample-exposed surfaces prior to the filter were placed in a glass jar, sealed, and labeled. The liquid level was marked after the container was sealed.

Container 3 - 200 mL of acetone was taken for the blank analysis. The blank was obtained and treated in a similar manner as the contents of Container 2.

Contents of the first three impingers were measured for volume and discarded. The contents of the fourth impinger (silica gel) were placed in a polyethylene bottle for subsequent weighing to the nearest 0.5 gram.

#### 3.1.5.4 Analytical Procedures

The analytical procedures followed those described in USEPA Method 5.

Container 1 - The filter and any loose PM from this sample container were placed in a glass weighing dish, dried at 105 °C for 2 hours, placed in a desiccator for 24 hours, and weighed to a constant weight to the nearest 0.1 mg.

Container 2 - The acetone washings were transferred to a beaker with a tared Teflon liner, evaporated to dryness at ambient temperature and pressure, placed in a desiccator for 24 hours, and weighed to a constant weight to the nearest 0.1 mg.

Container 3 - The acetone blank was transferred to a beaker with a tared Teflon liner, evaporated to dryness at ambient temperature and pressure, placed in a desiccator for 24 hours, and weighed to a constant weight to the nearest 0.1 mg.

The term "constant weight" means a difference of no more than 0.5 mg or 1 percent of the total weight less tare weight, whichever is greater between two consecutive readings, with no less than 6 hours of desiccation between weighings.

#### 3.1.6 Visible Emissions Determination (USEPA Method 9)

Visual opacity of emissions was determined in accordance with USEPA Method 9. A certified VE observer visually monitored and recorded the emission opacity (%) at 15-second intervals during each test run.



# 4.0 TEST RESULTS

The test results are presented in Table 4-1<sup>1</sup>.

The calculation summaries, field data, laboratory data, process data, calibration data, and test program qualifications are included in the appendices.

#### DISCUSSION

A total of four Method 5 PM test runs were conducted. Following the second test run, the Method 5 sampling train failed the post-test leak check, and an additional test run was conducted. Therefore, Table 4-1 presents the PM results for Test Run Nos. 1, 3, and 4.

Both qualitative and quantitative factors contribute to field measurement uncertainty and should be taken into consideration when interpreting the results contained within this report. Whenever possible, Montrose personnel reduce the impact of these uncertainty factors through the use of approved and validated test methods. In addition, Montrose personnel perform routine instrument and equipment calibrations and ensure that the calibration standards, instruments, and equipment used during test events meet, at a minimum, test method specifications as well as the specifications of the Montrose Quality Manual and ASTM D7036-04. The limitations of the various methods, instruments, equipment, and materials utilized during this test have been reasonably considered, but the ultimate impact of the cumulative uncertainty of this project is not fully identified within the results of this report



<sup>&</sup>lt;sup>1</sup> MEASUREMENT UNCERTAINTY STATEMENT

TEST RUN NO. : TEST DATE : TEST TIME :	1 12/11/18 08:00-09:15	3 12/11/18 12:32-13:39	4 12/11/18 14:10-15:15	Average
Plant Production Data				
Truck loads	24	27	18	23
Average ton/hr	298.4	297.1	298.9	298.1
Stack Gas Parameters				
Temperature, av. °F	253.8	267.4	271.0	264.1
Velocity, av. ft/sec	49.2	45.1	47.2	47.1
Volumetric flow, acfm	58,880	53,998	56,545	56,474
Volumetric flow, scfm	43,019	38,715	40,342	40,692
Volumetric flow, dscfh	1,742,412	1,593,668	1,656,583	1,664,221
Moisture, av. % vol.	32.5	31.4	31.6	31.8
Carbon dioxide, av. % vol. db	5.6	5.9	6.2	5.9
Oxygen, av. % vol. db	10.1	10.0	9.9	10.0
Particulate Sample				
Time, min.	60.0	60.0	60.0	
Volume, dscf	40.895	36.137	36.817	37.949
Filter media PM collected, mg	31.0	29.5	23.3	27.9
Probe wash PM collected, mg	15.9	22.4	26.9	21.7
Total filterable PM collected, mg	46.9	51.9	50.1	49.6
Isokinetic ratio, %	108.9	105.2	103.1	105.7
Filterable PM				
Concentration, grains/dscf	0.0177	0.0221	0.0210	0.0203
Concentration, x10 <sup>-6</sup> lb/dscf	2.529	3.164	3.003	2.899
Emission rate, lb/hr	4.41	5.04	4.97	4.81
Emission rate, lb/ton	0.0148	0.0170	0.0166	0.0161
TEST RUN NO. :	1	2	3	
TEST DATE :	12/11/18	12/11/18	12/11/18	
TEST TIME :	08:05-09:05	10:05-11:05	12:40-13:40	Average
Visible Emissions				
Opacity, Highest 6-min. avg. %	1.0	0.8	0.4	0.7

# TABLE 4-1BAGHOUSE STACK PM AND VE TEST RESULTS



MAT Asphalt, LLC: Chicago, Illinois December 2018 Asphalt Plant Drum Mixer Baghouse Stack Compliance Test

# APPENDIX A CALCULATION SUMMARIES



#### USEPA Method 4 Moisture Determination Sample Calculations

<b>A</b> 12 4			
Client:	MAT Asphalt		
Location: Source:	Chicago, IL Baghauga Exhaust		
Date:	Baghouse Exhaust 12/11/2018		
Run #:	1		
	1		
Data Input:		00 mon (1 <sup>3</sup>	
Volume metered		38.760 ft <sup>3</sup>	
	n coefficient (Y <sub>d</sub> ):	0.995 dimensionless	
Barometric pres		29.56 inches Hg	
Meter sample rai		1.52 inches H₂O 33.8 °F	
	t temperature (T <sub>m</sub> ):		
Stack Temperatu	ture collected (V <sub>ic</sub> ):	418.2 milliliters 253.8 °F	
-			
Static Pressure (	(51):	-0.1 inches H <sub>2</sub> O	
		ns (29.92 inches Hg, 68.0 °F):	
Volume of samp			
$Vm_{std} = V_m \times Y_d \times$	$\left(\frac{528.0^{\circ} R}{29.92'' Hg}\right) \times \left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_{m} + 460}\right)$	= 4	0.895 dscf
Volume of water	vapor in sample:		
$V_{wstd} = \frac{0.0470}{ml}$	$\frac{7 \text{ ft}^3}{1000 \text{ st}^3} \times \text{V}_{\text{lc}}$	= 1	9.685 scf
Fractional moist	ure content of stack gas:		and a state of the
		(a) A set of the se	
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd})}$	a V <sub>wstd</sub> )	= 0	.3249 B <sub>wo</sub>
Percent Moisture			
%moisture = E	2 100	_	32.49 %
Fractional moist	ure content of stack gas at satura	ted conditions:	
$T_{s(^{\circ}K)} = \big(\big(T_{s} - S^{\circ}\big)\big)$	32)*0.5556)+273	=	396.2 °Kelvin
$\mathbf{P}_{s(mmHg)} = \left(\mathbf{P}_{ba}\right)$	$\left(\frac{S_t}{13.6}\right) \times 25.401$	= 7	50.85 mm Hg
	(B))) where:		
√[10 <sup>[^</sup>	$\left(\frac{B}{(T_{s(\%)}-C)}\right)\right) \qquad \qquad$		0000
	(mmHg) C=27.65	= 1.	0000
	e at saturated conditions:		
· ·· · ·	<ul> <li>If the second sec</li></ul>		
/or noiscure <sub>satura</sub>	$_{ted} = B_{wos} \times 100$	= 1	00.00 %
<ul> <li>A second sec second second sec</li></ul>	e used for emissions calculations		
Percent moisture	e used for emissions calculations	an ta an ann an an an ann an an an an ann an a	e o su a contra contra de la composición.

r

## USEPA Method 2 Volumetric Flow Rate Sample Calculations (Circular Ducts)

Client:	MAT Asphalt		
Location:	Chicago, IL		
Source:	Baghouse Exhaust		
Date:	12/11/2018		
Run #:	1		
Data Input			
Carbon Dioxide	e (CO <sub>2</sub> ):	5.6 %	
Oxygen (O <sub>2</sub> ):		10.1 %	
Nitrogen (N <sub>2</sub> ):		84.3 %	
Fractional Mois	ture Content (B <sub>ws</sub> )	0.3249 dimensionless	
Stack Temperat		253.8 °F	
Pitot Coefficien	· •	0.84 dimensionless	
Average square		0.7051 inches H <sub>2</sub> O	
Barometric Pre		29.56 inches Hg	
Static Pressure		-0.10 inches H <sub>2</sub> O	
Stack diameter		60.50 inches 19.9636 ft <sup>2</sup>	
Stack area (A <sub>s</sub> ):		19.9636 <b>n</b>	
		ons (29.92 inches Hg, 68.0 °F):	
Dry molecular v	veight of stack gas:		
$M_{d} = (0.44 \times \%)$	$(0.32 \times (0.32 \times (0.20))) + (0.28 \times (0.20)) + ($	%N <sub>2</sub> ) =	29.300 lb/lb-mole
Molecular weig	ht of stack gas, wet basis:		
$M_s = (M_d \times (1 -$	$(-B_{ws})) + (18 \times B_{ws})$	=	25.628 lb/lb-mole
Absolute stack	gas pressure:		
$P_s = P_{bar} + \left(\frac{s}{13}\right)$	$\left(\frac{S_t}{36}\right)$	=	29.553 inches H <sub>2</sub> O
Stack gas velo	en e		
V <sub>s</sub> = 85.49 × C	$\mathcal{D}_{p} \times \sqrt{\Delta P} \times \sqrt{\frac{(T_{s} + 460)}{(P_{c} \times M_{s})}}$	=	49.156 feet/second
	metric flow rate:		
$Q_a = A_s \times V_s$	× 60	=	58,880 acfm
Stack gas volu	metric flow rate, wet basis:		
$\mathbf{Q}_{sw} = \mathbf{Q}_{a} \times \left[ \left( $	$\left[\frac{528^{\circ}R}{29.92\text{in.Hg}}\right] \times \left(\frac{P_s}{T_s + 460}\right)\right]$	=	43,019 scfm
$Q_{sw} = Q_a \times \left[ \left( \right) \right]$	$\frac{528^{\circ}\text{R}}{29.92\text{in.Hg}} \times \left(\frac{\text{P}_{\text{s}}}{\text{T}_{\text{s}} + 460}\right) \times 60$	) =	2,581,117 scfh
Stack gas volui	netric flow rate, dry basis:		2014년 2013년 2014년 2014년 1월 1914년 1914년 1914년 1월 1914년 1
$Q_{std} = Q_{sw} \times ($	(1-B <sub>ws</sub> )	=	29,040 dscfm
0 0	(4, 5, ), (0,		4 740 440 -1
$Q_{std} = Q_{sw} \times ($	(I-B <sub>ws</sub> )×00	=	1,742,412 dscfh

#### USEPA Method 5 Particulate Calculation Summary

Client:	MAT Asphalt
Location:	Chicago, IL
Source:	Baghouse Exhaust
Date:	12/11/2018
Run #:	1

#### Data Input

Barometric pressure (P <sub>bar</sub> ):	29.56 inches Hg	Particulate Weight:		
Stack pressure (P <sub>s</sub> ):	29.55 Inches Hg Abs.	Filter	31.00 milligrams	
Test length (θ):	60.0 minutes	Probe Wash	15.91 milligrams	
Sample nozzle diameter (D <sub>n</sub> ):	0.2810 inches	Total weight (M <sub>n</sub> ):	46.91 milligrams	
Sample nozzle area (A <sub>n</sub> ):	0.000431 ft <sup>3</sup>			
Stack temperature (T <sub>s</sub> ):	253.8 °F			
Volume metered (V <sub>mstd</sub> ):	40.895 dscf			
Stack gas velocity (V <sub>s</sub> ):	49.156 ft/sec			
Stack gas volumetric flow (Q <sub>std</sub> ):	1,742,412 dscfh			
Fractional Moisture content (B <sub>ws</sub> ):	0.3249			

#### Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Percent Isokinetic:

$\text{\%Isokinetic} = \frac{0.0945 \times V_{\text{mstd}} \times (T_{s} + 460)}{P_{s} \times V_{s} \times \theta \times A_{n} \times (1 - B_{wo})}$	=	108.9 % isokinetic

Total particulate concentration:



=

4.407 lb/hr

Total particulate emission rate:

 $E_{p} = C^{1}_{s} \times Q_{std}$ 

#### USEPA Method 4 Moisture Determination Sample Calculations

Client:	MAT Asphalt		
Location:	Chicago, IL		
Source:	Baghouse Exhaust		
Date:	12/11/2018		
Run #:	3		
Data lanut			
Data Input: Volume metered	(M_):	35.195 ft <sup>3</sup>	
Meter calibration		1.013 dimensionless	
Barometric press	1 47	29.56 inches Hg	
Meter sample rat		1.13 inches H <sub>2</sub> O	
-	t temperature (T <sub>m</sub> ):	56.1 °F	
	ure collected (V <sub>Ic</sub> ):	351.3 milliliters	
Stack Temperatu		267.4 °F	
Static Pressure (		-0.1 inches H <sub>2</sub> O	
Sample calcul	lations @ standard conditions (2	29.92 inches Ha. 68.0 °F):	
Volume of sampl			
Vm <sub>std</sub> =V <sub>m</sub> ×Y <sub>d</sub> ×	$\left(\frac{528.0^{\circ}\text{R}}{29.92^{"}\text{Hg}}\right) \times \left(\frac{\text{P}_{\text{bar}} + \frac{\Delta \text{H}}{13.6}}{\text{T}_{\text{m}} + 460}\right)$	=	36.137 dscf
Volume of water	vapor in sample:		
$V_{wstd} = \frac{0.04707}{ml}$	$\frac{7 \text{ ft}^3}{1000} \times \text{V}_{\text{lc}}$	=	16.536 scf
and the second		n data in other an ordered according to	
Fractional moistu	ure content of stack gas:		
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd})}$	i V <sub>wsta</sub> )		0.3139 B <sub>wo</sub>
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd})}$ Percent Moisture	s √ <sub>wstd</sub> )		
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd})}$	s √ <sub>wstd</sub> )		
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{wstd})}$ <i>Percent Moisture</i> %moisture = B	s √ <sub>wstd</sub> ) s <sub>ws</sub> ×100		0.3139 B <sub>wo</sub> 31.39 %
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd})}$ Percent Moisture = B Fractional moistu	s √ <sub>wstd</sub> ) s <sub>ws</sub> ×100	= 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - 1993 - =	0.3139 B <sub>wo</sub> 31.39 %
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd})}$ <i>Percent Moisture</i> %moisture = B <i>Fractional moistu</i> $T_{s(^{e}K)} = ((T_s - 3))$	yw <sub>std</sub> ) x B <sub>ws</sub> × 100 ure content of stack gas at saturated c	= - - 	0.3139 B <sub>wo</sub> 31.39 %
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} + V_{mstd}$ %moisture = B Fractional moistu $T_{s(^{o}K)} = ((T_{s} - 3) + V_{mmHg}) = (P_{bal})$	$\frac{1}{V_{wstd}}$ $B_{ws} \times 100$ wre content of stack gas at saturated c $B_{z}(x) \times 0.5556) + 273$ $T_{z}(x) + \frac{S_{t}}{13.6} \times 25.401$	= - - 	0.3139 B <sub>wo</sub> 31.39 % 403.8 °Kelvin
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd} + V_{mstd})}$ <i>Percent Moisture</i> %moisture = B <i>Fractional moistu</i> $T_{s(^{e}K)} = ((T_s - 3))$	$\frac{1}{V_{wstd}}$ $B_{ws} \times 100$ wre content of stack gas at saturated c $B_{z}(x) \times 0.5556) + 273$ $T_{z}(x) + \frac{S_{t}}{13.6} \times 25.401$	= - - 	0.3139 B <sub>wo</sub> 31.39 % 403.8 °Kelvin
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} $	$\frac{1}{V_{wstd}}$ $\frac{1}{V_{wstd}}$ $\frac{1}{S_{ws}} \times 100$ $\frac{1}{V_{wstd}} = content of stack gas at saturated c$ $\frac{1}{32} \times 0.5556 + 273$ $\frac{1}{13.6} \times 25.401$ $\frac{1}{(T_{s(W)} - C)} \longrightarrow A = 8.361$ $B = 1893.5$	= onditions: = =	0.3139 B <sub>wo</sub> 31.39 % 403.8 °Kelvin 750.85 mm Hg
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} $	$\frac{1}{V_{wstd}}$ $\frac{1}{V_{wstd}}$ $\frac{1}{S_{ws}} \times 100$ $\frac{1}{V_{wstd}} = content of stack gas at saturated c$ $\frac{1}{32} \times 0.5556 + 273$ $\frac{1}{3.6} \times 25.401$ $\frac{\left(\frac{1}{(T_{s(K)} - C)}\right)}{M_{s(K)}} = \frac{1}{25.401}$ $\frac{1}{M_{s(K)} + C_{s(K)} + C$	= onditions: = =	0.3139 B <sub>wo</sub> 31.39 % 403.8 °Kelvin 750.85 mm Hg
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} + V_{mot}$ $Fractional moistur T_{s(^{P}K)} = ((T_{s} - 3) + V_{s(^{P}K)}) = (P_{bal} + V_{s(^{P}K)}) = (P_{bal} + V_{mot}) = (P_{b$	$\frac{1}{V_{wstd}}$ $\frac{1}{V_{wstd}}$ $\frac{1}{S_{ws}} \times 100$ $\frac{1}{V_{wstd}} = content of stack gas at saturated c$ $\frac{1}{32} \times 0.5556 + 273$ $\frac{1}{3.6} \times 25.401$ $\frac{\left(\frac{1}{(T_{s(K)} - C)}\right)}{M_{s(K)}} = \frac{1}{25.401}$ $\frac{1}{M_{s(K)} + C_{s(K)} + C$	= onditions: = =	0.3139 B <sub>wo</sub> 31.39 % 403.8 °Kelvin 750.85 mm Hg 1.0000
$B_{ws} = \frac{V_{wstd}}{(V_{mstd} + V_{mstd} + V_{mol}$ $Percent moisture$ $Percent moisture$ $Percent moisture$ $Percent moisture$	$\frac{1}{V_{wstd}}$ $\frac{1}$	= onditions: = =	0.3139 B <sub>wo</sub> 31.39 % 403.8 °Kelvin 750.85 mm Hg 1.0000

# USEPA Method 2 Volumetric Flow Rate Sample Calculations (Circular Ducts)

Client: Location:	MAT Asphalt Chicago, IL
Source:	Baghouse Exhaust
Date:	12/11/2018
Run #:	3

Data Input		
Carbon Dioxide (CO <sub>2</sub> ):	5.9 %	
Oxygen (O <sub>2</sub> ):	10.0 %	
Nitrogen (N <sub>2</sub> ):	84.1 %	
Fractional Moisture Content (B <sub>ws</sub> )	0.3139 dimensionless	
Stack Temperature (T <sub>s</sub> ): Pitot Coefficient (C <sub>p</sub> ):	267.4 °F 0.84 dimensionless	
Average square root of ∆P	0.6425 inches H <sub>2</sub> O	
Barometric Pressure (P <sub>har</sub> ):	29.56 inches Hg	
Static Pressure (St)	-0.09 inches H <sub>2</sub> O	
Stack diameter:	60.50 inches	
Stack area (A <sub>s</sub> ):	19.9636 ft <sup>2</sup>	
Sample calculations @ standard conditions	tions (29.92 inches Hg, 68.0 °F):	
Dry molecular weight of stack gas:		
$M_{d} = (0.44 \times \% CO_{2}) + (0.32 \times \% O_{2}) + (0.28)$	×%N <sub>2</sub> ) =	29.344 lb/lb-mole
Molecular weight of stack gas, wet basis:	e de la composition d Composition de la composition de la comp	n (na starte starte granden) (na starte granden) Starte Maria (na starte granden) (na starte granden)
$\mathbf{M}_{s}=\left(\mathbf{M}_{d}\times\left(1\!-\!\mathbf{B}_{ws}\right)\right)\!+\!\left(18\times\mathbf{B}_{ws}\right)$	=	25.783 lb/lb-mole
Absolute stack gas pressure:		
$P_{s} = P_{bar} + \left(\frac{S_{t}}{13.6}\right)$	=	29.553 inches $H_2O$
	NAR BARAR ARAMAN AND A	
$V_{s} = 85.49 \times C_{p} \times \sqrt{\Delta P} \times \sqrt{\frac{(T_{s} + 460)}{(P_{s} \times M_{s})}}$	=	45.080 feet/second
Stack gas volumetric flow rate:		
$Q_a = A_s \times V_s \times 60$	=	53,998 acfm
Stack gas volumetric flow rate, wet basis:		ne ne a see anna an a
$Q_{sw} = Q_{a} \times \left[ \left( \frac{528^{\circ}R}{29.92 \text{in.Hg}} \right) \times \left( \frac{P_{s}}{T_{s} + 460} \right) \right]$	=	38,715 scfm
$Q_{sw} = Q_{a} \times \left[ \left( \frac{528^{\circ}R}{29.92 \text{in.Hg}} \right) \times \left( \frac{P_{s}}{T_{s} + 460} \right) \right] \times 6$	60 =	2,322,906 scfh
Stack gas volumetric flow rate, dry basis:		
$\boldsymbol{Q}_{std} = \boldsymbol{Q}_{sw} \times \left(1\!-\!\boldsymbol{B}_{ws}\right)$	=	26,561 dscfm
$Q_{std} = Q_{sw} \times (1 - B_{ws}) \times 60$	-	1,593,668 dscfh

### USEPA Method 5 Particulate Calculation Summary

Client:	MAT Asphalt
Location:	Chicago, IL
Source:	Baghouse Exhaust
Date:	12/11/2018
Run #:	3

#### Data Input

Barometric pressure (P <sub>bar</sub> ):	29.56 inches Hg	Particulate Weight:	
Stack pressure (P <sub>s</sub> ):	29.55 Inches Hg Abs.	Filter	29.45 milligrams
Test length (θ):	60.0 minutes	Probe Wash	22.40 milligrams
Sample nozzle diameter (D <sub>n</sub> ):	0.2810 inches	Total weight (M <sub>n</sub> ):	51.85 milligrams
Sample nozzle areə (A <sub>n</sub> ):	0.000431 <b>ft<sup>3</sup></b>		
Stack temperature (T <sub>s</sub> ):	267.4 °F		
Volume metered (V <sub>mstd</sub> ):	36.137 dscf		
Stack gas velocity (V <sub>s</sub> ):	45.080 ft/sec		
Stack gas volumetric flow (Q <sub>std</sub> ):	1,593,668 dscfh		
Fractional Moisture content (B <sub>ws</sub> ):	0.3139		

Sample calculations @ standard conditions (29.92 inch Percent lsokinetic:		
$\text{\%lsokinetic} = \frac{0.0945 \times V_{\text{mstd}} \times (T_{s} + 460)}{P_{s} \times V_{s} \times \theta \times A_{n} \times (1 - B_{wo})}$	=	105.2 % isokinetic
Total particulate concentration:		
$\left(\frac{0.01543 \text{grains}}{\text{mg}} \times \text{M}_{\text{n}}\right)$		

$$C_{s} = \frac{1}{V_{mstd}} = 0.0221 \text{ gr/dscf}$$

$$C_{s}^{1} = \frac{\left(\frac{2.205 \times 10^{-6} \text{ lb}}{\text{mg}} \times M_{n}\right)}{V_{mstd}} = 3.164 \times 10^{-6} \text{ lb/dscf}$$

=

5.042 lb/hr

Total particulate emission rate:

 $\mathsf{E}_{\mathsf{p}}=\mathsf{C}^{1}{}_{\mathsf{s}}\times\mathsf{Q}_{\mathsf{std}}$ 

.

#### **USEPA Method 4 Moisture Determination Sample Calculations**

Client:	MAT Asphalt
Location:	Chicago, IL
Source:	Baghouse Exhaust
Date:	12/11/2018
Run #:	4

#### Data Input:

36.362 ft <sup>3</sup>
1.013 dimensionless
29.56 inches Hg
1.23 inches H <sub>2</sub> O
63.5 °F
360.7 milliliters
271.0 °F
-0.1 inches H <sub>2</sub> O

#### Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Volume of sample, dry basis:		상황 방법을 가 들어 있습니다. 이것 등 문 같은 것 같은 것 같은 것 같은 것 같은 것 같이 있는 것 같은 것 같은
$Vm_{std} = V_m \times Y_d \times \left(\frac{528.0^{\circ}R}{29.92"Hg}\right) \times \left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m + 460}\right)$	=	36.817 dscf
Volume of water vapor in sample:		

Volume of water vapor in sample		este ruit taken kirk	ded freisen i helse beid in als sein i s
$V_{wstd} = \frac{0.04707  \text{ft}^3}{\text{mI}} \times V_{\text{lc}}$		=	16.978 scf
Fractional moisture content of s	tack gas;		la senda la Marca de Carlo de Carlo de Carlo de Car
$B_{ws} = \frac{V_{wstd}}{\left(V_{mstd} + V_{wstd}\right)}$		. =	0.3156 B <sub>wo</sub>
Percent Moisture:			
%moisture = $B_{ws} \times 100$			31.56 %
Fractional moisture content of st	tack gas at saturated condition	•	
$T_{s(^{o}K)} = ((T_{s} - 32) * 0.5556) +$	273	=	405.8 °Kelvin
$P_{s(mmHg)} = \left(P_{bar} + \frac{S_t}{13.6}\right) \times 25.$	.401	=	750.85 mm Hg
$B_{wos} = \frac{\sqrt{\left(10^{\left(A\left(\frac{B}{(T_{s(K)} \cdot C)}\right)}\right)}}{P_{s(mmH_{9})}}$	where: A= 8.361 B=1893.5 C=27.65	=	1.0000
Percent moisture at saturated co	anditions:		
%moisture <sub>saturated</sub> = $B_{wos} \times 100$	0	=	100.00 %
Percent moisture used for emiss	ilons calculations:		

31.56 %

=

## USEPA Method 2 Volumetric Flow Rate Sample Calculations (Circular Ducts)

Client:	MAT Asphalt
Location:	Chicago, IL
Source:	Baghouse Exhaust
Date:	12/11/2018
Run #:	4

Data Input		
Carbon Dioxide (CO <sub>2</sub> ):	6.2 %	
Oxygen (O <sub>2</sub> ):	9.9 %	
Nitrogen (N <sub>2</sub> ):	83.9 %	
Fractional Moisture Content (B <sub>ws</sub> )	0.3156 dimensionless	
Stack Temperature (T <sub>s</sub> ):	271.0 °F	
Pitot Coefficient (C <sub>p</sub> ): Average square root of ∆P	0.84 dimensionless	
Barometric Pressure (P <sub>bar</sub> ):	0.6713 inches H₂O 29.56 inches Hg	
Static Pressure (St)	-0.09 inches H <sub>2</sub> O	
Stack diameter:	60.50 inches	
Stack area (A <sub>s</sub> ):	19.9636 <b>ft<sup>2</sup></b>	
Sample calculations @ standard con	ditions (29.92 inches Hg, 68.0 °F):	
Dry molecular weight of stack gas:		
$M_{d} = (0.44 \times \% CO_{2}) + (0.32 \times \% O_{2}) + (0.2)$	$(28 \times \%N_2)$ =	29.388 lb/lb-mole
Molecular weight of stack gas, wet basis:		
$\mathbf{M}_{s}=\left(\mathbf{M}_{d}\times\left(1\!-\!\mathbf{B}_{ws}\right)\right)+\left(18\times\mathbf{B}_{ws}\right)$	=	25.794 lb/lb-mole
Absolute stack gas pressure:		
$P_s = P_{bar} + \left(\frac{S_t}{13.6}\right)$	=	29.553 inches $H_2O$
Stack gas velocity:		
$V_{s} = 85.49 \times C_{p} \times \sqrt{\Delta P} \times \sqrt{\frac{(T_{s} + 460)}{(P_{s} \times M_{s})}}$	=	47.207 feet/second
Stack gas volumetric flow rate:		
$Q_a = A_s \times V_s \times 60$	=	56,545 acfm
Stack gas volumetric flow rate, wet basis:		
$\mathbf{Q}_{sw} = \mathbf{Q}_{a} \times \left[ \left( \frac{528^{\circ} R}{29.92 \text{in.Hg}} \right) \times \left( \frac{P_{s}}{T_{s} + 460} \right) \right]$	=	40,342 scfm
$Q_{sw} = Q_{a} \times \left[ \left( \frac{528^{\circ}R}{29.92 \text{in.Hg}} \right) \times \left( \frac{P_{s}}{T_{s} + 460} \right) \right]$	× 60 =	2,420,526 scfh
Stack gas volumetric flow rate, dry basis:		
$\boldsymbol{Q}_{std} = \boldsymbol{Q}_{sw} \times \left(1\!-\!\boldsymbol{B}_{ws}\right)$	=	27,610 dscfm
$Q_{std} = Q_{sw} \times (1 - B_{ws}) \times 60$	=	1,656,583 dscfh

#### **USEPA Method 5 Particulate Calculation Summary**

Client:	MAT Asphalt
Location:	Chicago, IL
Source:	Baghouse Exhaust
Date:	12/11/2018
Run #:	4

#### Data Input

Barometric pressure (P <sub>bar</sub> ):	29.56 inches Hg	Particulate Weight:		
Stack pressure (P <sub>s</sub> ):	29.55 Inches Hg Abs.	Filter	23.25 milligrams	
Test length (θ):	60.0 minutes	Probe Wash	26.89 milligrams	
Sample nozzle diameter (D <sub>n</sub> ):	0.2810 inches	Total weight (M <sub>n</sub> ):	50.14 milligrams	
Sample nozzle area (A <sub>n</sub> ):	0.000431 ft <sup>3</sup>			
Stack temperature (T <sub>s</sub> ):	271.0 °F			
Volume metered (V <sub>mstd</sub> ):	36.817 dscf			
Stack gas velocity (V <sub>s</sub> ):	47.207 ft/sec			
Stack gas volumetric flow (Q <sub>std</sub> ):	1,656,583 dscfh			
Fractional Moisture content (Bws):	0.3156			

# Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F): Percent Isokinetic:

<sup>1</sup> CINERGONICAC, <sup>1</sup> S. C. S.	e de servición de servición de la construction de la construction de la construction de la construction de la c La construcción de la construction d
$\text{\%Isokinetic} = \frac{0.0945 \times V_{\text{mstd}} \times (T_{s} + 460)}{P_{s} \times V_{s} \times \theta \times A_{n} \times (1 - B_{wo})}$	= 103.1 % isokinetic
Total particulate concentration:	
(0.01542  grains)	

$C_{s} = \frac{\left(\frac{0.01543 \text{grains}}{\text{mg}} \times \text{M}_{n}\right)}{V_{\text{mstd}}}$	=	0.0210 gr/dscf
$C_{s}^{1} = \frac{\left(\frac{2.205 \times 10^{-6} \text{ Ib}}{\text{mg}} \times \text{M}_{n}\right)}{V_{\text{mstd}}}$	~ =	3.003 x 10 <sup>.6</sup> lb/dscf

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Total particulate emission rate:

 $\mathsf{E}_{\rho}=\mathsf{C}^{1}{}_{s}\times\mathsf{Q}_{std}$ 

4.975 lb/hr

MAT Asphalt, LLC: Chicago, Illinois December 2018 Asphalt Plant Drum Mixer Baghouse Stack Compliance Test

# APPENDIX B FIELD DATA



MONTROSE TRAVERSE POINT LOCATIONS FOR CIRCULAR AND RECTANGULAR STACKS AND DUCTS ALR QUALITY SERVICES

(22.0)/, 39 (≥0.5) 2 .⊑ S Equivalent Diameters Downstream From Disturbance (B) 2 Traverse Points / Port ) Stack IU (Ukitaine of Lowenstream From Disturbance (B)  $-\frac{1}{2}$  Port Distance Downstream From Disturbance (A)  $-\frac{1}{2}$ Equivalent Diameters Upstream From Disturbance (A) 3 <u>r</u>r رم ا Beg house Ext Stack ID (Distance C- Distance D) 1-11-2 Outside of Port (Distance D) Outside of Port (Distance C) NV4 Number of Ports Used nside of Near Wall to Inside of Far Wall to Sampling Location Facility Date

Sampling Ports

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Disturbance

Equivalent Diameter For a Square or Rectangular Stack =

[ (2 × L × W) / (L + W) ]

Equivalent Diameters Upstream From Disturbance (A) =

[Distance A / Stack ID]

Disturbance

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Equivalent Diameters Downstream From Disturbance (B) =

[Distance B / Stack ID]

Note: Sketch Stack/Ports/Control Device on Back of Form

9	Traverse Point	Location From	Outside of Port	(Sum of 4 and 5 in	inches)	424	7,05	10.14	13.71	13.13	24.54	41.96	48.34	52.23	56.36	59.45	62.23	
S	Port	Depth		(inches)		5, 0			× .				,					
ধ	Product of	Columns 2	and 3	(inches)		1.27	4.65	J. 1 4	12 21	15,13	21,54	53.96	45.34	4.9.44	5336	56.45	59.23	
3	Stack	<u></u>		(inches)		60.5		1									·	
2	Fractional	10 %	Stack I.D.	(frac. %)		9021	0.06%	2-118	0.177	0.250	256	0.644	C, 750	0. 923	0.382	0.933	5,979	
-	Port		Fount	Number		+	2	3	4	5	6	7	8	6	10	Ŧ	12	Loc Check
1					2	25	of	13	5			h		J				

For Stacks / Ducts ≤ 24 inches ID – No traverse point shall be located less than 0.5 inches from stack wall For Stacks / Ducts > 24 inches ID - No traverse point shall be located less than 1.0 inches from stack wall

Completeness QA/QC Check:

Contest Sector Sector Sector Legibility 2014 Accuracy 2014 Specifications C. Serie Method 1 Calculator Signature/Date

3 N N Field Supervisor Signature/Date

in. (for monoral bracket specs.)

in. (for monorail bracket specs.)

Port Length Outside of Stack

Port ID

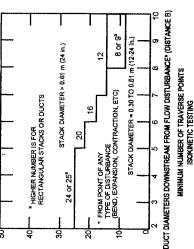
(12	51	6.7	11.8	1.11	25.0	35.6	2	75.0	82.3	88.2	83.3	87.9
10	2.6	8.2	14.6	22.6	342	65.8	77.4	85.4	91.8	97.4		
8	32	10.5	19.4	32.3	67.7	80.6	89.5	96.8				
9	4.4	14.6	28.8	70.4	85.4	95.6						
4	6.7	25.0	75.0	93.3								
Pre-	-	7	e	4	5	9	1	æ	6	₽	11	12

(12)	51	8.7	11.8	11	25.0	35.6	8.4	75.0	82.3	88.2	93.3	6.78
											Ĩ	ſ
\$	2.6	8.2	14.6	22.6	342	65.8	77.4	85.4	91.8	97.4		
60	3.2	10.5	19.4	32.3	67.7	80.6	89.5	96.8				
9	4.4	14.6	28.8	70.4	85.4	95.6						
4	6.7	25.0	75.0	93.3								
Pa Ba	-	7	n	4	u)	9	7	89	6	9	11	5

5 E	2	'n	4	ŝ	89	7		σ
1	25.0	16.7	12.5	10.0	8.3	7.1	6.3	5.6
2	75.0	50.0	37.5	30.0	25.0	21.4	18.8	<del>1</del> 8.7
ຄ		63.3	62.5	50.0	41.7	35.7	31.3	27.8
*			87.5	70.0	58.3	50.0	43.8	38.9
ŝ				90.0	75.0	64.3	56.3	50.0
8					51.7	78.6	68.3	81.4
~						92.9	81.3	72.2
8							<b>93.8</b>	83.3

S	2	25.0	75.0								"3 point CEMS RA
	Pts	-	7	•	4	5	8	7	8	6	*3 001
	R	Г			L			Ļ	_	_	Ľ
	12	21	8.7	11.8	17.	25.1	35.	z	75.(	8	8
	40	2.6	8.2	14.6	22.6	34.2	65.8	77.4	85.4	91.8	97.4
	8	32	10.5	19.4	32.3	67.7	80.6	89.5	96.8		
			6		4	4	9				

9         91.8         82.3         91.4         82.3         94.4           10         97.4         88.2         *3 point CEMS RATA traverse point locations (valid for rectangular and round stacks)         9.4         94.4           11         8.3         97.4         88.2         *3.3         *3 point CEMS RATA traverse point locations (valid for rectangular and round stacks)         94.4           12         8.3         97.4         82.3         97.4         82.3         94.4           12         87.9         DUCT DIAMETERS UPSTREAM FROM FLOW DISTURBANCE* (DISTANCE A)         DUCT DIAMETERS UPSTREAM FROM FLOW DISTURBANCE* (DISTANCE A)         0.5         1.0         1.5         2.0         2.5           00         1.5         2.0         2.5         5         0.5         1.0         1.5         2.0         2.5           00         1.6         1.5         2.0         2.5         5         0.5         1.6         1.5         2.0         2.5           00         *HICHER NUMBER IS FOR         RECTANGULAR STACKS OR DUCTS         4.0         *HECTANGULAR STACKS OR DUCTS         5         7.5         7.5
9 10 11 12 12 12 10 10 10 10 10 10 10 10 10 10 10 10 10



Form FDF 4000.00

DUCT DIAMETERS DOWNSTREAM FROM FLOW DISTURBANCE' (DISTANCE 8)

MINIMUM NUMBER OF TRAVERSE POINTS FOR VELOCITY (NON-ISOKINETIC) TRAVERSES

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8 or 9²

STACK DIAMETER = 0.30 TO 0.61 m (12-24 IN.)

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024AS-473273-RT-238

	CT 1855 MS 0.281 0.282 0.282 0.282 0.282 0 0.282 0 0 VES NO VES NO	FINAL PUMP IMPINGER VACUUM •F (in. Hg) 2937		10000000000000000000000000000000000000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	— <u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>
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	1.54		I Len	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	261 268 258 258 252 252 252 243 243	2.6 (0.1 5.6 (0.1 5.6 (0.1 5.6 (0.1
FIELD DATA	FILTER TARE, mg FILTER LOT NO. FILTER LOT NO. ACETONE LOT NO. HEXANE LOT NO. DI WATER LOT NO. ISOPROPANOL LOT NO. ISOPROPANOL LOT NO. NIST REFERENCE T/C ID	DGM TEMPE INLET (Tm <sub>in</sub> ) °F 30	31 31 32 31			33.8 30 330 (146 (1330 (1335) (1330) (1335)
M	ETTING 253 1106 252 1106 252 0.87 0.87 0.87 0.87 0.610 0.01	FFICE GAS SAMPLE H <sub>2</sub> 0 VOLUME DESIRED (VM) ポ ハムト ファア 383		Dartohan	45 2000 41 26 2100 4 21 20 21 2 21 22 220, 2 23 221 3 224 6 326, 346	1.52 - 38,760 S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.WEIGHT S.MEIGHT S
USEPA METHOD	PROBE HEATER SETTING HEATER BOX SETTING HEATER AH <sub>8</sub> C <sub>5</sub> FACTOR C <sub>5</sub> FACTOR C <sub>5</sub> FACTOR FACTOR C <sub>5</sub> FACTOR C <sub>5</sub> FACTOR C <sub>5</sub> FACTOR ALOR ID ALNOR ID ALNOR ID ALUOR ID ALUOR ID ALUOR ID ALUOR ID	DGM ORI (AH) In.1 ACTUAL	1 0 t 0 t		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	
USE	20 20 20 20 20 20 20 20 20 20 20 20 20 2	VELOCITY HEAD (AP) in. H20 (AP) SQ RT (AP)	45.0 25.0 25.0 25.0 25.0	0.49 0.49 0.40 27.0 27.0 27.0 27.0 27.0 27.0 27.0 27.	0.64 0.64 0.53 0.40 0.40 0.40 0.49 0.49 0.49	- 0.7651
	AMBIENT TEMPERATURE ASSUMED MOISTURE.% ASSUMED MOISTURE.% PROBE LENGTH. in. NOZZLE DIAMETER, in. STACK DIAMETER, in. NUMBER OF PORTS TOTAL NUMBER OF POINT MINUTES PER POINT	PRESSURE TEMP (in. H <sub>2</sub> O) (T <sub>3</sub> ) °F	952 632 632	122 122 122 122 122 122 122 122 122 122	1922 1922 1922 1922 1922 1922 1922 1922	$\begin{array}{c c} -0.10 & 253.8 \\ \hline $
	ESK LL	E SAMPLING TIME (Q) min.			27.2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
<b>MONTR</b>	PLANT DATE DATE LOCATION DERATON STACK NO. STACK NO. STACK NO. SAMPLE BOX NO. METER BOX NO.	CLOCK TRAVERSI TIME POINT (Hrs) NUMBER		0812 4 0820 9 0825 11 0825 11	1	AVERAGE 27 60 ALT-011 TIC CALIBRATION CHECK DIFFERENCE MUST BE s(± 20°F) MINPINGER NO. #1 IMPINGER NO. #1 FINAL 322 INITAL 320 NUTAL CONDENSATE COLLECTED TOTAL CONDENSATE COLLECTED
	02466 472272 0	T 220		26 of 12	*	*

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PLANT DATE LOCATION OPERATOR

STACK NO.

FIELD DATA 

	FILTER LOT NO.	FILTER PETRI LABEL NO.	ACETONE LOT NO.	HEXANE LOT NO.	DI WATER LOT NO.	ISOPROPANOL LOT NO.	TOLUENE LOT NO.	NIST REFERENCE T/C ID
ຍ ເ	HEATER BOX SETTING 2-5 C	METER AH , CY S	C, FACTOR	YaFACTOR	PROBE/PITOT NO. SO6 2/ 2281	MAGNEHELIC GAUGE ID	ALNOR ID	GAUGE SENSITIVITY, in H <sub>2</sub> O
12.	24-26	30	84	0.231	ée.5	Ч	74	2,5
	BAROMETRIC PRESSURE	ASSUMED MOISTURE, %	PROBE LENGTH, in.	NOZZLE DIAMETER, in.	STACK DIAMETER, in.	NUMBER OF PORTS	CCM TOTAL NUMBER OF POINTS	VECTO MINUTES PER POINT
1AT Aguest	12-11-68	News IL	FLANCIN	HSruck	2	HPEN.	08.8024	ian

NOZZLE (D DIA 1, in. *E*. *ZS* 1 DIA 2, in. *E*. *ZS* 1 DIA 3, in. *E*. *LS* 2 DIA AVG., in. *E*. *ZS* 1 DIA AVG., in. *E*. *ZS* 1

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	20				C. Car			1	61.10						6.631	
RUN NO.	4		_STACK DIAMETER, in.	eter, in.	60.5		PROBE/PITOT NO. SOE 2/	NO. 50621	18281	DI WATER LOT NO	T NO.			ΔD ≤ 0.004 in.	(TES	ON
SAMPLE BOX NO		FIREN	NUMBER OF PORTS	PORTS	1		MAGNEHELIC GAUGE ID	GAUGE ID	イノ	ISOPROPANOL LOT NO.	L LOT NO.			DENTS	YES	¢
METER BOX NO.		SS80.24	CSSC24 TOTAL NUMBER OF POINTS	ER OF POINTS	24	•	ALNOR ID	•		TOLUENE LOT NO.	NO.			SHARP EDGE	•	ON
START TIME		1000	MINUTES PER POINT	R POINT	2,5		GAUGE SENSITIVITY, In H <sub>2</sub> 0	TIVITY, in H <sub>2</sub> 0_		NIST REFERENCE T/C ID	NCE T/C ID			UNDAMAGED	(YES)	N
CLOCK	TRAVERSE	TRAVERSE SAMPLING	STATIC	STACK	VELOCI	TY HEAD	DGM ORIFICE	RFICE	GAS SAMPLE	DGM TEMPERATURE	ERATURE	FILTER	PROBE	AUXILIARY	FINAL	PUMP
(Hrs)	NUMBER	(Q) min.	(in. H <sub>2</sub> O)		(AP)	(ΔP) IN. H2O (ΔP) SQ RT (ΔP)		DESIRED	VOLUME (Vm) ft <sup>3</sup>	(Tm <sub>in</sub> ) °F	CUILEI (Tm <sub>out</sub> ) °F	E 4	л ГВТ	EXII ≉	IMPINGEK	(in. Ha)
1000	SE	Q	- 0.0	261	0.65		8.1	1.31	824.031	34		254	262		ŝ	
	N	2.5		262	0.64		1.8	1.20	\$30.8	45		282	162		20	
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	٧	よん		264	0.63		1.8	1.76	834.3	2 4		259	240		24	~
1010	2	10		264	0.61		· +	1.70	\$36.0	3		263	251		01 01	1
	Ĺ	12.5		263	0.53		9.1	1.62	337.8	5		257	250		39	
1015	<u>;</u> †	15	-	263	0.55	:	1.5	1.54	839.4	M Ø		249	236		92	~
	ŝ	ふせい		262	0.55		1.5		341.1	39		222	236		43	~
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	10	22.S		263	0.45		1.3	1.26	844.3	40		246	238		46	
1025	11	25		264	0.43		1.2	1.2.1	345.8	14		142	234		44	
	12	23.5		292	0.45		1.3	1.27	847.2	41		235	238		45	
102/1035	S & I	30		243	0.47		1.4	1.35	348.72	41		234	248		cj l	1
**	1	37.5		243	0.48		1.4	1.39	350.3	42		232	255		11.2	1
1040	53	35		245	0.49		1.4	1.42	851.8	42		237	253		41	
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1045	7	25		261	24.0		1.4	1.36	355.0	N N		242	235		41	~
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1050	Ľţ	3		192	0.45		1.3		258.1	43		1241	233		43	`
	3	ふたわ		259	0.49		1.4	1, 39	359.6	43		232	231		43	×
iess	ş	Ś		257	0.47		1.3		361.1	44		231	252		H	
	10	575		254	0.45		1.3	1.28	862.5	44		725	253		47	/
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	12.	Sts		452	0.42		1.2	1,20	365, S	45		182	264		たち	~
1105		Ú							367.005							
AVERAGE	21	60	-0.09	259.0	T	0.7135	اربح	(	37.974	40.8		22~	~ 250	Ĺ	€43	NAY I
								i kin								
7/1 LIN-174	ALI-011 I/C CALIBRATION CHECK		TRAIN T/C, *F					<u> </u>	TRAIN T/C, °F							
					_			-		-	_	-	-	-	-	

Q V 0.9 1820 TIME 1825 5181 TRIAL 3 **TRIAL 2 TRIAL 1** Average ORSAT DATA 2.00.0 9.9 4.7 S.G. WEIGHT 209.4 grams ¥ # VOLUME (ml) OR WEIGHT (g) 00 67 ¥ TOTAL CONDENSATE COLLECTED (specify ml or g) 300 100 100 #2 2002 300 Ŧ NET COLLECTED

TRAIN PRE: 0,001 CFM@15"H9 POST: 0.03ZcFM@06"H9

90 90 10.0 0,0) 100

> 0 0 0,2

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REF. T/C, "F

REF. T/C, \*F

🌸 DIFFERENCE MUST BE ≤ (± 2.0 °F)

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INITIAL FINAL

IMPINGER NO.

IMPINGERS

LEAK CHECK

POST: 1/ 64/24 0 > 3"H20 Form FDF 4003.00 PITOT PRE: 1 2000 @> 3"H2O

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FIELD DATA USEPA METHOD

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	NIAT AL 12-11-5 2 ALIER 2 ALIE	marker and	AMBIENT TEMPERATURE BAROMETRIC PRESURE ASSUMED MOISTURE, % PROBE LENGTH, in. NOZZE LENGTH, in. STACK DIAMETER, in. STACK DIAMETER, in. NUMBER OF PORTS TOTAL NUMBER OF POINT MINUTES PER POINT	AMBIENT TEMPERATURE BAROMETRIC PRESSURE ASSUMED MOISTURE, % PROBE LENGTH, in. NOZZLE DIAMETER, in. STACK DIAMETER, in. NUMBER OF PORTS TOTAL NUMBER OF POINT MINUTES PER POINT	25 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		PROBE HEATER SETTING METER BOX SETTING METER AN SX SETTING METER AN SX SETTING FACTOR Va FACTOR PROBEPTTOT NO. MAGNEHELIC GAUGE ID ALNOR ID ALNOR ID ALNOR ID GAUGE SENSITIVITY, IN H <sub>2</sub> O	ETFING TING C C C C	222 ~ 252 ~ 252 ~ 252 ~ 252 ~ 252 ~ 252 ~ 252 ~ 252 ~ 252	FILTER TARE, mg FILTER LOT NO. FILTER PERRI LABEL NO. AGETONE LOT NO. HEXARE LOT NO. ZDI WATER LOT NO. ISOPROPANOL LOT NO. NIST REFERENCE T/C ID NIST REFERENCE T/C ID	. mg 10. T LLABEL NO. T NO. T NO. UL LOT NO. T NO. NCE T/C ID	1	5 IEEt	NOZZLE ID DIA 1, in. DIA 2, in. DIA 3, in. DIA 3, in. DIA AVG., in. DIA AVG., in. DIA 2004 in. DENTS SHARP EDGE UNDAMAGED	C7 Less C7 Less C. 281 C. 281 C. 281 C. 281 C. 282 C. 281 C. 281 C. 281 C. 282 C. 282		
	TRAVERSE POINT NUMBER	SAMPLING TIME (0) min.	STATIC PRESSURE (in. H.O)	STACK TEMP (T <sub>o</sub> ) °F		VELOCITY HEAD (AP) In. H2O (AP) SO RT (AP)	DGM C (AH) ii ACTUAL	DGM ORIFICE (AH) in. H <sub>2</sub> O 11AI DESIRED	GAS SAMPLE VOLUME (Vm) H <sup>3</sup>		DGM TEMPERATURE INLET OUTLET	FILTER EXIT ec	PROBE	AUXILIARY EXIT	FINAL IMPINGER	PUMP	
	5 10 1	0,	10.01	1.52	0.46		(.3	52.1	210.080		(THBould F	234	.252		- 11-	(gr. m)	
1232	NN	3 L		263	0.46		1.2	1.25	211.6	40		1 23	N 25 N 25 N 25		200	2.	
	7	2.5		263	04.0		í. Í	1.07	4.2.4	30		233	260		se		
2671	5.	12.5		140	0.38		0.00	1.01	とで、	10		236	253		42	<b>\</b> ,	
2421	24	5		14	0.41		<u>د، زه</u>	0.18	212:0	20		200	1250		21		
	N	12.5		268	0.40		1.1	1.07	220.4	24		121	t22			-	
1321	6	202		266	0.38		1.1	1.02	· •	54		249	235		せか		
ç	16	22.5		266	0.35		0.94	0.94		5		2.39	236		68		
120+	1	22		165	0.32		0.86	0,86	. *			13 8 8 8 8 8	250		83		
1921/24	1-27	tt:)		218	0.51		12.0	1.54	1110.1	- 18			244		<i>6</i> <i>6</i>		
	11	2		222	0.57		, N ,	1.53	2 24 0	20		250	240		N V		
1314	~	-25		270	0.59	1	1.6	1.56	231.0	58		244	222		16		
	>			222	0.52		1.4	1.39		\$\$		256	0.52		8		
1314	4	40		273	0.49		1.3	1.29		58		263	1.52		23	/	
1.50	10			042	45.0		1.3	1.26	55	59		265	235		N 8		
1564	1 2	52		1+2	0.35		0.94	25.0	234.4	60		262	N N N		61		
0221	20 20	1		141	0.54		0.46	11.0	-38.0	6/		254	231		65		
1261	16	s N		14	0.54		0.41	1100	7 41 5	61		1220	230		63	<b>`</b>	
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	11			142	0.34	//	56.0	25.0	244.1	64		イシ	239		20		-i-V
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AVERAGE	42	60	P0.0-	267.4	١	0,6435	1.(3	١	35.195	56.1	l	242 r	Sh 2~		<u> 64</u>	MAN -	CEA.
	1	L						Ú	K								1
ALT-011 T/C CALIBRATION CHECK	LIBRATION		TRAIN T/C, F				ļ	57 5 6	TRAIN T/C, *F							N	122
DIFFERENCE MUST BE ≤ (± 2.0 °F)	IUST BE ≤ (±	t 2.0 °F)	REF. T/C, *F					0	REF. T/C, F							N	NZ4
INPINGERS				VOLUME (mi) OR WEIGHT (g)	T (g)		S.G. WEIGHT	22 195	ORSAT						LEAK CHECK	A State Street	
IMPINGER NO.		ئ ئ ئ	#2 7 0 C	¥	7#	¥	grams	22,11	DATA	TIME	co2	02	L	TRAIN PRE: 2.001	0.0010	CFM@15"Hg	
FINAL		2500 × 200	200	20			209.5	Vim	TRIAL 1 TRIAL 2	SVE1	100	0.0		POST:		CFM@14Hg	
	T			)			,	-	11/1/1 4		- 1	2 2 2			ł	7	

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POST: <u>0, 001</u> сFM@**#**<sup>Hg</sup>Hg PITOT PRE: <u>++/ <sup>0</sup> /<del>6</del>/</u>@ > 3"H<sub>2</sub>O POST: <del>1</del>/ *v U*/<u>1</u>@ > 3"H<sub>2</sub>O F60m FDF 4003.00

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ST 755

TRIAL 2 TRIAL 3 TRIAL 1

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TOTAL CONDENSATE COLLECTED (specify ml or g)

NET COLLECTED

351.3

Average

	1	
	PUMP VACUUM (In. Hg) (In. Hg)	DF 4003,00
25 10 12 12 12 12 12 12 12 12 12 12 12 12 12	HINNER HINNER	Fom F
NOZZLE ID DIA. 1, in: DIA. 2, in: DIA. 3, in: DIA. AVG. in:		
612	на на на на на на на на на на	
2 b L .]	ППЕК EXTER EX	
M mg LABEL NO. LABEL NO. T NO. L LOT NO. L LOT NO. NO. T NO. NO. NO.	DOM TEMPERATURE           INLET         OUTLET           (Imm.) F         (Imm.) P           65         65           65         64           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63           63         63	
FIELD DATA 250 FILTER TARE, mg FILTER LOT NO. FILTER LOT NO. AGETONE LOT NO. 250 HEXANE LOT NO. 150 PROPANOL LOT NO. 150 PROPANOL LOT NO. 100 UENE LOT NO. 100 LUENE LOT NO. 100 LUENE LOT NO. 100 LUENE LOT NO. 100 LUENE LOT NO.		
FIE	Gas Sample (vm) ft <sup>2</sup> (vm) ft <sup>2</sup> (vm) ft <sup>2</sup> (vm) ft <sup>2</sup> 247, 5 257, 4 257, 4 255, 4 255, 4 255, 4 255, 4 255, 4 255, 4 255, 4 255, 4 256, 5 256, 5 256	
A METHOD PROBE HEATER SETTING HEATER AN <sub>®</sub> C <sub>5</sub> FACTOR V <sub>4</sub> FACTOR PROBEPTIOT NO. 22 2/ PROBEPTIOT NO. 22 2/ MAGNEHELIC GAUGE ID ALNOR ID ALNOR ID ALUOR ID GAUGE SENSITIVITY, In H <sub>2</sub> O	B 32 4 5 7 5 7 5 7 8 5 9 9 9 9 9 9 9 9 7 1 5 1 5 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	
A METH PROBE HEATE HEATER BOX METER BOX METER AH® C <sub>5</sub> FACTOR V <sub>4</sub> FACTOR PROBE/PITOT MAGNEHELIC ALNOR ID GAUGE SENSI		-
	MELOCITY HEAD       (aP) In H20	-
250 250 250 250 250 250 250 250		
AMBIENT TEMPERATURE AMBIENT TEMPERATURE BAROMETRIC PRESSURE BAROMETRIC PRESSURE ASSUMED MOISTURE, % PROBE LENGTH, in. NOZZLE DIAMETER, in. STACK DIAMETER, in. NUMBER OF PORTS TOTAL NUMBER OF POINTS MINUTES PER POINT	татс ататс ататс таме Essure таме сезите таме 2.27 0 2.27 0 2.26 0 2.27 0 2.26 0 2.26 0 2.26 0 2.26 0 2.26 0 2.26 0 2.26 0 2.26 0 2.26 0 2.27 0 2.27 0 2.27 0 2.27 0 2.27 0 2.26 0 2.27 0 2.26 0 2.27 0 2.20	
AMBIENT TEMPERATURE AMBIENT TEMPERATURE AMBIENT TEMPERATURE ASSUMED MOISTURE, % PROBE LENGTH, in. NOZZLE DIAMETER, in. STACK DIAMETER, in. STACK DIAMETER, in. TOTAL NUMBER OF POINT MINUTES PER POINT		
MONTROSE PLANT MONTROSE PLANT MAR QUALITY SERVICES PLANT MAR QUALITY SERVICES PLANT MAR QUALITY SERVICES PLANT MARKEN PLANT MARKENT MARKEN PLANT MARKEN PLANT MARKEN PLANT MARKEN PLANT MAR	POINT         TRAVERSE         SAMPLING           POINT         TIME         TIME           NUMBER         (Q) min.         5         5           S         Z         Z.5         2           Z         Z.5         Z.5 </td <td></td>	
AON Nor Nor Nor Nor Nor Nor Nor Nor Nor No	ITRAVERSE POINT NUMBER SE/ Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	
PLANT PLANT PLANT DATE LOCATION OPERATOR STACK NO. START TIME START TIME	CLOCK         TRAVERSE SAMPLIT           TIME         PONT         TIME           (H1S)         NUMBER         CONT           (H1S)         SE         2         25           (Y/C)         SE         7         7           (Y/Z)         S         3         3           (Y/Y)         S         7         7	

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SOUNCE NAME MAT AS	>pnolt			12 -1		<u>018</u>		8	05		4	:05	-			
ADDRESS 2055 W Pe	rshing	- Roa	J	SEC MIN	0	15	30	45	SEC	0	15	30	45			
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000000 00 000000	.I	005041		<u> </u>	0	0	0	0	34	0	0	0	0			
Mix Arum		M		5	0	0	0	0	35	5	O	6	6			
CONTROL EQUIPMENT Baghouse		OPERAT MA		6	0	0	8	5	36	0	0	0	0			
DESCRIBE EMISSION POINT				~3	5	O	0	0	37	0	0	0	0			
	STOP Un	d: storb	ed (O	88	0	0	0	0	38	Ø	Ø	0	0			
HEIGHT ABOVE GROUND LEVEL	HEIGHTH	RELATIVE	TOOBSERVER	9	0	10	5	Ø	39	0	0	0	0			
START 40Ft STOP 40Ft				10	0	0	0	0	40	0	0	0	0			
DISTANCE FROM OBSERVER START 2005+ STOP2005+	1		MOBSERVER	11	0	0	5	5	41 -	. 0	Ø	0	0			
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START Water Vopor	STOP WO			13	0	0	0	0	43	0	0	0	0			
EMISSION COLOR START N/A STOP/V/A				14	0	0	0	0	43	0	0	0	0			
START //// STOP////+ WATER DROPLETS PRESENT:			ERMITTENT	15	0	0		0	47	0	0		0			
NO D YES			DETACHED			<u> </u>	0					0				
POINT IN THE PLUME AT WHICH				/16	0	0	0	0	46	0	0	0	0			
START East end of Plane	STOP Eas	t end c	of Plume	17	0	0	<u> </u>	0	47	0	0	Ø	0			
DESCRIBE BACKGROUND				18	Ø	0	0	0	48	Ø	a	Ø	0			
	<u> STOP <sub>С</sub> I. [SKY CON</u>			19	0	0	Ø	0	49	Ø	0	0	0			
START SKY Plue STOP Sky Plue				20	0	0	0	0	50	Ø	0	Ö	0			
WIND SPEED	WIND DI	RECTION	. (	221	0	0	0	0	51	Ø	0	0	0			
START COMPL STOP COMPL	START	Easts	stopE ast (	22	0	0	0	0	52	0	0	0	0			
AMBIENT TEMP.	WET BUL	.B TEMP.	RH,percent	23	0	0	0	0	53	0		0	0			
START 24°F STOP 29°F	<b>I</b>		· · · · · · · · · · · · · · · · · · ·	23	0	0			53 54	0	0		0			
Source Layout Sketch	Draw	North A	row -	25		0		9	54			0				
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Sun- Wind 🛶			-	30	Ċ	6	6	0	60	6	0	6	0			
Plume and 🖛 🖉	Observers	Position		AVERA			FOR	3,3	NUMB							
Stack 140	HIGHES RANGE							6 WERE								
Sun Location Line							MUM		1	ΜΑΧΙ	мим	S	]			
					VER'S	NAME	(PRIN)	"Ala	an N	<u>Nora</u>						
COMMENTS								,	<u> </u>	DATE		<u>م</u> ر				
COMMENTS					OBSERVER'S SIGNATURE Clam Marally							12-17-2018				
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Quality Assurance Handbook M9-4.2

FORM FDF 4013.00



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Visible Emission Observation Form

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Quality Assurance Handbook M9-4.2



Visible Emission Observation Fo

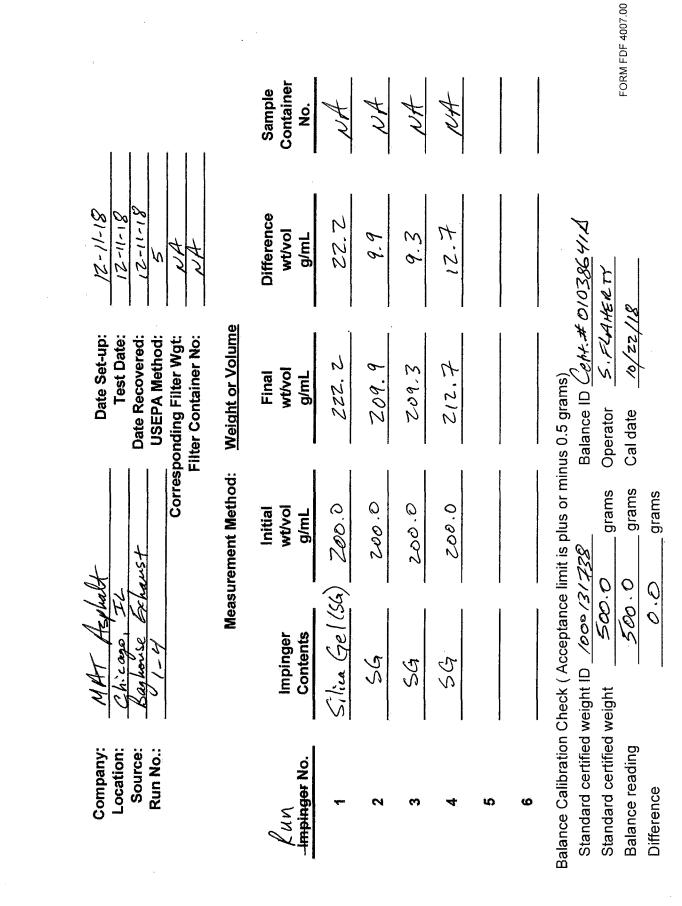
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**IMPINGER RECOVERY DATA SHEET** 

MONTROSE AIR QUALITY SERVICES MAT Asphalt, LLC: Chicago, Illinois December 2018 Asphalt Plant Drum Mixer Baghouse Stack Compliance Test

# APPENDIX C LABORATORY DATA







Texas NELAP ID: T104704428-17-10

# ANALYTICAL REPORT

Project Name:	MAT Asphalt
Lab Project Number:	08-1285
Sample Location:	Baghouse at Chicago,
Sample Date:	12/11/18
Analysis Date(s):	12/11/18 – 12/17/18
COC Number(s):	02603
Analytical Method:	USEPA Method 5

Prepared For: Montrose Air Quality Services 951 N. Old Rand Road, Unit 106 Wauconda, IL 60084 Project Mgr: Steve Flaherty Phone: (847) 487-1580 x12417 Fax: (847) 487-1587 Email: sflaherty@montrose-env.com

Prepared By: Montrose Air Quality Services 951 N. Old Rand Road, Unit 106 Wauconda, IL 60084 Eric Vogt, Lab Manager Phone: (847) 487-1580 Ext 12416 Fax: (847) 487-1587 Email:evogt@montrose-env.com

This analytical report has been made for your exclusive and confidential use. The results and interpretations expressed in this report represent the best judgment of Montrose Air Quality Services. This report shall not be reproduced, except in full, without the expressed written approval of Montrose Air Quality Services.

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# Project Narrative

# Sample Receipt and Custody

This report contains the results of analyses performed on samples received under the project name referenced on the cover page. Analytical results reported under this project name apply only to the samples as received and properly identified in the signed chain-of-custody included in this report.

Ten (10) samples were received at ambient temperature on 12/12/18 by J. Ruggaber at the Chicago North laboratory in Wauconda, Illinois. Sample receipt criteria are listed on the Sample Receipt Checklist included in this report.

Upon receipt, the samples were stored in a locked cage with access only to authorized Montrose Air Quality Services personnel except during analysis.

# Analysis Procedure

The samples were analyzed for filterable particulate matter following the general analytical procedures in USEPA Method 5 and MAQS SOP A0005 rev 11.

# Analytical Task Schedule

A chronology of the specific steps of the method analysis is given in the Task Schedule included in this report.

# Calibration

Gravimetric measurements were performed using the Ohaus Adventurer Pro balance with a readability of 0.1 milligrams and an Ohaus Scout balance with a readability of 0.1 grams. The Adventurer Pro balance was calibrated daily using a certified Class 1 200.0 gram weight. Linearity of the Adventurer Pro balance was verified daily with 0.2, 1.0, 100.0 and 200.0 grams which bracketed the range of sample weights measured. Accuracy and linearity of the Scout balance was verified with 1.0, 100.0 and 200.0 gram weights.

# QC Notes

Unless otherwise noted, the analyses met the QC requirements set forth by the test method, applicable method SOP, the TNI Standard and, where applicable, the project test plan. There were no deviations from the test method and no non-standard conditions that may affect the quality of the test data.

# **Reporting Notes**

Final Method 5 acetone wash net particulate matter (PM) mass values have been acetone blank corrected.

# Laboratory Accreditation

USEPA Method 5 is included in MAQS's current scope of accreditation under TCEQ/NELAP. Analytes not included in MAQS's current scope of accreditation or offered for accreditation under TCEQ/NELAP are identified with a "UA" flag in the notes column of the analytical report.



Report reviewed and approved by:

C Eric Vogt

Laboratory Manager Chicago North Laboratory Montrose Air Quality Services, LLC

Date

024AS-473273-RT-238

ANALYTICAL SUMMARY

M MONTROSE

**Baghouse Exhaust** 12/11/2018 Filterable PM **MAT** Asphalt Chicago, IL Client: Location: Source: Sample Date: Analysis:

Analysis Date: 12/11 - 12/17/18 Method: USEPA Method 5 Analyst: J. Ruggaber Reporting Date: 12/18/2018 Project Number: 08-1285 Page 1 of 1

	Filterable PM
•	Method 5 H

	<b>LIMS</b>	Solvent	Tare	Wt 1	Wt 2	Wt 1 - WT 2	difference	МЧ	PM (blank corr.)	Total M5 PM
Identification	Number	Mass (g)	(mg)	(mg)	(mg)	(mg)	(%)	(mg)	(mg)	(mg)
R1 Filter	27361	l	543.7	574.8	574.6	0.20	N/A	31.00		
R1 PW	27356	136.4	3807.4	3823.8	3823.5	0.30	N/A	16.25	15.91	40.91
R2 Filter	27362		563.6	598.9	598.6	0.30	N/A	35.15		
R2 PW	27357	69.3	3913.9	3931.5	3931.2	0.30	N/A	17.45	17.28	52.43
R3 Filter	27363	ı	552.6	582.0	582.1	-0.10	N/A	29.45	*	
R3 PW	27358	118.7	3891.0	3913.8	3913.6	0.20	N/A	22.70	22.40	c8.1c
R4 Filter	27364	1	546.5	569.9	569.6	0.30	N/A	23.25		T CL
R4 PW	27359	102.3	4186.6	4213.7	4213.8	-0.10	N/A	27.15	26.89	50.14
Acetone Blank	27360	99.8	3894.5	3894.7	3894.8	-0.10	N/A	0.25	1	
Filter Blank	27365		555.8	555.9	555.9	0.00	N/A	0.10	ł	

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951 Old Rand Road # 106 Wauconda, IL 60084



#### Montrose Air Quality Services Analytical Report

Texas NELAP ID: T 104704428-17-10

Baghouse Exhai	ust			Project Mana Received: Reported:	1 <b>ger: Steve</b> 12/12/ 12/19/	
Sample ID: Lab Sample #:	Run 1 PW 27356	e an faith a	in de finde forderen generen anderen de finde forderen de service de service de service de service de service d	Date Sam Field #:	pled: 12/11/20 27561	18
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	15.91	mg	
Sample ID:	Run 2 PW			Date Sam	<b>pled:</b> 12/11/20	18
Lab Sample #:	27357			Field #:	27562	
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	17.28	mg	
Sample ID: Lab Sample #:	Run 3 PW 27358			Date Sam Field #:	pled: 12/11/20 27558	18
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	22.40	mg	x
Sample ID:	Run 4 PW	999 - Harrison Constanting (1996 - 1997) - 1997		Date Sam		18
Lab Sample #:	27359			Field #:	27555	
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	26.89	mg	
Sample ID: Lab Sample #:	Acetone Blank 27360			Date Sam Field #:	pled: 12/11/20 27559	18
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	0.25	mg	
Sample ID:	Run 1 Filter			Date Sam		18
Lab Sample #:	27361			Fleid #:	26047	
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	31.00	mg	

Page 1 of 2

MAN MONIROSE

951 Old Rand Road # 106 Wauconda, IL 60084



Montrose Air Quality Services Analytical Report

Texas NELAP ID: T 104704428-17-10

MAT Asphait Chicago, IL Baghouse Exhai	ust			Lab Project #: Project Manage Received: Reported:	08-12 r: Steve 12/12 12/19	Flaherty /2018
Sample ID: Lab Sample #:	Run 2 Filter 27362	lálatoki Narovenské nyempodot nyem podot nyem podot	da man na Arangen yang kanang na pangang kang kang kang kang kang kang kan	Date Sampled Field #:	l: 12/11/20 27785	18
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	35.15	mg	
Sample ID:	Run 3 Filter		ng dahari kan kang kanda panakan panang kan p	Date Sampled	<b>i:</b> 12/11/20	18
Lab Sample #:	27363			Field #:	27288	
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	29.45	mg	
Sample ID:	Run 4 Filter			Date Sampled	I: 12/11/20	18
Lab Sample #:	27364			Field #:	26045	
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	23.25	mg	
Sample ID:	Filter Blank			Date Sampled	I: 12/11/20	18.
Lab Sampl <b>e</b> #:	27365			Field #:	27158	
Analyte	Method	Analyst	Analysis Date	Result	Units	Notes
Particulate	USEPA Method 5	Joel Ruggaber	12/18/2018	0.10	mg	·····

Notes:

UA - Unaccredited analyte not within the laboratory's current scope of accreditation or not offered for accreditation under TCEQ/NELAP

NA - Sample not tested for this analyte.

D - Value calculated from dilution.

J - Value less than the low standard but above the Limit of Detection (LOD).

L - Sample leaked before receipt.

H - Value greater than the high standard.

X - Quality control deficiency or failure observed.

Page 2 of 2



### USEPA METHOD 5 TASK SCHEDULE

Client: MAT Asphalt

Location: Chicago, IL

Project Manager: Steve Flaherty

Date Sampled: 12/11/18

Lab Project #: 08-1285

Spreadsheet Template ID: USEPA Method 5/202-Partic-Template-060T-REV4

Analyst: J. Ruggaber

Sodium Chloride Solution QC Sample: 1.0009 g/L NaCl in DI Water, 9/18/18

Acetone Manufacturer and Lot: J.T. Baker, Lot 0000196204

DATE	TIME	EQUIPMENT	TASK
12/11/18	16:30	Desiccator #2	Place labeled beakers with TFE liners in desiccator (store 24 hrs)
12/13/18	10:18	Oven #2	Heat filters in oven at 105°C (min. 2 hours)
12/13/18	12:31	Desiccator #2	Place filters in desiccator (store min. 24 hours)
12/13/18	9:11	Balance #1	Weigh conditioned beaker liners and record tares
12/13 - 12/14/18	-	-	Dry down 100 mL of sodium chloride solution in a beaker using hot plate or oven
12/13 - 12/14/18	-	-	Dry down probe washes in labeled beakers with liners
12/14/18	8:45	Desiccator #2	Place beakers in desiccator (store min. 24 hours)
12/17/18	10:47	Balance #1	Probe Wash (PW) beaker liner weighing #1
12/17/18	16:50	Balance #1	PW beaker liner weighing #2 (min. 6 hrs after Wt. #1)
N/A	N/A	N/A	PW beaker liner weighing #3 (min. 6 hrs after Wt. #2)
N/A	N/A	N/A	PW beaker liner weighing #4 (min. 6 hrs after Wt. #3)
12/17/18	10:51	Balance #1	Sodium Chloride (NaCl) beaker liner weighing #1
12/17/18	16:54	Balance #1	NaCl beaker weighing #2 (min. 6 hrs after Wt. #1)
N/A	N/A	N/A	NaCl beaker weighing #3 (min. 6 hrs after Wt. #2)
12/17/18	10:53	Balance #1	Filter weighing #1 (min. 24 hrs in desiccator)
12/17/18	16:55	Balance #1	Filter weighing #2 (min. 6 hrs after Wt. #1)
N/A	N/A	N/A	Filter weighing #3 (min. 6 hrs after Wt. #2)
N/A	N/A	N/A	Filter weighing #4 (min. 6 hrs after Wt. #3)
12/19/18	-		Prepare report
			Report QA review



# Sample Receipt Checklist

Client Name:	MAT Asphalt
Site Location:	Chicago, IL
MAQS Project Manager:	Steve Flaherty
Sample Collection Date(s):	12/11/18
Chain-of-Custody Number(s):	02603

Chain-of-Custody Form(s):

Custody release signatures, dates, and times present:	Yes
Preservation code noted:	Yes
Project information clearly identified:	Yes
Sample information clearly identified:	Yes
Analysis request clearly identified:	Yes
Report tier level noted:	Yes

Sample Containers:

Quantity of samples match number on the COC	Yes
Container label ID numbers and descriptions match COC	Yes
All containers received in good condition	Yes
Liquid levels at marked heights on containers	Yes
All container labels are legible	Yes
All sample IDs are unique	Yes
Samples received in correct container type	Yes
Samples received within the required holding time	Yes
Samples received under the required preservation code	Yes
Sample receipt temperature (°F)Meets applicable method limit	N/A

Non-Conformances and/or Corrective Actions Applied:

All criteria for sample acceptance met

Samples Received by:	Joel Ruggaber	1.1/4		
		77	signature	
Date and Time received:	12/12/18 16:30	<i>I</i>		Form LF0002

024AS-473273-RT-238

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Chain of Custody Record Number: 02803

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Preservation Code	1 = Ambient Temp.	2 = 4°C (Ice Packs)	3 = Ury Ice 4 = Other (Noted)	Comments														-	SHIPMENT:	Hand Carry		Custody	Applied	Yes (No)	minotion Eom LEO001
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Chilog O IL	Manager Freshow of the	Subcontracted Laboratory (if applicable) $M/R$		Sample Identification															(1) Relinquished By	(1) Date / Time	(1) Company	(1) Received By	(1) Date / Time /2///パイ で / 620	(1) Company // enth 05e	
	PP-6 Cfore	(e	6		RUN L PW	Run 2 PW	Run 3 PW	Ru, H PW	Aletone Blonk		R2 Filter	RS FILE	12 H	FITS BOOK		-						Compliance			
Client Name MAT As Phol 4	MAQS Test Plan Number 人うい A<~ い 7 3 こ 7 3 ~	Laboratory (Wauconda or Pasadena) 化しょでのの グイ	Samples Compliance	Sample Time of Date Collection <sup>2</sup>	00		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 - 100 -			× 1 - 1 -	-11-1 &		- # + ×			-				12-25-18	Engineering	Fittlen	and the second se	
$\frac{1}{2} \frac{1}{2} \frac{1}$	<b>C</b> 24 45 - 473273	•	Engineering or Compliance Test Samples	Label Number	27561 12.	27562 12.	2943) 2000	27555 12-	627559 12-	L HOAT	21 25 12	212 88 - 12	26045 12	27 5 8 12 2					Special Instructions:		Date test results needed:	Reporting level: Eng	Route results through:	Project manager signature:	

MAT Asphalt, LLC: Chicago, Illinois December 2018 Asphalt Plant Drum Mixer Baghouse Stack Compliance Test

# APPENDIX D PROCESS DATA



Comnany, MAT Achtal	Location: Chicago I	Source: Bachouse Exhaust	Test Date: 12/11/2018
4646	terio terio	ourc	t Dat

Production Data

		("WC)	2.946	2.580	2.347	2.539	2.729	2.550	2.618	2.666	2.630	2.431	2.260	2.503				2.567
Run 4	~	tons/hr	294	296	301	303	296	297	297	302	298	309	294	300				298.9
	Time F	hh:mm:ss	14:09:57	14:15:57	14:21:57	14:27:57	14:33:57	14:39:57	14:45:57	14:51:57	14:57:57	15:03:57	15:09:57	15:15:57				Averages:
	Baghouse Pressure	("wc)	3.039	2.982	2.794	2.922	2.799	2.594	2.545	2.579	2.400	2.688	2.479	2.597	2.523			2.688
Run 3	~	tons/hr																297.1
	Time F	hh:mm:ss	12:27:57	12:33:57	12:39:57	12:45:57	12:51:57	12:57:57	13:03:57	13:09:57	13:15:57	13:21:57	13:27:57	13:33:57	13:39:57			Averages:
(	Baghouse Pressure	("wc)	3.036	2.979	3.015	3.015	3.094	3.255	3.097	2.859	2.849	2.932	2.919	2.992	3.055			3.007
tun 2 (Void)	Produciton E Rate	tons/hr	306	299	307	303	305	311	313	305	302	305	299	308	303			305.1
К	Time												10:57:57					Averages:
	Baghouse Pressure	("WC)	2.810	8.891	2.945	2.939	2.885	2.787	2.811	2.920	2.955	2.803	2.915	2.804	2.872	2.948		3.306
Run 1	Produciton Rate	tons/hr	299	292	297	293	299	291	297	302	300	299	297	305	299	308		298.4
	Time	hh:mm:ss	7:57:57	8:03:57	8:09:57	8:15:57	8:21:57	8:27:57	8:33:57	8:39:57	8:45:57	8:51:57	8:57:57	9:03:57	9:09:57	9:15:57	1	Averages:

10/30/18 (noo)

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## Daily Totals Report for 12/11/18

\* STACK TEST \*

Manual Mix To Rejea Material Name-Material Description 106.5 Ton 0 Ton 0 Ton 0 Ton Antistrip Antistrip 25.6 Ton 86.2 Ton Virgin Scale Virgin Scale 11.8 Ton 47.4 Ton **Rap Scale Rap Scale** 37.7 Ton 133.5 Ton Total N70 State Surface 231431 (19524R-81BIT006X) N70 St.SC Material Name / Material Description Mix To Reject Mix To Silo 0.4 Ton 142.7 Ton AC 0.002 Ton 0.395 Ton Antistrip Antistrip 3.8 Ton 519.4 Ton 3/16 Minus Rap FRAP 843.5 Ton 6.1 Ton Hanson 028FM20% FM20 3.7 Ton 503.1 Ton Hanson 022CM13 CM13 5.6 Ton 758.5 Ton FM22 Hanson 038FM22 3.8 Ton 519.3 Ton CRAP 5/8-3/16 Rap 0.2 Ton 33.1 Ton MF **Mineral Fill** 15.3 Ton 2084.3 Ton Virgin Scale Virgin Scale 7.6 Ton 1045.1 Ton Rap Scale **Rap Scale** 3234.7 Ton 23 Ton Total All MIXITOSIC Mix To Reject. Matanal Name: Matanah Deseription 0.4 Ton 142.7 Ton AC 0.002 Ton 0.395 Ton Antistrip Antistrip 519.4 Ton 3.8 Ton 3/16 Minus Rap FRAP 6.1 Ton 843.5 Ton Hanson 028FM20 FM20 3.7 Ton 503.1 Ton Hanson 022CM13 CM13 5.6 Ton 758.5 Ton Hanson 038FM22 FM22 3.8 Ton 519.3 Ton CRAP 5/8-3/16 Rap 0.2 Ton 33.1 Ton **Mineral Fill** MF 2084.3 Ton 15.3 Ton Virgin Scale Virgin Scale 7.6 Ton 1045.1 Ten Rap Scale **Rap Scale** 23 Ton 3234.7 Ton Total tons TOTAL PRODUCED 12-11-18

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Page 1 of 1

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lo Pl L Pai	lant ramet	ers:	8 8:00 <b>:</b>	00 AM -	12/11/20	18 9:15	:59 AM										Taxable	
ne O	ut: 12	11/201										Product	Pr	oduct		Qtty	Taxabic	4
120	18 T	uesda Produ	y ,	nit: Ton	9					Formu (mix)		Code	10	escription		T		
uct	type		Tous	SLOING. 1	Job	Job	er [	cation		23143	1		N	-70	00070	() 19.78	3 Yes	
et ohe	r Na	stomer ne	Nu	mber	Name	+	M	arina	(r\n2075) 18410	W INTO		231431	TW	I-70 Surface(81E		4-	4	-
			150	000	Marina	Marir			118410 mWMA)		Concession of the local division of the loca	1	-+		- - 0	14.4	15 Yes	
)24	4 ICc	nstruct asing I	ion 50 nc.	000		$\bot$				2314		M-232	521	N-70 Surfa		_	+	-
_					Patch	ng Cab	le	_oomis	& Roose	velt N/0	FAC	<u>=</u>						
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		ervices	<u> </u>		T	B-4					<b>۱</b>	CE 2314	31TW	Sunacore				
		MAT		50000	B-4-	152 15	2-T	Dame	n)\r\nEvo	therm SU	NI /			+			21.09 Ye	5
09	246	Constri Leasin	g Inc.	50000				WMA		23	1431	M-		N-70 W Surface	(81BIT	006X)	1.05	_
						T			ia sing\r\n2( \r\nM184	)75 W IN	70	ACE 231	4311	vv oundee		1	-+	
		MAT	ruction	50000	Ма	rina 👖	Aarina		thermW	лА)	_			TN-70			20.85 Y	es
30	9247	Leas	ing Inc					and the second division of the second divisio		075 W	3143 170	31 M-	1431	N-70 TW Surfac	e(81BI	T006X)		
		+		T		arina	Marin			11 <u>7</u> , 1	SUR	FAUL					1 1	1/20
	0924	MAT Con	structic	on 5000	10 M	anna		(E)	othermiv	MA)	2314	131 N	٩.,	N-70		1T006X	19.93	162
	092-1	Lea	sing In	C.	+		1	- I -	arina ossing\r\t	12075 W	N70	EACE 2	3143	N-70 1TW Surfa	0000		+-	-
ł		MA	π	. 1=00		Marina	Mari		ossing and Brd\r\nM1 votherm	8410 NMA)	ISUI							Yes
	3092	a lea	nstruct asing l	ion 500 nc.			4				23	1431	M-	31TW Sur	) ace(81	BIT006	X)	
Ļ				-+-			1.40		Crossing	\n2075 W 18410		JKFAUL					1	T
		. en 10	AT	ction 50	000	Marina	Ivia	1	(Evotherr	nWMA)	+	24.431	1.	N-1	70	100T00	6X) 20.7	'6 Ye
7	309	250 10	easing	Inc.		<b>\</b>	+		Marina	Nr\n2075 V	NN	70	231	431TW SU	rface(e	11D1100	1	+
	-		MAT .		000	Marin	a M	arina		M18410 mWMA)	le	SURFACE	4				20	.42
	30	9251	Constr Leasin	uction 5	0000							231431	M-	1431TW S	-70 urface	(81BITO	.06X)	
	8		L69291			T	- I.	Marina	Crossir	g\r\n2075 M18410	vv	N70 SURFAC	23) (23	14311			-+	-1
	Γ		MAT	truction	50000	Mar	na	Vanna	(Evoth	ermWMA)				1			10	0.00
	cy 3	09252	Leas	ing Inc.								231431 N70	N2	1- 31431TW	Surfac	e(81811	0000	
	`}		+		T		rina	Marina				SURFA	CE					12.8
		309253	MAT Con	structio	n 50000	INIC	1.11.1		(Evot	hermonik	·/	23143	1	M-232521	N-70	Surface		
	10	00020	Lea	sing inc				Tank	Loor	nis & Roos	sevel	t N70 SURF	ACE		+			
				nchez	on 72820	) P	atchin	gCable				2314	31	M- 231431T\	N-70		31T006X)	19.7
	λ,	3092	SA ICO	rvices				T	Mar		075	N NTO	FACF	231431T	VISun	00010		+
			TM	AT	Enn	<sub>20</sub>	Marina	Mar	INA 431	othermWi	MA)			-1	1			1
	1	3092	er lo	onstructers in the second s	tion 5000 Inc.	·-			and the second sec	A A Longit	n H-4	SD 231	431	M- 231431	N-7	'0 rface(81	BITO06	~){ <sup>20</sup>
		ــــــ			-+-			B-	15	2 \r\nwns	0110-	N70	) RFAC	E 231431	WISU	100010		1
			Į,	MAT	ction 50		B-4-1	52 45	2-T In	amen)\r\n	Evoth	· 1				-70		12
			1	NILL I	-stan IKO	100	1-		2-			,	and the second division of the second divisio	M- it.asp?LDR=	114	-10		•

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#### 12/14/2018

.: DFLive :: Live Plant Data :: Chicago Plant : Customer ticket list broken by product type and unit :.

	2/14/2018		_	-		Jata :: Chicago Plant : Cl	_	-			
		Construction Leasing Inc.				Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	N70 SURFACE	231431TW	Surface(81BIT006X)		
	309258	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	12.57	Yes
	309259	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	20.69	Yes
	309260	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	19.54	Yes
8	309261	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	13.65	Yes
1	309262	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.43	Yes
<i>"</i> [	309263	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	13.42	Yes
	309264	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	21.38	Yes
	309265	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.00	Yes
<u>,</u> ,	309266	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.11	Yes
	309267	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.66	Yes
ſ									Produced 453.5	Tons	

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#### 12-11-2018 07:57:57

### Genco

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F B MIX NZO SHOO			12-11-2018	07:57:8	57		Geno
F B MIX: N70 St.SC	RATE: 299tph	TEMP:311.7°	F RUN TOT	AL: 744	1.2Ton	AC CONT	ENT: 6.1%MIX
Vir Scale Rap Scale +A/C #1 Virgin Feeder #1 Virgin Feeder #2 Virgin Feeder #3 Virgin Feeder #4 Virgin Feeder #5 Virgin Feeder #6 Recycle Feeder #1 Recycle Feeder #1 Recycle Feeder #1 Mineral Fill #1	Material Delta 19.4 9.8 1.328 0 7.8 0 7 4.6 0 4.6 0 4.8 4.8 0 0.3	190.4 95.2 13.47 0.0 77.8 0.0 70.1 46.6 0.0 47.9 48.1 0.0	%Req 62.5 30.5 6 0 25 0 22.5 15 0 15 15.5 0	%A 61. 32.9 4.5 0 25.4 0 22.8 15.2 0 15.8	ct (%Cmd) 7 9		Totals %Moisture 5.5 1.9 4 7 5.1 3.8 2 2.1 1.7 15.6
Antistrip JltraFoam GX	0.3  0 0	3.0 0.111 0	1  0 0	1 0 0	(29.1) (24) (0)	7.7 0 0	0 
DUST REMOVAL METER:	0.716	6.2		3.2	(0)	16.7	0
CCYCLE AC CONTENTS(% ANTISTRIP IN AC: 0 % RCY1: RCY2: C%: 0.917% 0.654% C% VIRGIN TOTAL% NTISTRIP TOTAL% C TOTAL% (actual)	RCY3: 0% 4.5 % 0.037 %	State ID: 23 ARB Lot#:			BH ( BH I Blue DUS AC 1 Silo (	INLET: 322 OUTLET: 2 PRESSUR Smoke PR T DIVERT Fank In Use Filling # 4	266°F E: 2.81"W RESS: 0.25"W ED To SILO e # 1
ANTISTRIP TOTAL% AC TOTAL% (actual)		ARB Lot#: EA Number		):97tph		AC 1 Silo I	AC Tank In Use Silo Filling # 4 MOTORS INTE

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#### 12-11-2018 08:03:57

#### Gencor

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			12-11-2010	00.03.07			Gencor
F B MIX: N70 St.SC	RATE: 292tph	TEMP:315°F	RUN TOTA	AL: 774.	1Ton	AC CONTENT: 6	
Vir Scale	Material Delta		%Req		t (%Cmd)		
	19.2	192.1	62.5	63.2		491	5.6
Rap Scale	9.8	96.1	30.5	31.5		258.6	1.9
+A/C #1	1.315	12.72	6		(32.8)	33.818	1.9
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.7	25		(62.4)	203.9	
Virgin Feeder #3	0	0.0	0	0	(02.4)	0	7
Virgin Feeder #4	7	69.9	22.5		(47.3)		7
Virgin Feeder #5	4.6	46.4	15		(47.3)	183	5.1
Virgin Feeder #6	0	0.0	0	0	•	121.5	3.8
Recycle Feeder #1	4.8	47.6	15	-	(0)	0	2
Recycle Feeder #2	4.8	47,8	15.5		(32.9)	125	2.1
RAS Feeder #1	0	0.0	0		(33.4)	125.4	1.7
Mineral Fill #1	0.3	3.0	1		(0)	0	15.6
				1 (	(29.1)	8	0
Antistrip	0	0.111	0	0	(24)	0	
UltraFoam GX	0	0	Ō		(24)	0	0
DUST REMOVAL METER:	0.691	7.9		4.1	(0)	17.39	0
AC STATISTICS: AC T	emp: 141°F			-r. )			
RECYCLE AC CONTENTS(% %ANTISTRIP IN AC: 0 % RCY1: RCY2: AC%; 0.96% 0.684%	6) RCY1: 5.8 % F RCY3: 0%	RCY2: 4 %	RCY3: 25.8 %		BH BH	INLET: 323°F OUTLET: 267°F PRESSURE: 2,8 Smoke PRESS:	91"W
AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	4.37 % 0.038 % 6.02 %	State ID: ; ARB Lot# EA Numb (Wet):203.4tpl	:	97.92tpt	DU: AC Silo	ST DIVERTED T Tank In Use # 1 Filling # 4 TORS INTERLO	o SÌLO

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## Gencor

F B MIX N70 St SC			12-11-20180	0.09.0	1		Genco
F B MIX: N70 St.SC	RATE: 297tph	TEMP:319.8°	F RUN TOTA	L: 803	.5Ton	AC CONTENT: 6	%MIX
Vir Scale Rap Scale +A/C #1 Virgin Feeder #1 Virgin Feeder #2 Virgin Feeder #3	Material Delta 18.6 9.9 1.28 0 7.8 0	TPH Rate 187 98.2 13.23 0.0 77.6 0.0	%Req 62.5 30.5 6 0 25 0	%A0 62.6 32 4.5 0	ct (%Cmd)	Material Totals 509.6 268.4 35.098 0 211.7	%Moisture 5.5 1.9 4 7
Virgin Feeder #4 Virgin Feeder #5 Virgin Feeder #6 Recycle Feeder #1 Recycle Feeder #2 RAS Feeder #1 Mineral Fill #1	7 4.6 0 4.8 4.8 0 0.3	69.8 46.6 0.0 47.3 47.8 0.0 3.0	22.5 15 0 15 15.5 0 1	22.9 15.2 0 15.5 15.7 0	(0) (47.3) (34.9) (0) (32.9) (33.4) (0) (29.1)	0 190 126.1 0 129.7 130.2 0 8.3	7 5.1 3.8 2 2.1 1.7 15.6 0
Antistrip JltraFoam GX	0 0	0.111 0	0 0		(24) (0)	0	
OUST REMOVAL METER:	0.661	5.6		3	(0)	18.05	0
AC STATISTICS: AC T RECYCLE AC CONTENTS(% &ANTISTRIP IN AC: 0 % RCY1: RCY2: AC%: 0.909% 0.648% AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	RCY3: 0% 4.46 % 0.037 % 6.02 %	State ID: 2: ARB Lot#: EA Numbe		100.11	BH BH DU AC Silo	INLET: 321°F OUTLET: 268°F PRESSURE: 2.9 eSmoke PRESS: ST DIVERTED To Tank In Use # 1 Filling # 4 TORS INTERLOO	45"W 0.369"W 9 SILO

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F B MIX: N70 St.SC	RATE: 293tph	TEMP:325.8°F	RUN TOTAL	. 833 .	Ton	AC CONTENT: 6	%MIX
F B WIX: N/0 51.50	Material Delta		%Req		t (%Cmd)		
Vir Scale	19	195.9	62.5	63.6		528.5	5.6
	9.8	97	30.5	31.2		278.2	1.9
Rap Scale +A/C #1	9.8 1.305	13.05	6		(33.9)	36.403	1.0
Virgin Feeder #1	0	0.0	0	4.4 0	(0)	0	4
Virgin Feeder #2	7.8	77.6	25		(62.4)	219.5	7
Virgin Feeder #3	0	0.0	0	20.4	(02.4)	0	7
Virgin Feeder #4	7	70.1	22.5	-	(47.3)	197	5.1
Virgin Feeder #5	4.6	46.6	15		(34.9)	130.8	3.8
Virgin Feeder #6	0	0.0	0	0	(04.0)	0	2
Recycle Feeder #1	4.8	47.2	15	-	(32.9)	134.5	2.1
Recycle Feeder #2	4.8	47.8	15.5		(33.4)	135	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	8.6	0
Antistrip	0	0.111	0	0	(24)	0	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.684	8.2		4.2		18.73	
RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 % RCY1: RCY2:	RCY3:	RCY2: 4 %	RCY3: 25.8 %		BI BI BI	H INLET: 321°F H OUTLET: 266°I H PRESSURE: 2 ueSmoke PRESS	939"W S: 0.138"W
AC%: 0.92% 0.656%		AL / 18 A					
AC% VIRGIN TOTAL%	4.45 %	State ID: 2				C Tank In Use # 1	l · ·
ANTISTRIP TOTAL%	0.038 %	ARB Lot#:				lo Filling # 4	
AC TOTAL% (actual) AC TOTAL% (required)	6.02 %	EA Numbe	er: oh Rap Rate(Wet)	·		OTORS INTERL	UCKED

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### Gencor

F B MIX: N70 St.SC	RATE: 299tph	TEMP:320.5°F	RUN TOTA	L: 862.	9Ton /	AC CONTENT: 6	%MIX
	Material Delta	TPH Rate	%Req	%Ac	t (%Cmd)	Material Totals	%Moisture
Vir Scale	19	188.6	62.5	62.2		547.5	5.6
Rap Scale	9.7	98.5	30.5	32.4		287.9	1.9
+A/C #1	1.31	13.08	.6	4.4	(34)	37.713	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.4	(62.4)	227.3	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	70.3	22.5	23	(47.3)	204	5.1
Virgin Feeder #5	4.6	46.4	15	15.2	(34.9)	135.4	3.8
Virgin Feeder #6	0	0,0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.3	15	15.5	(32.9)	139.2	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.6	(33.4)	139.7	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1	(29.1)	8.9	0
Antistrip	0	0.111	0	0	(24)	0	
UltraFoam GX	0	0	0	0	(0)	0	Ó
DUST REMOVAL METER:	0.596	6	······································	3.2		19.33	1/5 1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 %	Temp: 141°F %) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %		BH	I INLET: 321°F I OUTLET: 267°I	and the second
RCY1: RCY2: AC%: 0.927% 0.66%	RCY3: 0%		· .	, <sup>1</sup>	Blu	I PRESSURE: 2. JeSmoke PRESS JST DIVERTED	S: 0.302"W
AC% VIRGIN TOTAL%	4.38 %	State ID: 2	31431		AC	Tank In Use # 1	
ANTISTRIP TOTAL%	0.037 %	ARB Lot#:			Sil	o Filling # 3	
AC TOTAL% (actual)	5.96 %	EA Numbe	r:		M	DTORS INTERL	OCKED
AC TOTAL% (required)	6 % Virgin Rat	e(Wet):199.65tp	h Rap Rate(We	t):100.4	2tph		<u>.</u> '

12-11-2018 08:27:57

### Gencor

F B MIX: N70 St.SC	RATE: 291tph	TEMP:324.6°F	RUN TOTA	L: 892.	7Ton	AC CONTENT: 6	.1%MIX
	Material Delta	TPH Rate	%Req	%Ac	t (%Cmd)	Material Totals	%Moisture
Vir Scale	19.2	191.1	62.5	61.9		566.7	5.5
Rap Scale	9.7	100.9	30.5	32,9		297.6	1.9
+A/C #1	1.311	12.87	6	4.5	(33.1)	39.023	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.7	25	25.5	(62.4)	235	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	70.1	22.5	22.9	(47.3)	211	5.1
Virgin Feeder #5	4.6	46.2	15	15.2	(34.9)	140	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.5	15	15.5	(32.9)	144	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.7	(33.4)	144.5	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1	(29.1)	9.2	0
Antistrip	0	0.111	0	0	(24)	0	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.672	5.7		3		20	
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 % RCY1: RCY2:		RCY2: 4 % F	CY3: 25,8 %		BI BI	H INLET: 321°F H OUTLET: 267° H PRESSURE: 2 ueSmoke PRESS	.787"W
AC%: 0.942% 0.671%						UST DIVERTED	
AC% VIRGIN TOTAL%	4.46 %	State ID: 23	31431			C Tank In Use # 1	
ANTISTRIP TOTAL%	0.038 %	ARB Lot#:	• • • •			lo Filling # 3	-
AC TOTAL% (actual)	6.07 %	EA Number				OTORS INTERL	OCKED
AC TOTAL% (required)		te(Wet):202.31tpl		et):102.8			

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#### 12-11-2018 08:33:57

## Gencor

F B MIX: N70 St.SC	RATE: 297tph	TEMP:326°F	RUN TOTA	AL: 922.4	1Ton	AC CONTENT: 6	S%MIX
Vir Scale Rap Scale +A/C #1 Virgin Feeder #1 Virgin Feeder #2 Virgin Feeder #3 Virgin Feeder #4 Virgin Feeder #5	Material Del 19 9.7 1.302 0 7.8 0 7 4.7		%Req 62.5 30.5 6 0 25 0 22.5 15	%Act 61.4 33.3 4.4 0 25.4 0 23	(34.3) (0) (62.4) (0) (47.3)	Material Totals 585.7 307.4 40.325 0 242.8 0 218	%Moisture 5.6 1.9 4 7 7 5.1
/irgin Feeder #6 Recycle Feeder #1 Recycle Feeder #2 RAS Feeder #1 Aineral Fill #1	0 4.8 4.8 0 0.3	40.4 0.0 47.9 47.4 0.0 3.1	15 0 15 15.5 0 1	0 15.7 15.5 0	(34.9) (0) (32.9) (33.4) (0) 29.1)	144.7 0 148.8 149.3 0 9.5	3.8 2 2.1 1.7 15.6 0
ntistrip IltraFoam GX	0	0.111 0	0 0		(24) (0)	0 0	0
OUST REMOVAL METER:	0.716	7.9		4.2		20.72	
C STATISTICS: AC T RECYCLE AC CONTENTS(% 6ANTISTRIP IN AC: 0 % RCY1: RCY2: C%: 0.94% 0.67%	emp: 141°F 5) RCY1: 5.8 % RCY3: 0%	RCY2: 4 %	RCY3: 25.8 %		BH BH	INLET: 321°F OUTLET: 266°F PRESSURE: 2,8 eSmoke PRESS:	11"W
C% VIRGIN TOTAL% NTISTRIP TOTAL% C TOTAL% (actual) C TOTAL% (required)	4.43 % 0.037 % 6.04 %	State ID: : ARB Lot# EA Numb e(Wet):199.82t	;	):103.18 <del>1</del>	AC Silc	ST DIVERTED T Tank In Use # 1 Filling # 3 TORS INTERLO	:

RECORDATION			12-11-2018 08	Gencor			
F B MIX: N70 St.SC	RATE: 302tph	TEMP:322.1°F	RUN TOTAL	: 951.9	Ton	AC CONTENT: 5	.9%MIX
	Material Delta	TPH Rate	%Req	%Ac	t (%Cmd)	) Material Totals	%Moisture
Vir Scale	18.9	174.2	62.5	60.1		604.5	5.6
Rap Scale	9.8	101.4	30.5	34.4		317.2	1,9
+A/C #1	1.295	13.08	6	4.3	(34.1)	41.621	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.9	25	25.5	(62.4)	250.6	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	69.8	22.5	22.8	(47.3)	225	5.1
Virgin Feeder #5	4.6	46.3	.15	15.2	(34.9)	149.3	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.3	15	15.5	(32.9)	153.5	2.1
Recycle Feeder #2	4.8	47.8	15.5		(33.4)	154.1	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	9.8	0
Antistrip	0	0.111	0	0	(24)	0	* *************************************
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.613	3.4		1.9		21.33	
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 % RCY1: RCY2: AC%: 0.938% 0.668% AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	RCY3: 0% 4.33 % 0.037 % 5.94 %	State ID: 23 ARB Lot#: EA Numbe		:103.3	BI BI D A( Si M	H INLET: 320°F H OUTLET: 267°F H PRESSURE: 2. ueSmoke PRESS UST DIVERTED C Tank In Use # 1 lo Filling # 3 OTORS INTERLO	92"W 5: 0.242"W To SILO

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RECORDATION			12-11-2018 (	08:45:57	,		Genc
F B MIX: N70 St.SC	RATE: 300tph	TEMP:321.3°F	RUN TOTA	AL: 981.8	BTon	AC CONTENT: 6	%MIX
	Material Delta	a TPH Rate	%Req	%Ac	t (%Cmd	) Material Totals	%Moisture
Vir Scale	19	181.1	62.5	60.8		623.5	5.5
Rap Scale	9.8	95	30.5	33.7		327	1.9
+A/C #1	1.313	13.23	6	4.4	(34.5)	42.933	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	78.3	25	25.5	(62.4)	258.4	7
/irgin Feeder #3	0	0.0	0	0	(0)	0	7
/irgin Feeder #4	7	70.2	22.5	22.9	(47.3)	232	5.1
/irgin Feeder #5	4.6	46.4	15	15.1	(34.9)	154	3.8
∕irgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.7	15	15.5	(32.9)	158.3	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.6	(33.4)	158.9	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1	(29.1)	10.1	0
Antistrip	0	0.111	0	0	(24)	0	
JltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.561	2.5		1.4		21.89	
AC STATISTICS: AC T RECYCLE AC CONTENTS(9 %ANTISTRIP IN AC: 0 % RCY1: RCY2: AC%: 0.923% 0.658% AC% VIRGIN TOTAL% ANTISTRIP TOTAL%	RCY3:	RCY2: 4 % R State ID: 23 ARB Lot#:	CY3: 25.8 %		B B D A	H INLET: 323°F H OUTLET: 268°F H PRESSURE: 2. IueSmoke PRESS UST DIVERTED C Tank In Use # 1	955"W S: -0.07"W To SILO
						ilo Filling # 3	
AC TOTAL% (actual) AC TOTAL% (required)	6 % 6 %  Virgín Ra	EA Number te(Wet):191.7tph		:):96.84tp		IOTORS INTERLO	JUKED

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### Gencor

F B MIX: N70 St.SC	RATE: 299tph	TEMP:319.4°	RUN TOTA	L: 1011.3T	on AC CONTENT: 6	3.1%MIX
	Material Del	a TPH Rate	%Req	%Act (%		
Vir Scale	18.8	199.6	62.5	63.9	642,4	5.6
Rap Scale	9.7	96.5	30.5	30.8	336.7	1.9
+A/C #1	1.293	13.47	6	4.5 (35)		
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.5 (62		7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.7	22.5	22.8 (47		5.1
Virgin Feeder #5	4.6	46.3	15	15.2 (34		3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.0	15	15.4 (32		2.1
Recycle Feeder #2	4.8	47.8	15.5	15.7 (33.		1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Vineral Fill #1	0.3	3.1	1	1 (29.		0
Antistrip	0	0.111	0	0 (24)	0	N 18898
JItraFoam GX	0	0	0	0 (0)	0	0
OUST REMOVAL METER:	0.659	9		4.5	22.55	
RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 % RCY1: RCY2:	RCY3:	RCY2: 4 %	RCY3: 25.8 %		BH INLET: 325°F BH OUTLET: 270°F BH PRESSURE: 2. BlueSmoke PRESS	803"W
AC%: 0.925% 0.659% AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	4.5 % 0.037 % 6.09 %	State ID: 2 ARB Lot#: EA Numbe te(Wet):211.36tp		i):98.33tph	DUST DIVERTED AC Tank In Use # 1 Silo Filling # 5 MOTORS INTERLO	Γο SILO

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### Gencor

			12-11-20101	Genco								
F B MIX: N70 St.SC	RATE: 297tph	TEMP:316.3°F	RUN TOTA	L: 1041Ton	AC CONTENT: 6	5.1%MIX						
Vir Ceolo	Material Delta		%Req	%Act (%Cmo								
Vir Scale	19	197.8	62.5	64.2	661.4	5.5						
Rap Scale	9.7	94.8	30.5	30.5	346.4	1.9						
+A/C #1	1.311	13.44	6	4.5 (35)	45.538	1.0						
Virgin Feeder #1	0	0.0	0	0 (0)	0	4						
Virgin Feeder #2	7.8	77.7	25	25.5 (62.4)	274	7						
Virgin Feeder #3	0	0.0	0	0 (0)	0	7						
Virgin Feeder #4	7	69.4	22.5	22.7 (47.3)	246							
Virgin Feeder #5	4.7	46.2	15	15.1 (34.9)	163.2	5.1						
Virgin Feeder #6	0	0.0	0	0 (0)	0	3.8						
Recycle Feeder #1	4.8	47.3	15	15.5 (32.9)		2						
Recycle Feeder #2	4.8	47.7	15.5	• •	167.9	2.1						
RAS Feeder #1	0	0.0	0	15.6 (33.4)	168.4	1.7						
Mineral Fill #1	0.3	3.0	1	0 (0) 1 (29.1)	0 10.7	15.6 0						
Antistrip	0	0.112	0			- 						
UltraFoam GX	0	0	0	0 (24) 0 (0)	0	•						
DUST REMOVAL METER:	0.706	6.1		3.1	0	0						
AC STATISTICS: AC T	emp: 141°F				23.26 H INLET: 321°F							
RECYCLE AC CONTENTS(% %ANTISTRIP IN AC: 0 % RCY1: RCY2:	6) RCY1: 5.8 % F	RCY2: 4 % F	RCY3: 25.8 %	BI	HOUTLET: 270°F HPRESSURE: 2,9	)15"W						
AC%: 0.923% 0.658%	0%				ueSmoke PRESS							
AC% VIRGIN TOTAL%	4.52 %	State ID: 23	31431		JST DIVERTED T	o SILO						
NTISTRIP TOTAL%	0.038 %	ARB Lot#:			Tank In Use #1							
C TOTAL% (actual)	6.11 %	EA Number			o Filling # 5							
AC TOTAL% (required)	6 % Virgin Rate			MC CEAR	DTORS INTERLO	CKED						
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#### Gencor

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RATE: 305tph	TEMP:317.2°F	RUN TOTA	<b>L:</b> 107 <sup>-</sup>	1.2Ton	AC CONTENT: 5	.9%MIX
Material Delta	a TPH Rate	%Req	%Ac			
19.5	196	62.5				5.5
	97.3	30.5	31.4			1.9
1.335	13.38	6	4.3	(34,9)		
0	0.0	0	0		-	4
7.8	78.9	25	25.7			7
0	0.0	0	0			7
7	70.1	22.5	22.8			5.1
4.6	46.2	15				3.8
0	0.0	0				2
4.8	47.7	15	15.6			2.1
4.8	47.8	15.5				1.7
0	0.0	0	0	• •		15.6
0.3	3.1	1	1		11	0
0	0.111	0	 0	(24)		* 웹 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및 및
0	0	ō	õ		0	0
0.631	8.3		4.2		23.89	
6) RCY1: 5.8 % RCY3: 0% 4.33 % 0.036 %	State ID: 23 ARB Lot#:	1431		BH BH BIL DU AC Sile	I OUTLET: 268°F I PRESSURE: 2,8 IeSmoke PRESS IST DIVERTED T Tank In Use # 1 D Filling # 5	804"W : 0.464"W :o SILO
				MC	DTORS INTERLO	CKED
	Material Delta 19.5 9.6 1.335 0 7.8 0 7 4.6 0 4.8 4.8 4.8 0 0.3 0 0 0.631 Temp: 141°F 6) RCY1: 5.8 % RCY3: 0% 4.33 % 0.036 % 5.88 %	Material Delta         TPH Rate           19.5         196           9.6         97.3           1.335         13.38           0         0.0           7.8         78.9           0         0.0           7         70.1           4.6         46.2           0         0.0           4.8         47.7           4.8         47.8           0         0.0           0.3         3.1           0         0.111           0         0.1111           0         0.1111           0         0.631           8.3         8.3           Temp: 141°F           6) RCY1: 5.8 % - RCY2: 4 %           R         RCY3:           0%         4.33 %           4.33 %         State ID: 23           0.036 %         ARB Lot#:           5.88 %         EA Number:	Material Delta         TPH Rate         %Req           19.5         196         62.5           9.6         97.3         30.5           1.335         13.38         6           0         0.0         0           7.8         78.9         25           0         0.0         0           7         70.1         22.5           4.6         46.2         15           0         0.0         0           4.8         47.7         15           4.8         47.8         15.5           0         0.0         0           0.3         3.1         1           0         0.111         0           0         0.111         0           0         0.111         0           0         0.111         0           0         0         0           0.631         8.3           Ferministration of the second sec	Material Delta         TPH Rate         %Req         %Action           19.5         196         62.5         63.4           9.6         97.3         30.5         31.4           1.335         13.38         6         4.3           0         0.0         0         0           7.8         78.9         25         25.7           0         0.0         0         0           7.8         78.9         25         22.5           4.6         46.2         15         15.1           0         0.0         0         0           4.6         46.2         15         15.6           4.8         47.7         15         15.6           0         0.0         0         0         0           0.3         3.1         1         1         1           0         0.111         0         0         0         0           0.631         8.3         4.2         *         *           *         78         15.231431         0.036 %         ARB Lot#:           6.88 %         EA Number:         EA Number:         *	Material Delta         TPH Rate         %Req         %Act (%Cmd)           19.5         196         62.5         63.4           9.6         97.3         30.5         31.4           1.335         13.38         6         4.3         (34.9)           0         0.0         0         0         (0)           7.8         78.9         25         25.7         (62.4)           0         0.0         0         0         (0)           7         70.1         22.5         22.8         (47.3)           4.6         46.2         15         15.1         (34.9)           0         0.0         0         0         (0)           4.8         47.7         15         15.6         (32.9)           4.8         47.8         15.5         15.6         (33.4)           0         0.0         0         0         (0)           0.3         3.1         1         1         (29.1)           0         0.111         0         0         (24)           0         0         0         0         (0)         (0)           0.631         8.3         4.2	Material Delta         TPH Rate         %Req         %Act (%Cmd)         Material Totals           19.5         196         62.5         63.4         680.9           9.6         97.3         30.5         31.4         356.1           1.335         13.38         6         4.3         (34.9)         46.873           0         0.0         0         0         0         0           7.8         78.9         25         25.7         (62.4)         281.7           0         0.0         0         0         0         0           7         70.1         22.5         22.8         (47.3)         253           4.6         46.2         15         15.1         (34.9)         167.9           0         0.0         0         0         0         0         0           0         0.0         0         0         0         0         0           0         0.111         0         0         (24)         0         0           0         0.111         0         0         (24)         0         0           0         0         0         0         0         0

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			12-11-2010				Genco
F B MIX: N70 St.SC		TEMP:316.3°F	RUN TOT	AL: 1101	.3Ton	AC CONTENT: 6	S%MIX
Vir Coole	Material Delta	· · · · · · · ·	%Req	%Act	(%Cmd)		
Vir Scale	19.4	201.4	62.5	63.6	•	700.3	5.5
Rap Scale	9.7	96.1	30.5	31.1		365.8	1.9
+A/C #1	1.334	13,29	6	4.5	(33.8)	48.208	
Virgin Feeder #1	0	0.0	0		(0)	0	4
Virgin Feeder #2	7.8	77.3	25		(62.4)	289.5	7
Virgin Feeder #3	0	0.0	0		(0)	0	7
/irgin Feeder #4	7	69.9	22.5		(47.3)	260	, 5.1
/irgin Feeder #5	4.6	46.1	15		(34.9)	172.5	5.1 3.8
/irgin Feeder #6	0	0.0	0		(04.8)	0	
Recycle Feeder #1	4.8	48.1	15		(32.9)		2
Recycle Feeder #2	4.8	47.9	15.5			177.4	2.1
RAS Feeder #1	0	0.0	0		(33.4)	178	1.7
/ineral Fill #1	0.3	3.1	1		(0) 29.1)	0 11.3	15.6 0
ntistrip	0	0.111	0	0 (	(24)	·	
litraFoam GX	0	0	õ		(24) (0)	0 0	0
UST REMOVAL METER:	0.612	7.4		3.8		24.5	0
ECYCLE AC CONTENTS( ANTISTRIP IN AC: 0 % RCY1: RCY2: C%: 0.932% 0.664% C% VIRGIN TOTAL% NTISTRIP TOTAL% C TOTAL% (actual)	RCY3:	RCY2: 4 % ( State ID: 2: ARB Lot#: EA Number			BH BH Blue DUS AC Silo	INLET: 320°F OUTLET: 267°F PRESSURE: 2.8 eSmoke PRESS ST DIVERTED T Tank In Use # 1 Filling # 5 TORS INTERLO	72"W 0.086"W o SILO
C TOTAL% (required)	6 % Virgin Rate(	(Wet):213.21tpl	h Rap Rate(Wet	t):97.92tp	h MO		UNED

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### Genco

E D BRIVENIZO DE DO			12-11-20101	09:10:5	(		Gence
F B MIX: N70 St.SC	RATE: 308tph	TEMP:312.7°F	RUN TOTA	AL: 113	1.5Ton	AC CONTEN	
Vir Scale Rap Scale +A/C #1 Virgin Feeder #1 Virgin Feeder #2 Virgin Feeder #3 Virgin Feeder #4 Virgin Feeder #5 Virgin Feeder #6 Recycle Feeder #1 Recycle Feeder #1 Recycle Feeder #1 Mineral Fill #1	Material Deita 19.6 9.7 1.341 0 7.8 0 7 4.6 0 4.8 4.8 4.8 0 0.3	TPH Rate 195.3 95.4 13.81 0.0 77.9 0.0 70.1 46.2 0.0 49.2 47.9 0.0 3.1	%Req 62.5 30.5 6 0 25 0 22.5 15 0 15 15.5 0 1	%Ac 63.5 31 4.5 0 25.3 0 22.7 15 0 15.9 15.6 0	ct (%Cmd)		otals %Moisture 5.5 1.9 4 7 5.1 3.8 2 2.1 1.7 15.6 0
Antistrip JltraFoam GX	0 0	0.109 0	0	0	(24)	0	
OUST REMOVAL METER:	0.594	2.1		1.1	(0)	0 25.1	0
AC STATISTICS: AC T RECYCLE AC CONTENTS(% 6ANTISTRIP IN AC: 0 % RCY1: RCY2: AC%: 0.912% 0.65% AC% VIRGIN TOTAL% ATISTRIP TOTAL% AC TOTAL% (actual) C TOTAL% (required)	emp: 141°F 6) RCY1: 5.8 % R RCY3: 0% 4.45 % 0.035 % 6.01 % 6 % Virgin Rate(\	State ID: 23 <sup>-</sup> ARB Lot#: EA Number:		:97.25tr	BH BH DUS AC Silo	INLET: 319° OUTLET: 26 PRESSURE	97°F : 2.948"W SS: 0.281"W D To SILO # 1

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## MAT Asphalt Customer ticket list broken by product type and unit

Chicago Plant Report Parameters:

Time out: 12/11/2018 10:00:00 AM - 12/11/2018 11:05:59 AM

TRUCKS LOADED

Friday, December 14, 2018 4:05:40 PM

		18 Tuesday Type: Produce	d Unit: Tor	15							
	Ticket Number	Customer Name	Customer Number	Job Name	Job Number	Location	Formula (mix)	Product Code	Product Description	Qtty	Taxable
١	309280	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	12.48	Yes
~	309281	MAT Construction Leasing Inc.	50000	B-4-152	В-4- 152-Т	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE		N-70 Surface(81BIT006X)	20.22	No
ع	309282	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	13.00	Yes
પ	309283	MAT Construction Leasing Inc.	50000	B-4-152	В-4- 152- <b>Т</b>	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.62	Νο
5	309284	MAT Construction Leasing Inc.	50000	B-4-152	<b>В-4-</b> 152-Т	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.22	No
Ç	309285	Sanchez Construction Services	72820	Patching	Cable	Loomls & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	13.86	Yes
7	309286	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.47	Yes
8	309287	MAT Construction Leasing Inc.	50000	B-4-152	<b>B-4-</b> 1 <b>52-T</b>	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.77	No
9	309288	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	13.58	Yes
<b>(</b> )	309289	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE		N-70 Surface(81BIT006X)	19.63	Yes
((	309290	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	19.79	Yes
12	309291	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.25	Yes
<b>(</b> Ъ	309292	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.67	Yes
14	309293	Illinois Paving	39950			Illinols & Rush	231431 N70	M- 231431TW	N-70 Surface(81BI⊤006X)	15.30	Yes

https://secure.dflive.com/productiondashboard//reports/customerTicketListByProductTypeAndUnit.asp?LDR=1&plantId1=MAT-Chicago&tPlts=1&TSC=... 1/3 024AS-473273-RT-238 63 0T 135 .: DFLive :: Live Plant Data :: Chicago Plant : Customer ticket list broken by product type and unit :.

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	309294	MAT Construction Leasing Inc.	50000	B-4-152	B-4- 152-T	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE		N-70 Surface(81BIT006X)	19.82	No
	309295 -	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE		N-70 Surface(81BIT006X)	20.18	Yes
	309296	Illinois Paving	39950			Illinois & Rush	231431 N70 SURFACE		N-70 Surface(81BIT006X)	13.75	Yes
	309297	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19. <b>97</b>	Yes
	309298	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	20.42	Yes
U	309299	MAT Construction Leasing Inc.	50000	B-4 <b>-1</b> 52	B-4- 152-T	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.88	No
	309300	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.20	Yes
2	309301	MAT Construction Leasing Inc.	50000	B-4-152	B-4- 152-T	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.38	No
7	309302	MAT Construction Leasing Inc.	50000	B-4-152	В-4- 152- <b>Т</b>	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	21.26	No
۲	309303	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.36	Yes
<	309304	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	14.15	Yes
	309305	MAT Construction Leasing Inc.	50000	8-4-152	В-4- 152-Т	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BI⊤006X)	20.32	No
١	309306	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE	M-232521	N-70 Surface	12.84	Yes
,	309307	MAT Construction Leasing Inc.	50000	B-4-152	B-4- 152-T	Arterial North B-4- 152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.63	No
ŧ	309308	Sanchez Construction Services	72820	Patching	Cable	Loomis & Roosevelt	231431 N70 SURFACE		N-70 Surface	12.63	Yes
0	309309	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W	231431 N70 SURFACE		N-70 Surface(81BIT006X)	19.68	Yes

.: DFLive :: Live Plant Data :: Chicago Plant : Customer ticket list broken by product type and unit i.

					43rd\r\nM18410 (EvothermWMA)					
ų	309310	MAT Construction Leasing Inc.	Marina	Marina		231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	21.01	Yes
ſ								Produced 564.34	4 Tons	

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#### 12-11-2018 09:57:57

### Gencor

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			12-11-2010 (	09.07.07			Gencor
F B MIX: N70 St.SC		TEMP: 321.5°F	RUN TOTA	AL: 1342.91	on AC	CONTENT: 6	
Vir Scale	Material Delta		%Req	%Act (%		Material Totals	
	19.6	199.6	62.5	64.1		857	5.6
Rap Scale	9.6	95.4	30.5	30.6		442.8	1.9
+A/C #1	1.348	13.59	6	4.4 (35		58.95	110
Virgin Feeder #1	0	0.0	0	0 (0)	,		4
Virgin Feeder #2	7.8	77.8	25	25.4 (62		351.7	7
Virgin Feeder #3	0	0.0	0	0 (0)	'		7
Virgin Feeder #4	7	69.8	22.5	22.8 (47		816	, 5.1
Virgin Feeder #5	4.6	46.6	15	15.2 (34		209.6	3.8
Virgin Feeder #6	0	0.0	0	0 (0)			
Recycle Feeder #1	4.8	47.2	15	15.4 (32		, 15.8	2
Recycle Feeder #2	4.8	47.8	15.5	15.6 (33			2.1
RAS Feeder #1	0	0.0	0	0 (0)		16.2	1.7
Mineral Fill #1	0.3	3.0	1	1 (29.	0 .1) 1	3.8	15.6 0
Antistrip	0	0.111	0		······································		
UltraFoam GX	0	0	0	0 (24 0 (0)	) 0 0		0
DUST REMOVAL METER:	0.649	9.1		4.5		9.77	0
AC STATISTICS: AC T RECYCLE AC CONTENTS(% %ANTISTRIP IN AC: 0 % RCY1: RCY2: AC%: 0.911% 0.649% AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	emp: 141°F 5) RCY1: 5.8 % F 0% 4.45 % 0.036 % 6.01 % 6 % Virgin Rate(	State ID: 23 ARB Lot#: EA Number:	· · · · ·	) 97 24tnh	BH OI BH PF BlueS DUST AC Ta Silo Fi	ILET: 324°F UTLET: 272°F RESSURE: 3.0 moke PRESS DIVERTED T ink In Use # 1 illing # 4 DRS INTERLO	)36"W : -0.017"W o SILO

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#### 12-11-2018 10:03:57

### Gencor

F B MIX: N70 St.SC	DATE: 2004-1		(2-11-2010			Geno
	RATE: 299tph Material Delta	TEMP:323.3°F		TAL: 1373.2Ton		NT: 6.1%MIX
Vir Scale	19.9	196.6	%Req	%Act (%Cmo		otals %Moisture
Rap Scale	9.5	95.3	62.5 20.5	64.5	876.9	5.6
+A/C #1	1.352	13.65	30.5	30	452.3	1.9
Virgin Feeder #1	0	0.0	6	4.5 (34.9)	60.302	
Virgin Feeder #2	7.8	77.7	0	0 (0)	0	4
Virgin Feeder #3	0		25	25.4 (62.4)	359.5	7
Virgin Feeder #4	7	0.0	0	0 (0)	0	7
Virgin Feeder #5	4.6	70.2	22.5	22.9 (47.3)	323	5.1
Virgin Feeder #6	0	46.2	15	15.1 (34.9)	214.3	3.8
Recycle Feeder #1	4.8	0.0	0	0 (0)	0	2
Recycle Feeder #2		47.2	15	15.4 (32.9)	220.5	2.1
RAS Feeder #1	4.8	47.9	15.5	15.7 (33.4)	221	1.7
Vineral FIII #1	0	0.0	0	0 (0)	0	15.6
	0.3	3.1	1	1 (29.1)	14.1	0
Antistrip	0	0.111	0	0 (24)		a ang ang pak ang
UltraFoam GX	0	0	Ö	0 (24) 0 (0)	<u>0</u> 0	0
DUST REMOVAL METER:	0.766	4.4		2.3	30.54	U
NTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	0.037 % 6.14 % 6 % Virgin Rate	State ID: 23 ARB Lot#: EA Number: (Wet):208.16tph		Sil	7 Tank In Us o Filling # 4 DTORS INTE	
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RECORDATION			12-11-2018 10	0:09:57			Genco
F B MIX: N70 St.SC	RATE: 307tph	TEMP:325.2°F	RUN TOTAI	L: 1403	7Ton	AC CONTENT: 6	.1%MIX
	Material Delta	a TPH Rate	%Req	%Act	(%Cmd)	) Material Totals	%Moisture
Vir Scale	19.9	201.1	62.5	64.8		896.8	5.6
Rap Scale	9.6	91.4	30.5	29.7		461.9	1.9
+A/C #1	1.36	13.96	6	4.5	(36.2)	61.662	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.4	(62.4)	367.3	7
Virgin Feeder #3	· 0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	70.3	22.5	23	(47.3)	330	5.1
Virgin Feeder #5	4.6	46.2	15	15.1	(34.9)	218.9	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.2	15	15.5	(32.9)	225.3	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.6	(33.4)	225.8	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	14.4	0
Antistrip	0	0.111	0	0	(24)	0	<b></b>
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.659	6.8		3.4		31.19	
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 % RCY1: RCY2: AC%: 0.885% 0.63% AC% VIRGIN TOTAL%		RCY2: 4 % State ID: 2	RCY3: 25.8 % 31431		B B D	H INLET: 327°F H OUTLET: 272°I H PRESSURE: 3. IueSmoke PRESS UST DIVERTED C Tank In Use #	015"W S: 0.406"W To SILO
ANTISTRIP TOTAL%	0.036 %	ARB Lot#:			Silo Filling # 4		
AC TOTAL% (actual)	6.06 %	EA Numbe	er:	MOTORS INTERLOCKED			
AC TOTAL% (required)			h Rap Rate(Wet	t):93.19 <sup>.</sup>			

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12-11-2018 10:15:57

## Gencor

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F B MIX: N70 St.SC	RATE: 303tph	TEMP:320.2°F	RUN TOTA	NL: 1434	.3Ton	AC CONTENT: 5	.9%MIX		
	Material Delt	a TPH Rate	%Req	%Ac	t (%Cmc	d) Material Totals	%Moisture		
Vir Scale	19.9	195.6	62.5	63.4		916.7	5.5		
Rap Scale	9.5	95.1	30.5	31.3		471.4	1.9		
+A/C #1	1.368	13.26	6	4.4	(34.7)	63.03			
Virgin Feeder #1	0	0.0	0	0	(0)	0	4		
Virgin Feeder #2	7.8	77.7	25	25.4	(62.4)	375.1	7		
Virgin Feeder #3	0	0.0	0	0	(0)	0	7		
Virgin Feeder #4	7	69.9	22.5	22.9	(47.3)	337	5.1		
Virgin Feeder #5	4.6	46.6	15	15.2	(34.9)	223.6	3.8		
Virgin Feeder #6	0	0.0	0	0	(0)	0	2		
Recycle Feeder #1	4.8	49.5	15	15.6	(32.9)	230.2	2.1		
Recycle Feeder #2	4.8	47.8	15.5	15.6	(33.4)	230.6	1.7		
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6		
Mineral Fill #1	0.3	3.0	1	1	(29.1)	14.7	0		
Antistrip	0	0.111	0	0	(24)	0	4 6266227-2		
UltraFoam GX	0	0	0	0	(0)	0	0		
DUST REMOVAL METER:	0.537	3.4		1.8		31.73			
RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 %		RCY2: 4 %	RCY3: 25.8 %		· E	BH INLET: 322°F BH OUTLET: 273°F BH PRESSURE: 3	015"W		
RCY1: RCY2; AC%: 0.878% 0.626%	RCY3: 0%	<b>i</b>				BlueSmoke PRESS: 0.116"W DUST DIVERTED To SILO			
AC% VIRGIN TOTAL%	4.38 %	State ID: 231431				C Tank In Use # 1			
ANTISTRIP TOTAL%	0.037 %	ARB Lot#:		Silo Filling # 4					
AC TOTAL% (actual)	5.89 %	EA Numbe	er:			OTORS INTERLO	DCKED		
AC TOTAL% (required)	6 % Virgin Ra	te(Wet):207.04ti	h Rap Rate(We	et):96.96					

12-11-2018 10:21:57

### Gencor

F B MIX: N70 St.SC	RATE: 305tph	TEMP:328.6°F	RUN TOT	AL: 1464	.8Ton	AC CONTENT: 6	%MIX	
	Material Delta	TPH Rate	%Req	%Act	t (%Cmd)	Material Totals	%Moisture	
Vir Scale	20	199	62.5	63.2		936.6	5.5	
Rap Scale	9.6	97.3	30.5	31.4		481	1.9	
+A/C #1	1.363	13.65	6	4.4	(35.7)	64.393		
Virgin Feeder #1	0	0.0	0	0	(0)	0	4	
Virgin Feeder #2	7.8	77.8	25	25.3	(62.4)	382.9	7	
Virgin Feeder #3	0	0.0	0	0	(0)	0	7	
Virgin Feeder #4	7	70.1	22.5	22.8	(47.3)	344	5.1	
Virgin Feeder #5	4.6	46.6	15	15.2	(34.9)	228.2	3.8	
Virgin Feeder #6	0	0.0	0	0	(0)	0	2	
Recycle Feeder #1	4.8	47.9	15	15.5	(32.9)	235	2.1	
Recycle Feeder #2	4.8	47.9	15.5	15.6	(33.4)	235.3	1.7	
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6	
Mineral Fill #1	0.3	3.0	1	1	(29.1)	15	0	
Antistrip	0	0.111	0	0	(24)	0	* *****	
UltraFoam GX	0	0	0	0	(0)	0	0	
DUST REMOVAL METER:	0.671	6.8		3.5		32.4		
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0 %	C Temp: 141°F 6(%) RCY1: 5.8 %	RCY2: 4 % F	RCY3: 25.8 %		Bł	HINLET: 323°F HOUTLET: 271°I HPRESSURE: 3	· · · · ·	
RCY1: RCY2 AC%: 0.892% 0.636				BlueSmoke PRESS: 0.332"W DUST DIVERTED To SILO				
AC% VIRGIN TOTAL%	4.47 %	State ID: 231431			AC Tank In Use # 1			
ANTISTRIP TOTAL%	0.036 %	ARB Lot#:			Silo Filling # 4			
AC TOTAL% (actual)	6 %	EA Numbe	r:		MOTORS INTERLOCKED			
AC TOTAL% (required)	6 % Virgin Rat	e(Wet):210.66tp	h Rap Rate(W	/et):99.16	itph			

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### Gencor

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F B MIX: N70 St.SC	RATE: 311tph	TEMP:325.4°F	RUN TOT	<b>AL:</b> 1495	5.1Ton	AC CONTENT:	5.9%MIX	
	Material Dell	a TPH Rate	%Req	%Ac	t (%Cmd)	Material Totals	Moisture	
Vir Scale	19.8	192	62.5	63.2		956.4	5.5	
Rap Scale	9.5	95.6	30.5	31.3		490.5	1.9	
+A/C #1	1.351	13.71	6	4.4	(36.5)	65.744		
Virgin Feeder #1	0	0.0	0	0	(0)	0	4	
Virgin Feeder #2	7.8	78.1	25	25.4	(62.4)	390.6	7	
Virgin Feeder #3	0	0.0	0	0	(0)	0 .	7	
Virgin Feeder #4	7	70.2	22.5	22.9	(47.3)	351	5.1	
Virgin Feeder #5	4.6	46.7	15	15.2	(34.9)	232.8	3.8	
Virgin Feeder #6	0	0.0	0	0	(0)	0	2	
Recycle Feeder #1	4.8	47.9	15	15.6	(32.9)	239.8	2.1	
Recycle Feeder #2	4.8	47.8	15.5	15.5	(33.4)	240.1	1.7	
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6	
Mineral Fill #1	0.3	3.0	1	1	(29.1)	15.3	0	
Antistrip	0	0.111	0	0	(24)	0		
UltraFoam GX	0	0	0	0	(0)	0	0	
DUST REMOVAL METER:	0.55	0.3		0.2		32.95		
RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0 %		RCY2: 4 %	RCY3: 25.8 %		Bł	HINLET: 323°F HOUTLET: 273° HPRESSURE: 3		
RCY1: RCY2: AC%: 0.862% 0.614%	RCY3: 0%					ueSmoke PRES		
AC% VIRGIN TOTAL%	4.41 %	DUST DIVERTED To State ID: 231431 AC Tank In Use # 1						
ANTISTRIP TOTAL%	0.036 %	ARB Lot#:			Silo Filling # 4			
AC TOTAL% (actual)						OTORS INTERL	OCKED	
TOTAL% (required) 6 % Virgin Rate(Wet):203.32tph Rap Rate(Wet):97.49tph								

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#### 12-11-2018 10:33:57

### Gencor

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F B MIX: N70 St.SC	RATE: 313tph	TEMP:335.5°F	RUN TOT	FAL: 1525.1Ton	AC CONTENT: 5	i.9%MIX	
	Material Delta	TPH Rate	%Req	%Act (%Cmd	) Material Totals	%Moisture	
Vir Scale	19.4	192.6	62.5	63.1	975.8	5.5	
Rap Scale	9.5	95.1	30.5	31.3	500	1.9	
+A/C #1	1.338	13.84	6	4.3 (37.2)	67.082		
Virgin Feeder #1	0	0.0	0	0 (0)	0	4	
Virgin Feeder #2	7.8	77.8	25	25.5 (62.4)	398.4	7	
Virgin Feeder #3	0	0.0	0	0 (0)	0	7	
Virgin Feeder #4	7	69.9	22.5	22.9 (47.3)	358	5.1	
Virgin Feeder #5	4.7	46.2	15	15.1 (34.9)	237.5	3.8	
Virgin Feeder #6	0	0.0	0	0 (0)	0	2	
Recycle Feeder #1	4.8	46.9	15	15.4 (32.9)	244.6	2.1	
Recycle Feeder #2	4.8	47.9	15.5	15.7 (33.4)	244.9	1.7	
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6	
Mineral Fill #1	0.3	3.1	1	1 (29.1)	15.6	0	
Antistrip	0	0.111	0	0 (24)	0		
UltraFoam GX	0	0	0	0 (0)	0	0	
DUST REMOVAL METER:	0.661	8.3		4.3	33.61		
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0 % RCY1: RCY2	6(%) RCY1: 5.8 % 2: RCY3:	RCY2: 4 % F	RCY3: 25.8 %	E	3H INLET: 323°F 3H OUTLET: 272° 3H PRESSURE: 3 3IueSmoke PRES	.097"W S: -0.006"W	
AC%: 0.875% 0.624					OUST DIVERTED		
AC% VIRGIN TOTAL%	4.42 %	State ID: 23	31431		AC Tank In Use # 1		
ANTISTRIP TOTAL%	0.035 %	ARB Lot#:			Silo Filling # 4	00//55	
AC TOTAL% (actual)	5.92 %	EA Numbe			MOTORS INTERL	OCKED	
AC TOTAL% (required)	6 % Virgin Rat	e(Wet):203.94tp	h Rap Rate(V	vet):96.93tph	· •	•	

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### Gencor

F B MIX:N70 St.SC	RATE: 305tph	TEMP:339.4°F	RUN TOTA	AL: 1555	.1Ton	AC CONTENT: 6	%MIX
	Material Delta	TPH Rate	%Req	%Ac	t (%Cmd)	Material Totals	%Moisture
Vir Scale	19.6	195.7	62.5	62.6		995.4	5.5
Rap Scale	9.5	95.6	30.5	32		509.5	1.9
+A/C #1	1.336	13.5	6	4.5	(34.3)	68.418	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.6	25	25.4	(62.4)	406.2	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	70.2	22.5	22.9	(47.3)	365	5.1
Virgin Feeder #5	4.6	46.3	15	15.1	(34.9)	242.1	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.6	15	15.6	(32.9)	249.3	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.6	(33.4)	249.7	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	15.9	0
Antistrip	0	0.111	0	0	(24)	0	- ***
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.725	3.4	<b></b>	1.7		34.34	
RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0 %		RCY2: 4 % F	RCY3: 25.8 %		BI Bi	H INLET: 323°F H OUTLET: 271°I H PRESSURE: 2.	.859"W
RCY1: RCY2 AC%: 0.902% 0.643						lueSmoke PRESS	
AC% VIRGIN TOTAL%	4.45 %	State ID: 23	31431			C Tank In Use #	
ANTISTRIP TOTAL%	0.036 %	ARB Lot#:				ilo Filling # 4	
AC TOTAL% (actual)	6 %	EA Number	<b>r</b> ;			OTORS INTERL	OCKED
AC TOTAL% (required)		e(Wet):207.21tpl		of).07 //			

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F B MIX: N70 St.SC	RATE: 302tph	TEMP:334.9°F	RUN TOTA	AL: 1585.4Ton	AC CONTENT: 6	S%MIX
и - такина -	Material Delt	ta TPH Rate	%Req	%Act (%Cmd)	Material Totals	%Moisture
Vir Scale	19.6	196.4	62.5	64.4	1015	5.5
Rap Scale	9.6	97.6	30.5	30.2	519.2	1.9
+A/C #1	1.344	13.38	6	4.5 (35)	69.762	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.4 (62.4)	414	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7 7
Virgin Feeder #4	7	70.1	22.5	22.9 (47.3)	372	5.1
Virgin Feeder #5	4.6	46.4	15	15.2 (34.9)	246.8	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.7	15	15.6 (32.9)	254.1	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.6 (33.4)	254.5	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	16.2	0
Antistrip	0	0.073	0.4	0.4 (15.9)	0	، هن من من هندان او هو ما <del>بر</del> مار مر چه مر چه مر به
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.52	4.5		2.3	34.86	÷
AC STATISTICS: AC RECYCLE AC CONTENTS(	Temp: 141°F (%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %		I INLET: 322°F I OUTLET: 270°I	-
%ANTISTRIP IN AC: 0.4 %				BH	IPRESSURE: 2.	849"W
RCY1: RCY2:				Blu	eSmoke PRESS	S: 0.212"W
AC%: 0.909% 0.648%	6 0%			DU	JST DIVERTED	To SILO
AC% VIRGIN TOTAL%	4.46 %	State ID: 2	231431	AC	Tank In Use # 1	
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:		Sil	o Filling # 1	
AC TOTAL% (actual)	6.02 %	EA Numb	er:		OTORS INTERLO	OCKED
AC TOTAL% (required)	6 % Virgin Ra	te(Wet):207.92t	oh Rap Rate(We			

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### Gencor

F B MIX: N70 St.SC	RATE: 305tph	TEMP:328.5°	RUN TOT	AL: 1615.6Ton	AC CONTEN	
	Material Dell	a TPH Rate	%Req	%Act (%Cmd)	Material Tot	als %Moisture
Vir Scale	19.6	195.5	62.5	63.7	1034.5	5.6
Rap Scale	9.6	96.1	30.5	30.9	528.7	1.9
+A/C #1	1.34	13.56	6	4.5 (35.3)	71.102	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.9	25	25.4 (62.4)	421.8	. 7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.7	22.5	22.7 (47.3)	379	5.1
Virgin Feeder #5	4.6	46.2	15	15.1 <b>(</b> 34.9)	251.4	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	48.3	15	15.7 (32.9)	258.9	2.1
Recycle Feeder #2	4.8	48.1	15.5	15.7 (33.4)	259.3	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1 (29.1)	16.5	Ó
Antistrip	0.006	0.074	0.4	0.4 (16.5)	0.006	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.607	5.9		3	35.46	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 %		RCY2: 4 %	RCY3: 25.8 %	BI	H PRESSURE	70°F 5: 2.932"W
RCY1: RCY2 AC%: 0.9% 0.641					ueSmoke PR UST DIVERTI	ESS: 0.386"W ED To SILO
AC% VIRGIN TOTAL%	4.47 %	State ID:	231431	A	C Tank In Use	e#1
ANTISTRIP TOTAL%	0.024 %	ARB Lot#	<b>#</b> :	Si	Io Filling # 1	
AC TOTAL% (actual)	6.01 %	EA Num	ber:	· • • • • • • • • • • • • • • • • • • •	OTORS INTE	RLOCKED
AC TOTAL% (required)	6 % Virgin R	ate(Wet):206.97	tph Rap Rate(W	et):97.96tph		•

RECORDATION			12-11-2018 <sup>-</sup>	10:57:57		Genco	
F B MIX: N70 St.SC	RATE: 299tph	TEMP:323.9°F	RUN TOTA	L: 1645.5Ton	AC CONTENT: 6	.2%MIX	
	Material Delta	TPH Rate	%Req	%Act (%Cmd)	Material Totals		
Vir Scale	19.4	19 <b>4.8</b>	62.5	63.7	1053.9	5.6	
Rap Scale	9.6	96.7	30.5	30.9	538.3	1.9	
+A/C #1	1.324	13.62	6	4.5 (34.7)	72.426		
Virgin Feeder #1	0	0.0	0	0 (0)	0	4	
/irgin Feeder #2	7.8	77.5	25	25.3 (62.4)	429.5	7	
Virgin Feeder #3	0	0.0	0	0 (0)	0	7	
Virgin Feeder #4	7	70.2	22.5	22.8 (47.3)	386	5.1	
Virgin Feeder #5	4.6	46.4	15	15.1 (34.9)	256	3.8	
Virgin Feeder #6	0	0.0	0	0 (0)	0	2	
Recycle Feeder #1	4.8	47.9	15	15.5 (32.9)	263.7	2.1	
Recycle Feeder #2	4.8	48.2	15.5	15.7 (33.4)	264.1	1.7	
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6	
Mineral Fill #1	0.3	3.1	1	1 (29.1)	16.8	0	
Antistrip	0.007	0.074	0.4	0.4 (16.5)	0.013	///	
UltraFoam GX	0	0	0	0 (0)	0	0	
DUST REMOVAL METER:	0.693	7.3		3.7	36.16		
RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0.4 % RCY1: RCY2: AC%: 0.911% 0.649% AC% VIRGIN TOTAL%	RCY3: 6 0% 4.51 %	State ID: 2		BI BI DI AC	1 INLET: 320°F 1 OUTLET: 269° 1 PRESSURE: 2 ueSmoke PRES JST DIVERTED C Tank In Use #	.919"W S: 0.2"W To SILO	
ANTISTRIP TOTAL%	0.025 %	ARB Lot#	2 4	Si	lo Filling #1		
AC TOTAL% (actual)	6.08 %	EA Numb	er:	M	OTORS INTERL	OCKED	
AC TOTAL% (required)	6 % Virgin Rat	e(Wet):206.25t	ph Rap Rate(W	et):98.62tph			

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## Gencor

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B MIX: N70 St.SC	RATE: 308tph	TEMP:322.7°F	RUN TOT	AL: 1675.7Ton	AC CONTENT: 5	
	Material Delta	TPH Rate	%Req	%Act (%Cmd)	Material Totals	%Moisture
/ir Scale	19.5	194.3	62.5	63.2	1073.4	5.6
Rap Scale	9.6	96.4	30.5	31.4	548	1.9
+A/C #1	1.337	13.56	6	4.5 (35.8)	73.763	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.7	25	25.3 (62.4)	437.3	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.9	22.5	22.8 (47.3)	393	5.1
Virgin Feeder #5	4.7	46.6	15	15.2 (34.9)	260.7	3.8
Virgin Feeder #6	0	0. <b>0</b>	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.7	15	15.7 (32.9)	268.5	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.6 (33.4)	268.9	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1 (29.1)	17.1	0
Antistrip	0.007	0.071	0.4	0.4 (16.1)	0.021	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.58	6.1		3.1	36.74	
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0.4 %		RCY2: 4 %	RCY3: 25.8 %	B	H INLET: 321°F H OUTLET: 270° H PRESSURE: 2	.992"W
RCY1: RCY2: AC%: 0.895% 0.638%					lueSmoke PRES	
AC% VIRGIN TOTAL%	4.4 %	State ID: 2	231431	· A	C Tank In Use #	1
ANTISTRIP TOTAL%	0.023 %	ARB Lot#		S	ilo Filling # 1	
AC TOTAL% (actual)	5.94 %	EA Numb			IOTORS INTERL	OCKED
AC TOTAL% (required)						

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### Gencor

F B MIX: N70 St.SC	RATE: 303tph	TEMP:320.8°F	RUN TOTA	L: 1705.8Ton	AC CONTENT: 6	%MIX
· · · · · · · · · · · · · · · · · · ·	Material Delta	TPH Rate	%Req	%Act (%Cmd)	Material Totals	%Moisture
Vir Scale	19.6	193.2	62.5	63.2	1093	5.6
Rap Scale	9.6	95.6	30.5	31.3	557.5	1.9
+A/C #1	1.327	13.2	6	4.4 (34.3)	75.09	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.4 (62.4)	445.1	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.9	22.5	22.9 (47.3)	400	5.1
Virgin Feeder #5	4.6	46.4	15	15.2 (34.9)	265.3	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.7	47.2	15	15.4 (32.9)	273.2	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.7 (33.4)	273.6	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	17.4	0
Antistrip	0.007	0.071	0.4	0.4 (16.2)	0.028	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.691	4.7		2.4	37.43	
AC STATISTICS: AC RECYCLE AC CONTENTS	Temp: 141°F (%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %		H INLET: 320°F H OUTLET: 270°	5
%ANTISTRIP IN AC: 0.4 %	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				H PRESSURE: 3	and the second
RCY1; RCY2:	RCY3:	•			ueSmoke PRES	
AC%: 0.913% 0.65%					UST DIVERTED	
AC% VIRGIN TOTAL%	4.4 %	State ID: 2	231431		C Tank in Use #	
ANTISTRIP TOTAL%	0.023 %	ARB Lot#:		Si	ilo Filling # 1	
AC TOTAL% (actual)	5.96 %	EA Numb	er:	M	OTORS INTERL	OČKED
AC TOTAL% (required)		e(Wet):204.58t	ph Rap Rate(We	et):97.44tph		

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### **MAT Asphalt** Customer ticket list broken by product type and unit

Chicago Plant Report Parameters: Time out: 12/11/2018 12:32:00 PM - 12/11/2018 1:39:59 PM

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Friday, December 14, 2018 4:06:34 PM

		18 <b>Tuesday</b> Type: Produced	d Unit: Ton	S							
	Ticket Number	Customer	Customer Number	Job Name	Job Number	Location	Formula (mix)	Product Code	Product Description	Qtty	Taxable
¢	309342	Sanchez Construction Services	72820	Sewer	Sewer	Sewer Structure\r\nAncillary P- N 7226C\r\nSouthChicago & Ingleside (EvothermWMA)	231431 N70 SURFACE		N-70 Surface(81BIT006X)	15.21	No
r	309343	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.34	Yes
3	309344	MAT Construction Leasing Inc.	50000	B-4- 152	В-4- 152-Т	Arterial North B-4-152 Ir\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.74	No
ų	309345	B & T Underground	06295			11305 S.Spaulding	231431 N70 SURFACE	M-232521	N-70 Surface	5.07	Yes
ц	309346	MAT Construction Leasing Inc.	50000	В-4- 152	<b>В-4-</b> 152-Т	Artenal North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.27	No
6	309347	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 <sup>°</sup> Surface(81BIT006X)	19.68	Yes
1	309348	MAT Construction Leasing Inc.	50000	B-4- 152	<b>В-4-</b> 152-Т	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- · 231431TW	N-70 Surface(81BIT006X)	20.60	No
b	309349	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431⊤W	N-70 Surface(81BIT006X)	20.17	Yes
¢	309350	MAT Construction Leasing Inc.	50000	B-4- 152	В-4- 152-Т	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.94	No
0	<b>30935</b> 1	Sanchez Paving Company	72825			Lake & Kedzie	231431 N70 SURFACE		N-70 Surface	11.54	Yes
ŋ	309352	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	21.12	Yes
\V	309353	MAT Construction Leasing Inc.	50000	8-4- 152	В-4- 152-Т	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	<mark>м-</mark> 231431TW	N-70 Surface(81BIT006X)	20.50	No
(ઝ	309354	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.97	Yes
4	309355	MAT Construction	50000	B-4- 152	В-4- 152-Т	Arterial North B-4-152 \r\nWilson(LSD to	231431 N70	M- 231431TW	N-70 Surface(81BIT006X)	20.84	No

12/14/2018

.: DFLive :: Live Plant Data :: Chicago Plant : Customer ticket list broken by product type and unit :.

		Leasing Inc.		ļ		Damen)\r\nEvotherm WMA	SURFACE		L		
ζ	309356	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.58	Yes
9	309357	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M 231431TW	N-70 Surface(81BIT006X)	20.49	Yes
7	309358	Sanchez Paving Company	72825			Lake & Kedzie	231431 N70 SURFACE	M-232521	N-70 Surface	11.79	Yes
3	309359	MAT Construction Leasing Inc.	5000 <b>0</b>	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431⊤W	N-70 Surface(81BIT006X)	20.04	Yes
l	309360	MAT Construction Leasing Inc.	50000	B-4- 152	В-4- 152-Т	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20. <b>0</b> 8	No
0	309361	MAT Construction Leasing Inc.	50000	B-4- 152	B-4- 152-⊤	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE		N-70 Surface(81BIT006X)	20.97	No
A.	309362	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431 <b>T</b> W	N-70 Surface(81BIT006X)	21.33	Yes
2	309363	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075`W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.86	Yes -
3	309364	MAT Construction Leasing Inc.	50000	B-4- 152	B-4- 152-T	Arterial North B-4-152 Ir\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.80	No
	309365	Sanchez Paving Company	72825			Lake & Kedzie	231431 N70 SURFACE	M-232521	N-70 Surface	19.52	Yes
<	309366	Sanchez Construction Services	72820	Sewer	Sewer	Sewer Structure\r\nAncillary P- N- 7226C\r\nSouthChicago & Ingleside (EvothermWMA)	231431 N70 SURFACE		N-70 Surface(81BIT006X)	12.59	No
r	309367	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE		N-70 Surface(81BIT006X)	20.43	Yes
1	309368	MAT Construction Leasing Inc.	50000	B-4- 152	В-4- 152-Т	Arterial North B-4-152 Ir\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE		N-70 Surface(81BIT006X)	20.18	No

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F B MIX: N70 St.SC	RATE: 296tph	TEMP:334.7°F	RUN TOTA	L: 2095	Ton	AC CONTENT: 6	%MIX
	Material Delta		%Req	%Act	(%Cmd)	) Material Totals	%Moisture
Vir Scale	19.3	194.2	62.5	64.4	•	1346.2	5.5
Rap Scale	9.4	94.6	30.5	30.3		680.7	1.9
+A/C #1	1.317	13.05	6	4.5	(33.5)	92.344	
/irgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7,8	77.9	25	25.4	(62.4)	546.6	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	69.8	22.5	22.7	(47.3)	491.4	5.1
Virgin Feeder #5	4.6	46.3	15	15.1	(34.9)	325.9	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.6	15	15.6	(32.9)	335.6	2.1
Recycle Feeder #2	4.8	48.1	15.5	15.7	(33.4)	336.2	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	21.4	0
Antistrip	0.007	0.071	0.4	0.4	(15.8)	0.121	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.57	10.1		5.2		45.92	
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0.4 %		RCY2: 4 %	RCY3: 25.8 %	, ,	E	BH INLET: 323°F BH OUTLET: 273°I BH PRESSURE: 3	.039"W
RCY1: RCY2: AC%: 0.927% 0.66%	RCY3: 0%	. ·				BlueSmoke PRES	
AC% VIRGIN TOTAL%	4.44 %	State ID: 2	31431		A	C Tank In Use #	1 1 2
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:			· 5	Silo Filling # 3	
AC TOTAL% (actual)	6.03 %	EA Numbe	r:		N	IOTORS INTERL	OCKED
AC TOTAL% (required)	6 % Virgin Ra	te(Wet):205.59tp	h Ran Rate(We	et) 96 45	itoh	,	

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RECORDATION	DATE 0074	TEMP:332°F	DUN TOT	AL: 2124.7Ton	AC CONTENT: 5	9%MIX
F B MIX: N70 St.SC	RATE: 297tph	كالأثل تستعب فتقاد فالمتعادين	%Reg	%Act (%Cn		
	Material Delta		%Req 62.5	64.4	1365.5	5.5
Vir Scale	19.3	193.8	82.5 30.5	30.3	690.2	1.9
Rap Scale	9.4	93.7		4.3 (33.8)	93.657	1.0
+A/C #1	1.313	12.96	6	4.3 (33.8) 0 (0)	0	4
Virgin Feeder #1	0	0.0	0	25.4 (62.4)	-	7
Virgin Feeder #2	7.8	77.6	25	, .	0	7
Virgin Feeder #3	0	0.0	0	0 (0)	<del>.</del>	5.1
Virgin Feeder #4	7	70.2	22.5	23 (47.3)		3.8
Virgin Feeder #5	4.6	46.4	15	15.2 (34.9)		2
Virgin Feeder #6	0	0.0	0	0 (0)	0 340.4	2.1
Recycle Feeder #1	4.8	47.0	15	15.4 (32.9)		1.7
Recycle Feeder #2	4.8	48.2	15.5	15.7 (33.4)		15.6
RAS Feeder #1	0	0.0	0	0 (0)	0	
Mineral Fill #1	0.3	3.0	1.	1 (29.1)	21.7	0
Antistrip	0.007	0.071	0.4	0.4 (16)	0.129	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.742	10		5.2	46.67	
RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0.4 % RCY1: RCY2: AC%: 0.919% 0.6559 AC% VIRGIN TOTAL% ANTISTRIP TOTAL%	RCY3: 6 0% 4.36 % 0.024 %	State ID: ARB Lot	#:		BH INLET: 323°F BH OUTLET: 273° BH PRESSURE: 2 BlueSmoke PRES DUST DIVERTED AC Tank In Use # Silo Filling # 3	.982"W S: 0.249"W To SILO 1
AC TOTAL% (actual)	5.94 %	EA Numl			MOTORS INTERL	
AC TOTAL% (required)	6 % Virgin Ra	te(Wet):205.16	itph Rap Rate(V	Vet):95.56tph		

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RECORDATION			12-11-2018		Genco	
B MIX: N70 St.SC	RATE: 294tph	TEMP:333.5°F	RUN TOT	AL: 2154.2Ton	AC CONTENT: 6	_
	Material Delt	a TPH Rate	%Req	%Act (%Cm	•	
/ir Scale	19.2	194.9	62.5	64.4	1384.7	5.6
Rap Scale	. 9.4	92.9	30.5	30.3	699.5	1.9
-A/C #1	1.31	13.08	6	4.4 (34.1)	94.968	
/irgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.5 (62.4)	562.1	7
/irgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.7	22.5	22.8 (47.3)	505.4	5.1
Virgin Feeder #5	4.6	46.4	15	15.2 (34.9)	335.2	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.6	15	15.5 (32.9)	345.2	2.1
Recycle Feeder #2	4.8	48.2	15.5	15.7 (33.4)	345.8	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1 (29.1)	22	0
Antistrip	0.007	0.071	0.4	0.4 (15.9)	0.136	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.607	7.6		3.9	47.27	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 %		RCY2: 4 %	RCY3: 25.8 %		BH INLET: 324°F BH OUTLET: 274° BH PRESSURE: 2	
RCY1: RCY2 AC%: 0.9% 0.641	RCY3:		·	• .	BlueSmoke PRES DUST DIVERTED	
AC% VIRGIN TOTAL%	4.47 %	State ID: 2	231431		AC Tank In Use #	1 👘
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:			Silo Filling # 3	
AC TOTAL% (actual)	6.01 %	EA Numbe			MOTORS INTERL	OCKED
AC TOTAL% (required)		ate(Wét):206.32t		vet):94.7toh		

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RECORDATION	DATE: 2004ab	TEMP:331.8°F	12-11-2018 1	AC CONTENT: 5	9%MIX		
F B MIX: N70 St.SC	RATE: 302tph Material Delt		%Reg		t (%Cmd		
En Oasta	19.3	194.4	62.5	63.6	( /JOING	1404	5.6
Vir Scale	19.3 9.4	94.6	30.5	31.1		708.9	1.9
Rap Scale	9.4 1.315	94.0 13,26	6		(34.9)	96.283	
+A/C #1		0.0	0	4.4 0	(0)	0	4
Virgin Feeder #1	0	77.6	25		(62.4)	569.9	7
Virgin Feeder #2	7.8		25	0	(02.4)	0	7
Virgin Feeder #3	0	0.0		-	(0) (47.3)	512.4	, 5.1 ·
Virgin Feeder #4	7	69.8 46.7	22.5 15		(47.3)	339.9	3.8
Virgin Feeder #5	4.7	46.7			• •	0	2
Virgin Feeder #6	0	0.0	0	0	(0)	350	2.1
Recycle Feeder #1	4.8	48.1	15		(32.9)		1.7
Recycle Feeder #2	4.8	48.1	15.5		(33.4)	350.6	1.7 15.6
RAS Feeder #1	0	0.0	0	0	(0)	0	
Mineral Fill #1	0.3	3.0	1	1	(29.1)	22.3	0
Antistrip	0.007	0.071	0.4	0.4		0.143	_
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.547	1.7		0.9		47.82	
AC STATISTICS: AC	Temp: 141°F					BH INLET: 326°F	
<b>RECYCLE AC CONTENTS(</b>	%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %			BH OUTLET: 274°	
%ANTISTRIP IN AC: 0.4 %				•		H PRESSURE: 2	
RCY1: RCY2:	RCY3:					BlueSmoke PRES	
AC%: 0.893% 0.636%				•		OUST DIVERTED	
AC% VIRGIN TOTAL%	4.36 %	State ID: 2				C Tank In Use #	1 <sup>·</sup>
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:		`		Silo Filling # 3	
AC TOTAL% (actual)	5.89 %	EA Numbe	er:		A A	IOTORS INTERL	OCKED
AC TOTAL% (required)	6 % Virgin R	ate(Wet):205.78tp	ph Rap Rate(We	et):96.44	4tph		
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F B MIX: N70 St.SC	RATE: 302tph	TEMP:333.2°F	RUN TOT	AL: 2213.6Ton	AC CONTENT	Г: <u>6%</u> МIX			
	Material Delt	a TPH Rate	%Req	%Act (%Cmd)	Material Tot	als %Moisture			
Vir Scale	19.3	191.2	62.5	63.7	1423.3	5.6			
Rap Scale	9.3	94	30.5	30.9	718.2	1.9			
+A/C #1	1.317	13.26	6	4.5 (34.4)	97.601				
Virgin Feeder #1	0	0.0	0	0 (0)	0	4			
Virgin Feeder #2	7.8	77.8	25	25.5 (62.4)	577.7	7			
Virgin Feeder #3	0	0.0	0	0 (0)	0	7			
Virgin Feeder #4	7	70.3	22.5	23.1 (47.3)	519.4	5.1			
Virgin Feeder #5	4.6	46.4	15	15.2 (34.9)	344.5	3.8			
Virgin Feeder #6	0	0.0	0	0 (0)	0	2			
Recycle Feeder #1	4.8	45.8	15	15.8 (32.9)	354.8	2.1			
Recycle Feeder #2	4.8	48.1	15.5	15.8 (33.4)	355.4	1.7			
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6			
Mineral Fill #1	0.3	3.1	1	1 (30.1)	22.6	0			
Antistrip	0.007	0.071	0.4	0.4 (16)	0.15				
UltraFoam GX	0	0	0	0 (0)	0	0			
DUST REMOVAL METER:	0.72	9		4.7	48.54				
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 %	(%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %	BH	HINLET: 326 HOUTLET: 2 HPRESSURE	75°F			
RCY1: RCY2 AC%: 0.904% 0.644	: RCY3:				ueSmoke PR JST DIVERTI	ESS: 0.39"W ED To SILO			
AC% VIRGIN TOTAL%	4.42 %	State ID: 2	31431		C Tank In Use				
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:	-	Si	lo Filling #1				
AC TOTAL% (actual)	5.97 %	EA Numbe	er:		OTORS INTE	RLOCKED			
AC TOTAL% (required)				Vet) 95 81tph	6 % Virgin Rate(Wet):202.43tph Rap Rate(Wet):95.81tph				

B MIR: N/10 St. Sc         NATE: 250 pr         TELM 700 st. Sc         Waterial Delta         TPH Rate         %Req         %Act (%Cmd)         Material Totals         %Moisture           fir Scale         19.4         194.9         62.5         63.3         1442.7         5.6           Rap Scale         9.4         97.8         30.5         31.5         727.6         1.9           A/C #1         1.328         13.11         6         4.4 (34.2)         98.929         98.929           A/C #1         1.328         13.11         6         4.4 (34.2)         98.929         98.929           A/C #1         1.328         13.11         6         4.4 (34.2)         98.929         98.929           A/C #1         1.328         13.11         6         4.4 (34.2)         98.929         98.929           A/C #1         0.00         0.0         0         0         0         0         77.7           A/C #1         1.328         13.11         6         4.4 (34.2)         98.929         38.7           A/C migin Feeder #2         7.8         77.7         25         25.3 (62.4)         58.5         7           A/rigin Feeder #4         7         70.3         22.5				DUNITOT	AL - 2242 5Top	AC CONTENT: 6	%MIX
In Social       19.4       194.9       62.5       63.3       1442.7       5.6         Rap Social       9.4       97.8       30.5       31.5       727.6       1.9         A/C #1       1.328       13.11       6       4.4       (34.2)       98.929         A/C #1       0       0.0       0       0       0       0       4         A/C #1       1.328       13.11       6       4.4       (34.2)       98.929         A/C #1       0       0.0       0       0       0       0       4         Argin Feeder #2       7.8       77.7       25       25.3       (62.4)       565.5       7         Aringin Feeder #3       0       0.0       0       0       0       7       7         Aringin Feeder #4       7       70.3       22.5       22.9       (47.3)       526.4       5.1         Aringin Feeder #6       0       0.0       0       0       0       2.1       3.8         Aringin Feeder #1       4.8       48.1       15.5       15.7       (33.4)       360.2       1.7         Recycle Feeder #1       0.3       3.0       1       1       (29.1) <th>B MIX: N70 St.SC</th> <th></th> <th>TEMP:330.6°F</th> <th></th> <th></th> <th></th> <th></th>	B MIX: N70 St.SC		TEMP:330.6°F				
Mr Scale       19.4       19.4       19.4       19.4       10.5       0.15	. 2			•	• •		
Ap Scale       9.4       9.0       000       000       0       000       0	Vir Scale						
HAC #1       1.020       10.11       0       0.11       0	Rap Scale						1.9
Virgin Feeder #1       0       0.0       0.0       0       0.0       0       0       0       0       7         Virgin Feeder #2       7.8       77.7       25       25.3       (62.4)       585.5       7         Virgin Feeder #3       0       0.0       0       0       0       0       0       7         Virgin Feeder #4       7       70.3       22.5       22.9       (47.3)       526.4       5.1         Virgin Feeder #5       4.6       46.6       15       15.2       (34.9)       349.2       3.8         Virgin Feeder #6       0       0.0       0       0       0       0       2         Recycle Feeder #1       4.8       47.7       15       15.5       (32.9)       359.6       2.1         Recycle Feeder #1       0       0.0       0       0       0       17       7         RAS Feeder #1       0       0.0       0       0       0       0       17         Mineral Fill #1       0.3       3.0       1       1       (29.1)       22.9       0         Antistrip       0.007       0.070       0.4       0.4       (15.9)       0.157     <	+A/C #1						4
Virgin Feeder #2       7.8       77.7       2.0       0.0       0       0       0       0       0       7         Virgin Feeder #3       0       0.0       0       0       0       0       0       0       7         Virgin Feeder #4       7       70.3       22.5       22.9       (47.3)       526.4       5.1         Virgin Feeder #5       4.6       46.6       15       15.2       (34.9)       349.2       3.8         Virgin Feeder #6       0       0.0       0       0       0       0       2         Recycle Feeder #1       4.8       47.7       15       15.5       (32.9)       359.6       2.1         Recycle Feeder #2       4.8       48.1       15.5       15.7       (33.4)       360.2       1.7         RAS Feeder #1       0       0.0       0       0       0       0       0       15.6         Mineral Fill #1       0.3       3.0       1       1       (29.1)       22.9       0         Antistrip       0.007       0.070       0.4       0.4       (15.9)       0.157         UltraFoam GX       0       0       0       0       0	√irgin Feeder #1						
Virgin Feeder #3       0       0.0       0.0       0       0.0	Virgin Feeder #2				• •		
Virgin Feeder #4       7       70.3       21.0       12.0 </td <td>Virgin Feeder #3</td> <td>0</td> <td></td> <td></td> <td>• •</td> <td></td> <td></td>	Virgin Feeder #3	0			• •		
Virgin Feeder #5       4.5       40.0       10       10       10.1       10.1       10.1       10.1       10.1       10.1       10.1       10.1       10.0 <td>Virgin Feeder #4</td> <td>7</td> <td></td> <td></td> <td>• •</td> <td></td> <td></td>	Virgin Feeder #4	7			• •		
Virgin Feeder #6       0       0.0       0       0       0       0       0       2         Recycle Feeder #1       4.8       47.7       15       15.5       (32.9)       359.6       2.1         Recycle Feeder #2       4.8       48.1       15.5       15.7       (33.4)       360.2       1.7         RAS Feeder #1       0       0.0       0       0       0       0       0       15.6         Mineral Fill #1       0.3       3.0       1       1       (29.1)       22.9       0         Antistrip       0.007       0.070       0.4       0.4       (15.9)       0.157         UltraFoam GX       0       0       0       0       0       0       0         DUST REMOVAL METER:       0.544       5.6       2.8       49.08       8       8       90.8         AC STATISTICS:       AC Temp: 141°F       RCY1: S.8 %       RCY2: 4 %       RCY3: 25.8 %       8       90.021 LET: 274°F       8       90.021 LET: 274°F       8       90.021 LET: 274°F       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9       9	Virgin Feeder #5	4.6			• •		
Recycle Feeder #1       4.8       47.7       15       15.5       (32.9)       359.6       2.1         Recycle Feeder #2       4.8       48.1       15.5       15.7       (33.4)       360.2       1.7         RAS Feeder #1       0       0.0       0       0       0       0       0       15.6         Mineral Fill #1       0.3       3.0       1       1       (29.1)       22.9       0         Antistrip       0.007       0.070       0.4       0.4       (15.9)       0.157         UltraFoam GX       0       0       0       0       0       0       0         DUST REMOVAL METER:       0.544       5.6       2.8       49.08         AC STATISTICS:       AC Temp: 141°F       BH INLET: 323°F       BH OUTLET: 274°F         RECYCLE AC CONTENTS(%) RCY1: 5.8 %       RCY2: 4 %       RCY3: 25.8 %       BH OUTLET: 274°F         %ANTISTRIP IN AC: 0.4 %       RCY1:       RCY2: RCY3:       RCY3: 25.8 %       BH OUTLET: 274°F         BH OUTLET: 274°F       BH OUTLET: 274°F       BH OUTLET: 274°F       BH OUTLET: 274°F         AC%:       0.902%       0.643%       0%       DUST DIVERTED TO SILO         AC%:       0.902%       0.643		0	0.0				
Recycle Feeder #2       4.8       48.1       10.0       10.1       10.1       10.1       10.1       10.0       15.6         RAS Feeder #1       0       0.0       0<	Recycle Feeder #1	4.8	47.7				
RAS Feeder #1       0       0.0       0       0       0       0       0       0       13.5         Mineral Fill #1       0.3       3.0       1       1       (29.1)       22.9       0         Antistrip       0.007       0.070       0.4       0.4       (15.9)       0.157         UltraFoam GX       0       0       0       0       0       0       0         DUST REMOVAL METER:       0.544       5.6       2.8       49.08         AC STATISTICS:       AC Temp: 141°F       RCY1: 5.8 % RCY2: 4 % RCY3: 25.8 %       BH INLET: 323°F       BH OUTLET: 274°F         %ANTISTRIP IN AC: 0.4 %       RCY1:       RCY2: RCY3:       RCY3: 25.8 %       BlueSmoke PRESS: 0.21"W         AC%:       0.902%       0.643%       0%       State ID: 231431       AC Tank In Use #1         AC% VIRGIN TOTAL%       4.46 %       State ID: 231431       AC Tank In Use #1       Silo Filling #1         ACY1:       MOTORS INTERLOCKED       6.01 %       EA Number:       MOTORS INTERLOCKED	Recycle Feeder #2	4.8	<b>48</b> .1	15.5	• •		
Mineral Fill #1       0.3       3.0       1       (dotty)       End         Antistrip       0.007       0.070       0.4       0.4       (15.9)       0.157         UltraFoam GX       0       0       0       0       0       0       0         DUST REMOVAL METER:       0.544       5.6       2.8       49.08         AC STATISTICS:       AC Temp: 141°F       BH INLET: 323°F       BH OUTLET: 274°F         RECYCLE AC CONTENTS(%) RCY1: 5.8 %       RCY2: 4 %       RCY3: 25.8 %       BH PRESSURE: 2.594"W         %ANTISTRIP IN AC: 0.4 %       RCY1:       RCY2:       RCY3:       214%         AC%:       0.902%       0.643%       0%       0%       00ST DIVERTED To SILO         AC%:       0.902%       0.643%       0%       ARB Lot#:       Silo Filling # 1         ANTISTRIP TOTAL%       0.024 %       ARB Lot#:       Silo Filling # 1         AC TOTAL% (actual)       6.01 %       EA Number:       MOTORS INTERLOCKED		0	0.0			-	
Antistrip       0.007       0.070       0.070       0.070       0.070       0 <t< td=""><td>Mineral Fill #1</td><td>0.3</td><td>3.0</td><td>1</td><td>1 (29.1)</td><td>22.9</td><td>0</td></t<>	Mineral Fill #1	0.3	3.0	1	1 (29.1)	22.9	0
UltraFoam GX         0 <t< td=""><td>Antistrip</td><td>0.007</td><td>0.070</td><td>0.4</td><td></td><td></td><td>_</td></t<>	Antistrip	0.007	0.070	0.4			_
AC STATISTICS:AC Temp: 141°FBH INLET: 323°FRECYCLE AC CONTENTS(%) RCY1: 5.8 %RCY2: 4 %RCY3: 25.8 %BH OUTLET: 274°F%ANTISTRIP IN AC: 0.4 %RCY1:RCY2:RCY3:BH PRESSURE: 2:594"W%AC%:0.902%0.643%0%DUST DIVERTED TO SILOAC%VIRGIN TOTAL%4.46 %State ID: 231431AC Tank In Use # 1ANTISTRIP TOTAL%0.024 %ARB Lot#:Silo Filling # 1AC TOTAL% (actual)6.01 %EA Number:MOTORS INTERLOCKED	•	0	0	0	0 (0)	0	U
AC STATISTICS.       AC remp. 1411         RECYCLE AC CONTENTS(%) RCY1: 5.8 %       RCY2: 4 %       RCY3: 25.8 %         %ANTISTRIP IN AC: 0.4 %       BH PRESSURE: 2.594"W         RCY1:       RCY2:       RCY3:         AC%:       0.902%       0.643%       0%         AC% VIRGIN TOTAL%       4.46 %       State ID: 231431       AC Tank In Use # 1         ANTISTRIP TOTAL%       0.024 %       ARB Lot#:       Silo Filling # 1         AC TOTAL% (actual)       6.01 %       EA Number:       MOTORS INTERLOCKED		0.544	56		28	49.08	
	DUST REMOVAL METER	. 0.044	0.0				
	AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2 AC%: 0.902% 0.643 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual)	C Temp: 141°F S(%) RCY1: 5.8 % % 2: RCY3: 3% 0% 4.46 % 0.024 % 6.01 %	RCY2: 4 % F State ID: 2 ARB Lot#: EA Numbe	31431 er:	B B B D A S W	H INLET: 323°F H OUTLET: 274° H PRESSURE: 2 lueSmoke PRES UST DIVERTED C Tank In Use # ilo Filling # 1	594"W S: 0.21"W To SILO 1
	AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2 AC%: 0.902% 0.643 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	C Temp: 141°F S(%) RCY1: 5.8 % % 2: RCY3: 3% 0% 4.46 % 0.024 % 6.01 %	RCY2: 4 % F State ID: 2 ARB Lot#: EA Numbe	31431 er:	B B B D A S W	H INLET: 323°F H OUTLET: 274° H PRESSURE: 2 lueSmoke PRES UST DIVERTED C Tank In Use # ilo Filling # 1	594"W S: 0.21"W To SILO 1
	AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2 AC%: 0.902% 0.643 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	C Temp: 141°F S(%) RCY1: 5.8 % % 2: RCY3: 3% 0% 4.46 % 0.024 % 6.01 %	RCY2: 4 % F State ID: 2 ARB Lot#: EA Numbe	31431 er:	B B B D A S W	H INLET: 323°F H OUTLET: 274° H PRESSURE: 2 lueSmoke PRES UST DIVERTED C Tank In Use # ilo Filling # 1	594"W S: 0.21"W To SILO 1

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F B MIX: N70 St.SC	RATE: 304tph	TEMP:329°F	RUN TOT	AL: 2273.1Ton	AC CONTENT: 5	.9%MIX
· · · · · · · · · · · · · · · · · · ·	Material Delta	TPH Rate	%Req	%Act (%Cmd)	Material Totals	
Vir Scale	19.2	194.8	62.5	64	1462	5.5
Rap Scale	9.4	92.2	30.5	30.5	737	1.9
+A/C #1	1.316	13.47	6	4.4 (35.8)	100.244	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.4 (62.4)	593.3	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.9	22.5	22.9 (47.3)	533.4	5.1
Virgin Feeder #5	4.6	46.4	15	15.2 (34.9)	353.8	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.2	15	15.4 (32.9)	364.4	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.7 (33.4)	365	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	23.2	0
Antistrip	0.007	0.070	0.4	0.4 (15.8)	0.164	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.49	3.8		1.9	49.57	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 %	Temp: 141°F (%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %-	В	H INLET: 324°F H OUTLET: 274° H PRESSURE: 2	
RCY1: RCY2	RCY3:	· .		В	lueSmoke PRES	S: 0.376"W
AC%: 0.842% 0.6%	0%				UST DIVERTED	
AC% VIRGIN TOTAL%	4.43 %	State ID:	231431	A	C Tank In Use #	1
ANTISTRIP TOTAL%	0.023 %	ARB Lot	<b>#:</b>	S	ilo Filling # 1	
AC TOTAL% (actual)	5.88 %	EA Num	per:	· N	IOTORS INTERL	OCKED
AC TOTAL% (required)		e(Wet):206.2tr	h Rap Rate(We	et):93.96tph		14 14

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RECORDATION	RATE: 296tph	TEMP: 325.8°F	RUN TOTAL	: 2303.	3Ton	AC CONTENT: 6.	
B MIX: N70 St.SC	10 Cimine - ibii	TPH Rate	%Req		(%Cmd)	Material Totals	%Moisture
·.	Material Delta	190.4	62.5	62.7	, ,	1481.6	5.6
/ir Scale	19.7	190.4 96.4	30.5	32		746.3	1.9
Rap Scale	9.4	96.4 13.23	6		(34.5)	101.594	
A/C #1	1.35	0.0	0		(0)	0	4
/irgin Feeder #1	0	77.6	25		(62.4)	601.1	7
/irgin Feeder #2	7.8		0		(0)	0	7
/irgin Feeder #3	0	0.0	22.5		(47.3)	540.4	5.1
Virgin Feeder #4	7	70.2	22.5 15		(34.9)	358.5	3.8
Virgin Feeder #5	4.7	46.6	0	0	(0)	0	2
Virgin Feeder #6	0	0.0	•	_	(32.9)	369.2	2.1
Recycle Feeder #1	4.9	47.2	15		(33.4)	369.8	1.7
Recycle Feeder #2	4.8	48.2	15.5	0	(0)	0	15.6
RAS Feeder #1	0	0.0	0		(29.1)	23.6	0
Mineral Fill #1	0.3	3.0	1	1 	(20.1)		
Antistrip	0.007	0.071	0.4		(16)	0.171	0
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.556	5.7		3		50.13	
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0.4 % RCY1: RCY2: AC%: 0.911% 0.6499 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	RCY3: % 0% 4.44 % 0.024 % 6 %	State ID: ARB Lota EA Num	<b>#</b> :	et):98.3		BH INLET: 323°F BH OUTLET: 274 BH PRESSURE: 2 BlueSmoke PRES DUST DIVERTED AC Tank In Use # Silo Filling # 3 MOTORS INTER	2.579"W SS: 0.258"W ) To SILO 1

RECORDATION	RATE: 292tph	TEMP:335.2°F	RUN TOTAL	: 2333.	1Ton	AC CONTENT: 6	%MIX
B MIX: N70 St.SC	Material Delta	TPH Rate	%Reg		(%Cmd	Material Totals	%Moisture
		198.5	62.5	64.9	•	1500.9	5.5
/ir Scale	19.3	95.6	30.5	30		755.7	1.9
Rap Scale	9.4	95.0 12.87	6		(33.4)	102.916	
A/C #1	1.322	0.0	0	0	(0)	0	4
/irgin Feeder #1	0	0.0 77.7	25	+	(62.4)	608.8	7
/irgin Feeder #2	7.8	-	0	0	(0)	0	7
/irgin Feeder #3	0	0.0	22.5		(47.3)	547.4	5.1
√irgin Feeder #4	7	69.9	15		(34.9)	363.1	3.8
/irgin Feeder #5	4.6	46.6	0	0	(0)	0	2
Virgin Feeder #6	0	0.0	15	-	(32.9)	374.1	2.1
Recycle Feeder #1	4.9	48.4			(33.4)	374.6	1.7
Recycle Feeder #2	4.8	48.1	15.5	0	(0)	0	15.6
RAS Feeder #1	0	0.0	0	1	(29.1)	23.9	0
Mineral Fill #1	0.3	3.1	1	ا 	(20.1)	£0.0	
Antistrip	0.007	0.070	0.4		(15.5)	0.179	0
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.576	7.2		3.6		50.71	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2 AC%: 0.873% 0.622 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	RCY3: % 0% 4.51 % 0.024 % 6.01 %	State ID: ARB Lot EA Numl	<b>#</b> :	(at):07 A		BH INLET: 325°F BH OUTLET: 274 BH PRESSURE: BlueSmoke PRES DUST DIVERTED AC Tank In Use # Silo Filling # 3 MOTORS INTER	2.4"W SS: 0.417"W D To SILO 1

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F B MIX: N70 St.SC	RATE: 291tph	TEMP:325.6°F	RUN TOT		AC CONTENT: 6	
	Material Delta	TPH Rate	%Req	%Act (%Cmd)		
Vir Scale	19.3	193.5	62.5	63.8	1520.2	5.5
Rap Scale	9.2	92.9	30.5	30.8	765	1.9
+A/C #1	1.305	13.2	6	4.6 (34.3)	104.221	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	78.8	25	25.7 (62.4)	616.6	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.8	22.5	22.8 (47.3)	554.4	5.1
Virgin Feeder #5	4.6	46.2	15	15.1 (34.9)	367.7	3,8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.7	15	15.6 (32.9)	378.9	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.6 (33.4)	379.4	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1 (29.1)	24.2	0
Antistrip	0.007	0.071	0.4	0.4 (16)	0.186	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.769	6.8		3.5	51.48	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 %	(%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %	B	H INLET: 326°F H OUTLET: 275° H PRESSURE: 2	2.688"W
RCY1: RCY2 AC%: 0.866% 0.617	: RCY3:	• •		D	lueSmoke PRES	To SILO
AC% VIRGIN TOTAL%	4.56 %	State ID: 2			C Tank In Use #	1
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:			ilo Filling # 3	OÓKED
AC TOTAL% (actual)	6.04 %	EA Numbe			IOTORS INTERI	
AC TOTAL% (required)	6 % Virgin Ra	ate(Wet):204.83t	oh Rap Rate(\	/vet):94.73tpn	· ·	·

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RECORDATION		TEMP.004 6%E		AL: 2392Ton	AC CONTENT: 6	%MIX
B MIX: N70 St.SC	RATE: 297tph	TEMP:324.6°F		%Act (%Cmd)		
	Material Delta		%Req	63.4	1539.5	5.6
/ir Scale	19.3	191.3	62.5	31.2	774.3	1.9
Rap Scale	9.3	94	30.5		105.532	1.0
-A/C #1	1.311	13.23	6	4.5 (34.3)	0	4
/irgin Feeder #1	0	0.0	0	0 (0)	624.4	7
∕irgin Feeder #2	7.8	77.9	25	24.8 (62.4)	024.4	7
Virgin Feeder #3	0	0.0	0	0 (0)	-	, 5.1
Virgin Feeder #4	7	70.2	22.5	22.4 (47.3)	561.4 372.4	3.8
Virgin Feeder #5	4.6	46.0	15	14.7 (34.9)		2
Virgin Feeder #6	0	0.0	0	0 (0)	0	2 2.1
Recycle Feeder #1	4.8	54.8	15	16.3 (32.9)	383.7	
Recycle Feeder #2	4.8	48.1	15.5	15.3 (33.4)	384.2	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	24.5	0
Antistrip	0.007	0.070	0.4	0.4 (15.7)	0.193	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.626	3.8		2	52.1	
AC STATISTICS: AC	Temp: 141°F		· .		H INLET: 325°F	
RECYCLE AC CONTENTS(	%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %		H OUTLET: 276°	· .
%ANTISTRIP IN AC: 0.4 %					H PRESSURE: 2	· · · ·
RCY1: RCY2;	RCY3:				lueSmoke PRES	
AC%: 0.897% 0.639%	6 0%			-	UST DIVERTED	
AC% VIRGIN TOTAL%	4.48 %	State ID: 2	31431		C Tank In Use #	1 🐇
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:			ilo Filling # 1	
AC TOTAL% (actual)	6.01 %	EA Numbe			NOTORS INTERL	OCKED
AC TOTAL% (required)	6 % Virgin R	ate(Wet):202.5tpl	n Rap Rate(W	/et):95.78tph	-	

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B MIX: N70 St.SC	RATE: 297tph	remp:325°F	RUN TOTA	L: 2421.6Ton	AC CONTENT: 6	
	Material Delta	TPH Rate	%Req	%Act (%Cmd	) Material Totals	
/ir Scale	19.3	190	62.5	63.3	1558.8	5.5
Rap Scale	9.4	93.6	30.5	31.4	783.6	1.9
+A/C #1	1.314	13.11	6	4.5 (34)	106.846	· ·
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.4 (62.4)	632.2	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	70.1	22.5	22.9 (47.3)	568.4	5.1
Virgin Feeder #5	4.6	46.3	15	15. <b>1 (</b> 34.9)	377	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.7	15	15.5 (32.9)	388.5	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.7 (33.4)	389	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	24.8	0
Antistrip	0.007	0.070	0.4	0.4 (15.7)	0.2	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.714	7.4		3.9	52.82	
RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 %		RCY2: 4 %	RCY3: 25.8 %	. E	BH INLET: 329°F BH OUTLET: 277° BH PRESSURE: 2	.597"W
RCY1: RCY2: AC%: 0.907% 0.6469				· I	BlueSmoke PRES	To SILO
AC% VIRGIN TOTAL%	4.44 %	State ID	: 231431		AC Tank In Use #	1
ANTISTRIP TOTAL%	0.024 %	ARB Lot	#:		Silo Filling #1	
AC TOTAL% (actual)	5.99 %	EA Num	ber:		MOTORS INTERL	OCKED
AC TOTAL% (required)	6 % Virgin Rat	e(Wet):201.1′	1tph Rap Rate(W	et):95.46tph	•	

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RECORDATION			12-11-2018 1				Geno
B MIX: N70 St.SC		TEMP:321.8°F	RUN TOTA			AC CONTENT: 5	
	Material Delta		%Req		t (%Cmc		
Vir Scale	19.3	203.7	62.5	63.3		1578.1	5.6
Rap Scale	9.3	90.6	30.5	31.4		792.9	1.9
+A/C #1	1.315	13.17	6	4.4	(34.1)	108.161	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.9	25	25.5	(62.4)	640	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	70.1	22.5	22.9	(47.3)	575.4	5.1
Virgin Feeder #5	4.6	46.3	15	15. <b>1</b>	(34.9)	381.6	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.3	15	15.5	(32.9)	393.3	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.6	(33.4)	393.8	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	25.1	0
Antistrip	0.007	0.071	0.4	0.4	(15.9)	0.207	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.626	3.9		1.9		53.44	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2	(,	RCY2: 4 % F	RCY3: 25.8 %	· · · · · · · · ·	. '	BH INLET: 326°F BH OUTLET: 278° BH PRESSURE: 2 BlueSmoke PRES	.523''W
AC%: 0.889% 0.6339						DUST DIVERTED	
AC% VIRGIN TOTAL%	4.42 %	State ID: 2	31431	. •		AC Tank In Use #	
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:				Silo Filling # 1	
AC TOTAL% (actual)	5.95 %	EA Numbe	r			MOTORS INTERL	OCKED
AC TOTAL% (actual) AC TOTAL% (required)		te(Wet):215.66tp		ef):92.3			*

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### MAT Asphalt Customer ticket list broken by product type and unit

Chicago Plant Report Parameters:

Time out: 12/11/2018 2:10:00 PM - 12/11/2018 3:10:59 PM

	Ticket	Customer	d Unit: Tor	_	Job		Formula	Product	Product	<b>.</b>	Tanahla
	Number		Number		Number	Location	(mix)	Code	Description	Qtty	Taxable
	309377	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	21.61	Yes
	309378	Sanchez Construction Services	72820	Sewer	Sewer	Sewer Structure\r\nAncillary P- N- 7226C\r\nSouthChicago & Ingleside (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	12.62	No
	309379	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431 <b>T</b> W	N-70 Surface(81BIT006X)	20.63	Yes
	309380	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.65	Yes
5	309381	MAT Construction Leasing Inc.	50000	B-4- 152	В-4- 152-Т	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.13	No
,	309382	MAT Construction Leasing Inc.	50000	B-4- 152	В-4- 152-Т	Arterial North B-4-152 \r\nWilson(LSD to Demen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.40	No
l	309383	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.07	Yes
	309384	MAT Construction Leasing Inc.	50000	B-4- 152	B-4- 152-T	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.89	No
l	309385	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.91	Yes
6	309386	Sanch <del>e</del> z Paving Company	72825			Lake & Kedzie	231431 N70 SURFACE	M-232521	N-70 Surface	11.94	Yes
4	309387	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	19.52	Yes
7⁄	309388	MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.11	Yes
3	309389	MAT Construction Leasing Inc.	50000	B-4- 152	B-4- 152-⊺	Arterial North B-4-152 \r\nWilson(LSD to Damen)\r\nEvotherm WMA	231431 N70 SURFACE	M- 231431TW	N-70 Surface(81BIT006X)	20.08	No
y	309390	Sanchez	72820	Sewer	Sewer	Sewer	231431	M-	<b>N-7</b> 0	13.36	No

https://secure.dflive.com/productiondashboard//reports/customerTicketListByProductTypeAndUnit.asp?LDR=1&plantId1=MAT-Chicago&tPlts=1&TSC=... 1/2 024AS-473273-RT-238 94 of 135

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		Construction Services				Structure\r\nAncillary P- N- 7226C\r\nSouthChicago & Ingleside (EvothermWMA)	SURFACE	Surface(81BIT006X)		
3093		MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	N-70 Surface(81BIT006X)	19.73	Yes
3093		MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)		N-70 Surface(81BIT006X)	21.04	Yes
3093	93	Sanchez Construction Services	72820	Sewer	Sewer	Sewer Structure\r\nAncillary P- N- 7226C\r\nSouthChicago & Ingleside (EvothermWMA)	IN:711	N-70 Surface(81BIT006X)	4.09	No
3093		MAT Construction Leasing Inc.	50000	Marina	Marina	Marina Crossing\r\n2075 W 43rd\r\nM18410 (EvothermWMA)	231431 N70 SURFACE	N-70 Surface(81BIT006X)	20.66	Yes

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B MIX: N70 St.SC	RATE: 294tph	TEMP:320.4°F	RUN TOTA	L: 2600.9Ton	C CONTENT	
	Material Delta	a TPH Rate	%Req	%Act (%Cmd)	Material Tot	als %Moisture
Vir Scale	19.7	190.5	62.5	63.3	1675.4	5.6
Rap Scale	9.5	95.1	30.5	31.3	840.5	1.9
+A/C #1	1.342	13.2	6	4.5 (33.6)	114.788	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.8	25	25.4 (62.4)	678.9	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	70.1	22.5	22.9 (47.3)	610.4	5.1
Virgin Feeder #5	4.6	46.6	15	15.2 (34.9)	404.9	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.2	15	15.4 (32.9)	417.3	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.7 (33.4)	417.8	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	26.6	0
Antistrip	0.007	0.073	0.4	0.4 (16.2)	0.243	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.717	9.6		5	56.77	
AC STATISTICS: AC	Temp: 141°F			Bł	I INLET: 320	۴
RECYCLE AC CONTENTS	(%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %		I OUTLET: 2	and the second
%ANTISTRIP IN AC: 0.4 %			÷		I PRESSURE	
RCY1: RCY2:	RCY3:			BI	ueSmoke PR	ESS: 0.286"W
AC%: 0.936% 0.667%	% 0%			Ð	JST DIVERTI	ED To SILO
AC% VIRGIN TOTAL%	4.51 %	State ID:	231431	A	C Tank In Use	≱#1 ≦
ANTISTRIP TOTAL%	0.025 %	ARB Lot#	<b>#:</b>	Si	o Filling #1	
AC TOTAL% (actual)	6.12 %	EA Numb	ber:	M	OTORS INTE	RLOCKED
AC TOTAL% (required)	6 % Virgin Ra	te(Wet):201.66	tph Rap Rate(We	et):96.93tph		2

F B MIX: N70 St.SC	RATE: 296tph	TEMP:321.5°F	RUN TOTAL	2631	Ton	AC CONTENT: 6	%MIX
	Material Delta	TPH Rate	%Req	%Ac	t (%Cmd	) Material Totals	%Moisture
Vir Scale	19.6	194.2	62.5	63.4		1695	5.5
Rap Scale	9.6	95.4	30.5	31.3		850	1.9
+A/C #1	1.332	13.17	6	4.5	(34.2)	116.12	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.7	25	25.5	(62.4)	686.6	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	69.9	22.5	22.9	(47.3)	617.4	5.1
Virgin Feeder #5	4.6	46.3	15	15.2	(34.9)	409.5	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.0	15	15.4	(32.9)	422	2.1
Recycle Feeder #2	4.8	48.2	15.5	15.8	(33.4)	422.6	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	26.9	0
Antistrip	0.007	0.071	0.4	0.4	(16.2)	0.25	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.791	5.9		3.1		57.56	
AC STATISTICS: AC RECYCLE AC CONTENTS( %ANTISTRIP IN AC: 0.4 % RCY1: RCY2:	Temp: 141°F %) RCY1: 5.8 % RCY3:	RCY2: 4 % F	RCY3. 25.8 %		E	3H INLET: 324°F 3H OUTLET: 275° 3H PRESSURE: 2 3IueSmoke PRES	.58"W S: 0.126"W
AC%: 0.896% 0.638%	o 0%				[	OUST DIVERTED	To SILO
AC% VIRGIN TOTAL%	4.48 %	State ID: 23	31431	-		AC Tank In Use #	1
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:				Silo Filling # 3	
AC TOTAL% (actual)	6.01 %	EA Numbe	r:		1	MOTORS INTERL	OGKED
AC TOTAL% (required)	6 % Virgin Rate	e(Wet):205.58tp	h Rap Rate(Wet)	:97.27	7tph	•••	•

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#### Gencor RECORDATION 12-11-2018 14:21:57 AC CONTENT: 6%MIX RUN TOTAL: 2660.9Ton TEMP: 321.5°F B MIX: N70 St.SC RATE: 301tph ۴ Material Totals %Moisture %Act (%Cmd) **TPH Rate** %Req Material Delta 5.6 1714.4 63.5 195 62.5 19.4 Vir Scale 1.9 31.2 859.6 30.5 96 9.6 Rap Scale 117.44 4.4 (34.1) 13.11 6 1.32 +A/C #1 4 0 0 (0)0 0.0 0 Virgin Feeder #1 7 694.4 25.4 (62.4) 25 7.8 77.8 Virgin Feeder #2. 7 0 0 0 (0)0.0 Virgin Feeder #3 0 5.1 22.9 (47.3) 624.4 22.5 7 70.2 Virgin Feeder #4 3.8 414.2 46.2 15 15.1 (34.9) 4.6 Virgin Feeder #5 0 2 0 0 (0) 0.0 Virgin Feeder #6 0 2.1 15.6 (32.9) 426.8 47.5 15 4.8 **Recycle Feeder #1** 427.4 1.7 15.7 (33.4) 15.5 47.9 4.8 Recycle Feeder #2 15.6 0 0 0 (0) 0.0 0 RAS Feeder #1 27.2 Ö 1 1 (29.1)3.1 0.3 Mineral Fill #1 0.257 0.4 (16) 0.4 0.007 0.071 Antistrip 0 0 0 0 (0) 0 0 UltraFoam GX 58.2 2.8 5.5 0.641 DUST REMOVAL METER: BH INLET: 325°F AC STATISTICS: AC Temp: 141°F BH OUTLET: 275°F RCY3: 25.8 % -RECYCLE AC CONTENTS(%) RCY1: 5.8 % RCY2: 4 % BH PRESSURE: 2.347"W %ANTISTRIP IN AC: 0.4 % W

	Y1: RCY2: 28% 0.661%	RCY3: 0%			BlueSmoke PRESS: 0.234"\ DUST DIVERTED To SILO
AC%: 0.9 AC% VIRGIN ANTISTRIP TO AC TOTAL% ( AC TOTAL% (	TOTAL% DTAL% actual)	4.37 % 0.024 % 5.96 %	State ID: 231431 ARB Lot#: EA Number: ate(Wet):206.41tph Rap Rate(	(Wet):97.81tph	AC Tank In Use # 1 Silo Filling # 3 MOTORS INTERLOCKED

F B MIX: N70 St.SC	RATE: 303tph	TEMP:322.3°F	RUN TOTA	L: 2691Ton	AC CONTENT: 6	%MIX
D MIX. THE OLOG	Material Delta	TPH Rate	%Req	%Act (%Cmd	) Material Totals	%Moisture
Vir Scale	19.4	190.6	62.5	63	1733.8	5.6
Rap Scale	9.7	95	30.5	31.5	869.3	1.9
+A/C #1	1.326	13.47	6	4.4 (35.1)	118.766	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.7	25	25.4 (62.4)	702.2	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	70.1	22.5	22.9 (47.3)	631.4	5.1
Virgin Feeder #5	4.6	46.3	15	15.1 (34.9)	418.8	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.7	15	15.6 (32.9)	431.6	2.1
Recycle Feeder #2	4.8	47.8	15.5	15.6 (33.4)	432.2	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	27.5	0
Antistrip	0.007	0.071	0.4	0.4 (15.7)	0.264	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.603	3.5		1.9	58.8	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2 AC%: 0.916% 0.653 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual)	: RCY3: % 0% 4.44 % 0.023 % 6.01 %	RCY2: 4 % I State ID: 2 ARB Lot#: EA Numbe e(Wet):201.83tp	er:	E E I I I I I I I I I	3H INLET: 322°F 3H OUTLET: 274° 3H PRESSURE: 2 BlueSmoke PRES OUST DIVERTED AC Tank In Use # Silo Filling # 3 MOTORS INTERL	.539"W S: 0.185"W To SILO 1

#### 12-11-2018 14:33:57

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F B MIX: N70 St.SC	RATE: 296tph	TEMP:322.6°F	RUN TOTA	L: 2720.9Ton	AC CONTENT: 6	
	Material Delta	TPH Rate	%Req	%Act (%Cmd)	Material Totals	%Moisture
Vir Scale	19.4	186.4	62.5	61.8	1753.1	5.5
Rap Scale	9.6	97.4	30.5	32.9	878.9	1.9
+A/C #1	1.317	12.96	6	4.4 (33.7)	120.083	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	77.7	25	25.3 (62.4)	710	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	69.9	22.5	22.8 (47.3)	638.4	5.1
Virgin Feeder #5	4.6	46.4	15	15.1 (34.9)	423.4	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	48.4	15	15.8 (32.9)	436.4	2.1
Recycle Feeder #2	4.8	48.1	15.5	15.7 (33.4)	437	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1 (29.1)	27.8	0
Antistrip	0.007	0.073	0.4	0.4 (16.1)	0.272	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.794	8.1		4.3	59.59	
AC STATISTICS: AC	Temp: 141°F		······································		H INLET: 323°F	
<b>RECYCLE AC CONTENTS(</b>	%) RCY1: 5.8 %	RCY2: 4 % 👘 F	RCY3: 25.8 %		H OUTLET: 275°	
%ANTISTRIP IN AC: 0.4 %		¢			H PRESSURE: 2	
RCY1: RCY2:	RCY3:				lueSmoke PRES	
AC%: 0.915% 0.652%	0%				UST DIVERTED	
AC% VIRGIN TOTAL%	4.41 %	State ID: 23	31431		C Tank In Use #	1
ANTISTRIP TOTAL%	0.025 %	ARB Lot#:			ilo Filling # 3	
AC TOTAL% (actual)	5.98 %	EA Numbe	r:	N	OTORS INTERL	OCKED
AC TOTAL% (required)	6 % Virgin Rat	e(Wet):197.3tph	Rap Rate(Wet	):99.27tph		

RECORDATION			12-11-2018 1	4:39:57		Geno
B MIX: N70 St.SC	RATE: 297tph	TEMP:327.4°F	RUN TOTA	L: 2750.7Ton	AC CONTENT: 6	
	Material Delta	a TPH Rate	%Req	%Act (%Cmd)		
/ir Scale	19.2	191.2	62.5	62.8	1772.4	5.5
Rap Scale	9.7	96.3	30.5	31.9	888.6	1.9
A/C #1	1.307	13.08	6	4.4 (34.1)	121.39	
/irgin Feeder #1	0	0.0	0	0 (0)	0	4
/irgin Feeder #2	7.8	77.6	25	25.3 (62.4)	717.8	7
/irgin Feeder #3	0	0.0	0	0 (0)	0	.7
/irgin Feeder #4	7	70.1	22.5	22.8 (47.3)	645.4	5.1
/irgin Feeder #5	4.6	46.6	15	15.2 (34.9)	428.1	3.8
/irgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	48.1	15	15.6 (32.9)		2.1
Recycle Feeder #2	4.8	47.9	15.5	15.6 (33.4)	441.8	1.7
RAS Feeder #1	0	0.0	s <b>0</b>	0 (0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1 (29.1)	28.1	0
Antistrip	0.007	0.071	0.4	0.4 (15.6)	0.279	
JltraFoam GX	0	0	0	0 (0)	0	0.
OUST REMOVAL METER:	0.681	5.9		3.1	60.28	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2: AC%: 0.934% 0.6669 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	RCY3: % 0% 4.43 % 0.024 % 6.03 %	RCY2: 4 % State ID: 3 ARB Lot# EA Numb ate(Wet):202.48t	: er:	B B C A S N	H INLET: 324°F H OUTLET: 275° H PRESSURE: 2 NueSmoke PRES DUST DIVERTED C Tank In Use # Silo Filling # 3 AOTORS INTERL	:55"W S: 0.384"W To SILO 1

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B MIX: N70 St.SC	RATE: 297tph	TEMP:325.7°F	RUN TOTA	L: 2780.2Ton	AC CONTENT: 6	%MIX
B WIX: N/U SL.SC	Material Delta		%Req	%Act (%Cmd)	Material Totals	%Moisture
Vir Scale	18.9	193.9	62.5	62.9	1791.3	5.5
Rap Scale	9.7	98.3	30.5	31.9	898.3	1.9
+A/C #1	1.292	12.99	6	4.3 (33.9)	122.682	•
	0	0.0	0	0 (0)	0	4
Virgin Feeder #1	7.8	77.6	25	24.9 (62.4)	725.6	7
Virgin Feeder #2	0	0.0	0	0 (0)	0	7
Virgin Feeder #3	7	69.8	22.5	22.4 (47.3)	652.4	5.1
Virgin Feeder #4	4.7	46.4	15	14.9 (34.9)	432.7	3.8
Virgin Feeder #5		0.0	0	0 (0)	0	2
Virgin Feeder #6	0	53.7	15	17.2 (32.9)	446	2,1
Recycle Feeder #1	4.8		15.5	15.4 (33.4)	446.6	1.7
Recycle Feeder #2	4.8	47.9	0	0 (0)	0	15.6
RAS Feeder #1	0	0.0		1 (29.1)	28.4	0
Mineral Fill #1	0.3	3.0	1	1 (23.1)		~
Antistrip	0.007	0.070	0.4	0.4 (15.7)	0.286	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.663	10		5.2	60.94	
	Temp: 141°F			-	3H INLET: 324°F 3H OUTLET: 276	2
RECYCLE AC CONTENTS		RCY2: 4 %	RCY3: 25.8 %		BH PRESSURE: 2	
%ANTISTRIP IN AC: 0.4 %					BlueSmoke PRES	
RCY1: RCY2					OUST DIVERTED	
AC%: 0.933% 0.665°						
AC% VIRGIN TOTAL%	4.39 %	State ID:			C Tank In Use #	1 .
ANTISTRIP TOTAL%	0.024 %	ARB Lot#			Silo Filling # 3	OCKED
AC TOTAL% (actual)	5.99 %	· EA Numb			MOTORS INTER	
AC TOTAL% (required)	6 % Virgin Ra	te(Wet):205.28	tph Rap Rate(W	et):100.23tph	· ·	

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RECORDATION			12-11-2018 1	4:51:57		Genco
F B MIX: N70 St.SC	RATE: 302tph	remp:323.6°F	RUN TOTA	L: 2810Ton	AC CONTENT: 6	%MIX
	Material Delta	TPH Rate	%Req	%Act (%Cmc	I) Material Totals	%Moisture
Vir Scale	19.2	195.1	62.5	<b>62.8</b> .	1810.5	5.5
Rap Scale	9.7	95.5	30.5	31.7	908	1.9
+A/C #1	1.308	13.38	6	4.5 (35)	123.99	
Virgin Feeder #1	0	0.0	0	0 (0)	0	4
Virgin Feeder #2	7.8	78.1	25	25.5 (62.4)	733.4	7
Virgin Feeder #3	0	0.0	0	0 (0)	0	7
Virgin Feeder #4	7	70.3	22.5	23 (47.3)	659.4	5.1
Virgin Feeder #5	4.6	46.6	15	15.2 (34.9)	437.4	3.8
Virgin Feeder #6	0	0.0	0	0 (0)	0	2
Recycle Feeder #1	4.8	47.3	15	15.3 (32.9)	450.8	2.1
Recycle Feeder #2	4.8	48.2	15.5	15.7 (33.4)	451.4	1.7
RAS Feeder #1	0	0.0	0	0 (0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1 (29.1)	28.8	0
Antistrip	0.007	0.073	0.4	0.4 (15.9)	0.293	
UltraFoam GX	0	0	0	0 (0)	0	0
DUST REMOVAL METER:	0.742	6.2		3.2	61.68	
AC STATISTICS: AC T RECYCLE AC CONTENTS(9 %ANTISTRIP IN AC: 0.4 % RCY1: RCY2: AC%: 0.908% 0.647% AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	RCY3: 0% 4.48 % 0.024 % 6.04 %	RCY2: 4 % F State ID: 2 ARB Lot#: EA Numbe e(Wet):206.53tp	r:		3H INLET: 322°F 3H OUTLET: 275° BH PRESSURE: 2 BlueSmoke PRES DUST DIVERTED AC Tank In Use # Silo Filling # 3 MOTORS INTERL	.666"W S: 0.303"W To SILO 1

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B MIX:N70 St.SC	RATE: 298tph	TEMP:325.8°F	RUN TOTAL	: 2840	.2Ton	AC CONTENT: 5	
	Material Delta	TPH Rate	%Req	%Ac	t (%Cmo	I) Material Totals	
Vir Scale	19.5	191.2	62.5	63.1		1830	5.6
Rap Scale	9.8	94.6	30.5	31.6		917.7	1.9
+A/C #1	1.33	12.96	6	4.4	(33.8)	125.319	
Virgin Feeder #1	0	0.0	0	0	(0)	0	4
Virgin Feeder #2	7.8	77.9	25	25.5	(62.4)	741.1	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	69.7	22.5		(47.3)	666.4	5.1
Virgin Feeder #5	4.6	46.2	15	15.1	(34.9)	442	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.5	15		(32.9)	455.7	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.7	(33.4)	456.2	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.0	1	1	(29.1)	29.1	0
Antistrip	0.007	0.071	0.4	0.4	(15.7)	0.3	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.674	6.1		3.2		62.36	
AC STATISTICS: AC						BH INLET: 324°F	, <b></b>
RECYCLE AC CONTENTS(	%) RCY1: 5.8 %	RCY2: 4 %	RCY3: 25.8 %	· .		BH OUTLET: 276°	
%ANTISTRIP IN AC: 0.4 %			. * .			BH PRESSURE: 2	
RCY1: RCY2:	RCY3:					BlueSmoke PRES DUST DIVERTED	
AC%: 0.924% 0.658%						AC Tank In Use #	
AC% VIRGIN TOTAL%	4.37 %	State ID: 2					1
ANTISTRIP TOTAL%	0.024 %	ARB Lot#:				Silo Filling # 3	
AC TOTAL% (actual)	5.95 %	EA Numbe				MOTORS INTERL	JUCKED
AC TOTAL% (required)	6 % Virgin Rat	e(Wet):202.4tpl	n Rap Rate(Wet)	:96.39	tph		•

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RECORDATION			12-11-2018	10.00.07			Genc
B MIX: N70 St.SC	RATE: 309tph	TEMP:326.5°F	RUN TOT	<b>AL:</b> 2870	.5Ton	AC CONTENT: 5	
· · ·	Material Delta	TPH Rate	%Req	%Ac	t (%Cmd)		
Vir Scale	19.5	192.6	62.5	63		1849.5	5.6
Rap Scale	9.7	96.6	30.5	31.6		927.4	1.9
+A/C #1	1.338	13.2	6	4.3	(34.6)	126.657	
Virgin Feeder #1	0	0.0	· 0	0	(0)	0	4
Virgin Feeder #2	7.8	77.9	25	25.4	(62.4)	748.9	7
Virgin Feeder #3	0	0.0	0	0	(0)	0	7
Virgin Feeder #4	7	70.2	22.5	22.8	(47.3)	673.4	5.1
Virgin Feeder #5	4.6	46.7	15	15.2	(34.9)	446.7	3.8
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	49.1	15	16	(32.9)	460.5	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.6	(33.4)	461	1.7
RAS Feeder #1	0	0.0	0	0	(0)	0	15.6
Mineral Fill #1	0.3	3.1	1	1	(29.1)	29.4	0
Antistrip	0.007	0.073	0.4	0.4	(16.1)	0.308	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.562	6.4		3.4		62.92	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY2 AC%: 0.921% 0.657 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	2: RCY3: % 0% 4.31 % 0.024 % 5.89 %	RCY2: 4 % State ID: 2 ARB Lot#: EA Numbe e(Wet):201.76tr	er:	Viot1:09 4	E E C A S N	H INLET: 324°F H OUTLET: 276° H PRESSURE: 2 BlueSmoke PRES DUST DIVERTED C Tank In Use # Silo Filling # 3 AOTORS INTERL	2.431"W S: 0.184"W To SILO 1

	DATE: 004tob	TEMP:328°F	RUN TOTA	· 2900	5Ton	AC CONTENT: 6	%MIX
F B MIX: N70 St.SC	RATE: 294tph Material Delta		%Reg		(%Cmc		ويستجنب ويتقصيه والمتجين
		190.5	62.5	63	(///////	1868.9	5.6
Vir Scale	19.4		30.5	31.7		937.1	1.9
Rap Scale	9.7	95.9 40.07			(33.7)	127.976	
+A/C #1	1.318	12.87	6		(0)	0	4
Virgin Feeder #1	0	0.0	0			756.7	7
Virgin Feeder #2	7.8	77.6	25		(62.4)		7
Virgin Feeder #3	0	0.0	0	0	(0)	0	5.1
Virgin Feeder #4	7	69.9	22.5		(47.3)	680.4	3.8
Virgin Feeder #5	4.6	46.2	15		(34.9)	451.3	
Virgin Feeder #6	0	0.0	0	0	(0)	0	2
Recycle Feeder #1	4.8	47.9	15		(32.9)	465.3	2.1
Recycle Feeder #2	4.8	47.9	15.5	15.7	(33.4)	465.8	1.7
RAS Feeder #1	0	0.0	0	0	(0)	Ö	15.6
Mineral Fill #1	0.3	3.1	1	1	(29.1)	29.7	0
Antistrip	0.007	0.073	0.4	0.4	(15.8)	0.315	
UltraFoam GX	0	0	0	0	(0)	0	0
DUST REMOVAL METER:	0.801	10		5.3		63.72	
AC STATISTICS: AC	Temp: 141°F		· -	· .		BH INLET: 326°F	· _ ·,
RECYCLE AC CONTENTS		RCY2: 4 %	RCY3: 25.8 %			BH OUTLET: 277°	
%ANTISTRIP IN AC: 0.4 %						BH PRESSURE: 2	
RCY1: RCY2:	RCY3:	and a second				BlueSmoke PRES	
AC%: 0.929% 0.6629			· · ·			DUST DIVERTED	
AC% VIRGIN TOTAL%	4.4 %	State ID:	231431	÷ .		AC Tank In Use #	1
ANTISTRIP TOTAL%	0.025 %	ARB Lot				Silo Filling # 3	
AC TOTAL% (actual)	5.99 %	EA Num	ber:			MOTORS INTERL	OCKED
AC TOTAL% (required)			ph Rap Rate(Wet	):97.721	tph -		

. .

ECORDATION			12-11-2018 15:"	and the second se		C CONTENT: 6%MIX	
	RATE: 300tph	EMP:331.4°F	RUN TOTAL:	2930.2	2Ton (%Cmd)		s %Moisture
r Scale ap Scale A/C #1 irgin Feeder #1 irgin Feeder #2 /irgin Feeder #3 /irgin Feeder #4 /irgin Feeder #5 /irgin Feeder #6 Recycle Feeder #1 Recycle Feeder #2 RAS Feeder #1	Material Delta 19.3 9.6 1.306 0 7.8 0 7 4.6 0 4.6 0 4.8 4.8 0	TPH Rate 190.3 97.9 13.11 0.0 77.6 0.0 69.7 46.4 0.0 47.7 47.9 0.0 3.1	%Req 62.5 30.5 6 0 25 0 22.5 15 0 15 15.5 0 1	62.3 32.4 4,5 0 25.5 0 22.8 15.2 0 15.6		1888.2 946.7 129.282 0 764.5 0 687.4 456 0 470.1 470.6 0 30	5.6 1.9 4 7 5.1 3.8 2 2.1 1.7 15.6 0
Mineral Fill #1 Antistrip	0.3	0.071	0.4 0	0.4 0	(15.8) (0)	0.322 0	0
UltraFoam GX	0	2.8		1.5		64.43	
AC STATISTICS: AC RECYCLE AC CONTENTS %ANTISTRIP IN AC: 0.4 % RCY1: RCY AC%: 0.933% 0.66 AC% VIRGIN TOTAL% ANTISTRIP TOTAL% AC TOTAL% (actual) AC TOTAL% (required)	C Temp: 141°F S(%) RCY1: 5.8 % % 2: RCY3: 5% 0% 4.41 % 0.024 %	State IE ARB LC		Vet):99	.85tph	BH INLET: 328 BH OUTLET: 2 BH PRESSUR BlueSmoke PF DUST DIVER AC Tank In Us Silo Filling # 3 MOTORS INT	278°F E: 2.503"W RESS: 0.323"W TED To SILO se # 1

.

MAT Asphalt, LLC: Chicago, Illinois December 2018 Asphalt Plant Drum Mixer Baghouse Stack Compliance Test

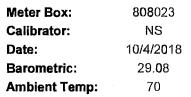
## APPENDIX E CALIBRATION DATA



~	1/ 			METH	METHOD 5 PRE-TEST CONSOLE CALIBRATION	CONSOLE CALIBI	RATION				
				SU	USING CALIBRATED CRITICAL ORIFICES	CRITICAL ORIFI	CES				
					5-POINT EN	5-POINT ENGLISH UNITS					
Me	Meter Console Information	ation			Callbration	Calibration Conditions				Fectors/Conversions	6
Console Model Number	tber	MC522		Date	Time	4-Oct-18	14:00		Std Temp	528	Å
Console Serial Number	ber	808023		Barometric Pressure	2	29.1	eH ri		Std Press	29.92	in Hg
DGM Model Number		MS4		Theoretical Critical Vacuum <sup>1</sup>	l Vacuum <sup>1</sup>	13.7	in Hg		K	17.647	oRiin Hg
DGM Serial Number		979751		Callbration Technician	cian	SN					
<sup>1</sup> For valid test res	ults, the Actual Va	<sup>t</sup> For valid test resul <del>ts</del> , the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.	to 2 in. Hg greater 1	than the Theoretic	cal Critical Vacuum	shown above.					
<sup>2</sup> The Critical Orflice	Coefficient, K', mus	$^2$ The Critical Orthce Coefficient, K', must be entered in English units, ( $\mathfrak{n}^{3,0}R^{12})$	sh units, (fi <sup>3+a</sup> R <sup>12</sup> )((in	/(In.Hg*min).							-
emt an			Materian Console		Callbration Data			Cutical Order			
	Dick Other	Voltime		Outlet Tamp	Outliet Tamp	Carial	Croffictant	Amh Tamp	Amh Tama	Actual	
Elapsed		Initial	Final	outer remp	Cuttet remp	Number	Coencient	Amo lemp Initial	Amo lemp Final	Vacuum	
(8)	( <sup>m</sup> )	(Vml)	(V <sub>mt</sub> )	(t <sub>ml</sub> )	(t <sub>mt</sub> )		¥	(t <sub>antb</sub> )	(t <sub>amb</sub> )		
Ë	in H <sub>2</sub> O	cubic feet	cubic feet	ų.	Å		see above2	<u>ц</u> ,	40	in Hg	
10.0	3.1	144.830	154.980	76	76	6773	0.7870	02	70	14	
10.0	1.8	117.510	125.160	9/2	77	ox63	0.5902	8	69	16	
10.0	1.1	125.160	131.010	11	77	OX25	0.4487	02	70	19	
18.0	0.7	131.010		77	76	0x48	0.3451		69	21	
19.0	0.3	139.120		17	76	ox40	0.2307	89	20	33	
				-110							
	Standan	Standardized Data		SINCAL		Drv Gas Meter					
				Callbrat	Callbration Factor	Flowrate	Ψ	AH @			
Dry Gas Meter	s Meter	Critical	Critical Orlfice	Value	Variation	Std & Corr	Σ				
(Vm(std))	(Q <sub>m(etd)</sub> )	(Vcr <sub>(seld</sub> ))	(Q <sub>cr(std)</sub> )	3	(AY)	(Qm(sto)(corr))	(AH@)	(@HVV)			
cubic feet	Ē	cubic feet	efm			cţm	in H2O				
9.794	0.979	9.941	0.994	1.015	0.002	0.994	1.717	-0.098			
7.351	0.735	7,462	0.746	1.015	0.002	0.746	1.756	-0.059			
5.606	0.561	5.668	0.567	1.011	-0.002	0.567	1.852	0.037			
7.770	0.432	7.846	0.436	1,010	-0.003	0.436	1.848	0.032			
5.466	0.288	5.539	0.292	1.013	0.001	0.292	1.903	0.088			
CAL-MASTERMETER-WORKBOOK-203T-REV1	ORKBOOK-203T-REV	<del>,</del>		1.013	Y Average		1.816	AH@ Average			
Note: For Calibration	Factor Y, the ratio of	Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the	bration meter to the dr	y gas meter, accepts	dry gas meter, acceptable tolerance of individual values from the average is +-0.02	ual values from the ave	erage is +-0.02.				
I certify that the abo	ve Dry Gas Meter	I certify that the above Dry Gas Meter was calibrated in accordance with USEPA Methods, CFR Title 40, Part 60, Appendix A-3, Method 5, 16.2.3	cordance with USE	PA Methods, CFR	Title 40, Part 60, Apt	pendix A-3, Method 5	5, 16.2.3				
		Mr -							11/12/20		
	Signature							Date / / /			

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#### Meter Console Thermometer Pretest Calibration Data Form



**Reference Thermometer: Altek Thermocouple Source** 

CAL-MASTERMETER-WORKBOOK-203T-REV1

ATR QUALITY SERVICES

Thermometer	Difference	Thermometer	Difference	Thermometer	Difference
Temperature	(%) mean	Temperature	(%) mean	Temperature	(%) mean
Inlet	Inlet	Oulet	Oulet	Probe	Probe
	0.00	0	0.00	0	0.00
	-17.86	100	0.00	100	0.00
	-30.30	202	0.30	202	0.30
	-39.47	302	0.26	<b>3</b> 02	0.26
	-46.51	398	-0.23	398	-0.23
	-52.08	500	0.00	500	0.00
	Temperature	Temperature         (%) mean           Inlet         Inlet           0.00         -17.86           -30.30         -39.47           -46.51         -46.51	Temperature Inlet         (%) mean Inlet         Temperature Oulet           100         0           -17.86         100           -30.30         202           -39.47         302           -46.51         398	Temperature Inlet         (%) mean         Temperature Oulet         (%) mean           Inlet         Oulet         Oulet           0.00         0         0.00           -17.86         100         0.00           -30.30         202         0.30           -39.47         302         0.26           -46.51         398         -0.23	Temperature Inlet         (%) mean Fremperature         Temperature Oulet         (%) mean Oulet         Temperature Probe           101         0         0         0         0           -177.86         100         0.000         100           -30.30         2022         0.300         2022           -39.47         302         0.26         302           -46.51         398         -0.23         398

Reference	Thermometer	Difference	Thermometer	Difference	Thermometer	Difference
Temperature	Temperature	(%) mean	Temperature	(%) mean	Temperature	(%) mean
Altek	Filter	Filter	Exit	Exit	Aux	Aux
0	0	0.00	0	0.00	0	0.00
100	1 <b>0</b> 0	0.00	100	0.00	100	. 0.00
200	202	0.30	202	0.30	202	0.30
300	302	0.26	302	0.26	302	0.26
400	398	-0.23	398	-0.23	398	-0.23
500	500	0.00	500	0.00	500	0.00

Reference Temperature Altek	Thermometer Temperature Stack	Difference (%) mean Stack
0	1	0.22
200	202	0.30
400	<b>3</b> 98	-0.23
600	602	0.19
800	803	0.24
1000	1003	0.21

Reference Temperature Altek	Thermometer Temperature Stack	Difference (%) mean Stack
1200	1201	0.06
1400	1400	0.00
1 <b>60</b> 0	1605	0.24
1800	1802	0.09
		,

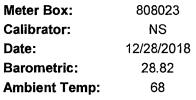
	W WON POSE		METHCUSI	DD 5 POST-TEST NG CALIBRATED	METHOD 5 POST-TEST CONSOLE CALIBRATION USING CALIBRATED CRITICAL ORIFICES	RATION CES				
	4 4 2) 1 2)			3-POINT EN	<b>3-POINT ENGLISH UNITS</b>					
Meter Console Information	lation	<u>.    </u>		Calibration	Calibration Conditions				Factors/Conversions	s
Console Model Number	MC522		Date	Time	28-Dec-18	14:00		Std Temp	528	ĸ
Console Serial Number	808023	<u> </u>	Barometric Pressure	ą	28.8	in Hg		Std Press	29.92	in Hg
	MS-4	<u> </u>	Theoretical Critical Vacuum <sup>1</sup>	1 Vacuum <sup>1</sup>	13.6	in Hg		K,	17.647	oR/in Hg
	979751		Calibration Technician	cian	N Sekulic					
<sup>1</sup> For valid test results, the Actual Vac	<sup>1</sup> For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.	n. Hg greater than th	e Theoretical Crit	ical Vacuum shown a	above.					
e Coefficient, K', m	<sup>2</sup> The Critical Orifice Coefficient, K, must be entered in English units, (ft3*0R1/2)/(in.Hg*min).	ish units, (ft3*oR1/2)	/(in.Hg*min).	Calibration Data						
		Metering Console					Critical Orifice			1
DGM Orifice	Volume	Volume	Outlet Temp	Outlet Temp	Serial	Coefficient	Amb Temp	Amb Temp	Actual	
Η	Initial	Final	Initial	Final	Number		Initial	Final	Vacuum	
(P <sub>m</sub> )	(V <sub>mi</sub> )	(V <sub>mf</sub> )	(t <sub>mi</sub> )	(t <sub>mf</sub> )		¥	(t <sub>amb</sub> )	(t <sub>amb</sub> )		
in H <sub>2</sub> O	cubic feet	cubic feet	Ļ-	Ļ-		see above2	Ļ	Ļ	in Hg	
1.8	374.400	384.595	65	99	OX63	0.5902	96	99	16	
1.8	384.595	394.820	66	99	OX63	0.5902	66	67	16	
1.8	394.820	405.055	67	88	0X63	0.5902	67	67	16	
			Results					_		
Standa	Standardized Data				Dry Gas Meter					
			Calibrat	Calibration Factor	Flowrate	©H∕0	0			
Dry Gas Meter	Critical Orifice	Orifice	Value	Variation	Std & Corr	0.75 SCFM	Variation			
	(Vcr <sub>(std)</sub> )	(Q <sub>cr(std)</sub> )	ε	(AY)	(Qm(std)(corr))	(@H@)	(@HVV)			
0 762	9 641	0 742	0 973	100.0	0 742	1 799	0.001			
0.764	9.637	0.741	0.970	-0.001	0.741	1.799	0.001	ŀ		
0.763	9.632	0,741	0.972	0.000	0.741	1.796	-0.002			
Pretest Gamma 1.013	% Deviation	4.1	0.972	Y Average		1.798	∆H@ Average	CAL-MASTERMETER-WORKBOOK-203T-REV	/ORKBOOK-203T-REV	-
in Factor Y, the ratio (	Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.	rration meter to the dry	gas meter, accepte	able tolerance of individ	dual values from the av	erage is +-0.02.				
ove Dry Gas Mete	I certify that the above Dry Gas Meter was calibrated in accordance with USEPA I	cordance with USEP	A Methods, CFR	Title 40, Part 60, Ap	Methods, CFR Title 40, Part 60, Appendix A-3, Method 5, 16.2.3	5, 16.2.3				
Signature	1/11 100		1				7 / 7	7/22/15		

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8080023

### Meter Console Thermometer Post-Test Calibration Data Form



**Reference Thermometer: Altek Thermocouple Source** 

MONTROSE OF ODALLY SUBVICES

CAL-MASTERMETER-WORKBOOK-203T-REV1

Reference	Thermometer	Difference	Thermometer	Difference	Thermometer	Difference
Temperature	Temperature	(%) mean	Temperature	(%) mean	Temperature	(%) mean
Altek	Oven	Inlet	Outlet	Outlet	Probe	Probe
0		0.00	1	0.22	1	0.22
100		-17.86	100	0.00	100	0.00
200		-30.30	203	0.45	203	0.45
300		-39.47	304	0.53	304	0.53
400		-46.51	401	0.12	401	0.12
500		-52.08	502	0.21	502	0.21

Reference	Thermometer	Difference	Thermometer	Difference	Thermometer	Difference
Temperature	Temperature	(%) mean	Temperature	(%) mean	Temperature	(%) mean
Altek	Filter	Filter	Exit	Exit	Aux	Aux
0	1	0.22	1	0.22	1	0.22
100	100	0.00	101	0.18	101	0.18
200	203	0.45	204	0.61	204	0.61
300	304	0.53	304	0.53	304	0.53
400	401	0.12	401	0.12	402	0.23
500	502	0.21	503	0.31	503	0.31

Reference	Thermometer	Difference
Temperature	Temperature	(%) mean
Altek	Stack	Stack
0	1	0.22
200	203	0.45
400	_ 401	0.12
600	606	0.57
800	809	0.71
1000	1010	0.68

	Reference	Thermometer	Difference
Т	emperature	Temperature	(%) mean
	Altek	Stack	Stack
	1200	1209	0.54
	1400	1409	0.48
	1600	1613	0.63
	1800	1813	0.58

A 1.24		- ا مو مر		METH	METHOD 5 PRE-TEST CONSOLE CALIBRATION	CONSOLE CALIB	RATION					
				S	USING CALIBRATED CRITICAL ORIFICES 5-POINT ENGLISH UNITS	Jalibra i ed critical orific 5-point english units	CES.		•			
Mé	Meter Console Information	tion			Calibration	Calibration Conditions				Factors/Conversions		
Console Model Number	mber	MC522	_	Date	Time	13-Nov-18	9:30		Std Temp	528	Å	
Console Serial Number	nber	808024	_	Barometric Pressure	ILE	29.5	in Hg		Std Press	29.92	in Hg	
DGM Model Number	×	MS4	_	Theoretical Critical Vacuum <sup>1</sup>	l Vacuum <sup>1</sup>	13.9	in Hg		K,	17.647	<b>o</b> R/in Hg	
DGM Serial Number		1502218		Calibration Technician	clan	SN			•			
<sup>1</sup> For valid test res	sults, the Actual Va	For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.	o 2 in. Hg greater	than the Theoretik	cal Critical Vacuum	shown above.						
<sup>2</sup> The Critical Orifice	s Coefficient, K', mus	<sup>2</sup> The Critical Orifice Coefficient, K', must be entered in English units, (ft <sup>34,0</sup> R <sup>12</sup> )/(in.H <u>9<sup>4</sup> min)</u>	th units, (ft <sup>3*0</sup> R <sup>1/2</sup> )/(ii	n.Hg⁺min).								
					Calibration Data							
Run Time			Metering Console					<ul> <li>Critical Orifice</li> </ul>				
	DGM Orifice	Volume	Volume	Outlet Temp	Outlet Temp	Serial	Coefficient	Amb Temp	Amb Temp	Actual		
Elapsed	AH	Initial	Final	Initial	Final	Number		Initial	Finaf	Vacuum		
( <del>G</del> )	(F <sub>m</sub> )	(V <sub>mi</sub> )	(V <sub>mt</sub> )	(t <sub>ni</sub> )	(t <sub>mr</sub> )		×	(t <sub>amb</sub> )	(t <sub>amb</sub> )			
min	in H <sub>2</sub> O	cubic feet	cubic feet	յլ	¥,		see above2	4 <b>,</b>	ĥ	in Hg		
11.0	3.5	736.400	747.790	72	73	0X73	0.7870	67	67	18		
10.0	2.0	747.790	755.580	73	74	OX63	0.5902	67	70	20		
12.0	1.2	755.580	762.680	74	74	OX55	0.4487	20	69	22		
13.0	0.7	762.680	768.580	74	74	OX48	0.3451	69	68	23		
20.0	0.3	768.580	774.645	74	73	OX40	0.2307	69	67	24		
				Results				-	<b>r</b>			
	Standarc	Standardized Data				Drv Gas Meter			·r			
				Calibrat	Calibration Factor	Flowrate	μΔ	AH @	<b>.</b>			
Dry Ga	Dry Gas Meter	Critical Orifice	Orifice	Value	Variation	Std & Corr	0.75 SCFM	Variation				
(V <sub>m(std)</sub> )	(Q <sub>m(std)</sub> )	(Vcr <sub>(std)</sub> )	(Q <sub>cr(stu)</sub> )	3	(AY)	(Q <sub>m(std)(corr</sub> ))	(AH@)	(@HVV)				
cubic feet	cţu	cubic feet	cţm			cţ	in H2O		<u> </u>			
11.221	1.020	11.113	1.010	0:990	-0.005	1.010	1.918	-0.025				
7.632	0.763	7.566	0.757	0.991	-0.004	0.757	1.937	-0.007				
6.935	0.578	6.896	0.575	0.994	-0.001	0.575	2.004	0.061				
5.756	0.443	5.751	0.442	0.999	0.004	0.442	1.911	-0.032				
5.917	0.296	5.918	0.296	1.000	0.005	0.296	1.946	0.003				
CAL-MASTERMETER-V	CAL-MASTERMETER-WORKBOOK-203T-REV1	-		0.995	Y Average		1.943	AH@ Average				
				.								

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

I certify that the above Dry Gas Meter was/calibrated in accordance with USEPA Methods, CFR Title 40, Part 60, Appendix A-3, Method 5, 16.2.3

Signature

6

Date

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METHOD 5 PRE-TEST CONSOLE CALIBRATION

### Meter Console Thermometer Pretest Calibration Data Form

Meter Box:	808024
Calibrator:	NS
Date:	11/13/2018
Barometric:	29.47
Ambient Temp:	67

Reference Thermometer: Altek Thermocouple Source

# 

CAL-MASTERMETER-WORKBOOK-203T-REV1
------------------------------------

emperature	
emperatare	(%) mean
Probe	Probe
0	0.00
99	-0.18
200	0.00
299	-0.13
397	-0.35
498	-0.21
	397

,

Reference	Thermometer	Difference	Thermometer	Difference	Thermometer	Difference
Temperature	Temperature	(%) mean	Temperature	(%) mean	Temperature	(%) mean
Altek	Filter	Filter	Exit	Exit	Aux	Aux
0	0	0.00	0	0.00	0	0.00
100	99	-0.18	99	-0.18	99	-0.18
200	200	0.00	200	0.00	200	0.00
300	299	-0.13	300	0.00	300	0.00
400	397	-0.35	397	-0.35	397	-0.35
500	498	-0.21	498	-0.21	498	-0.21

Reference	Thermometer	Difference
Temperature	Temperature	(%) m <b>e</b> an
Altek	Stack	Stack
0	0	0.00
200	200	0.00
400	397	-0.35
600	599	-0.09
800	800	0.00
1000	1000	0.00

Reference	Thermometer	Difference
Temperature	Temperature	(%) m <b>e</b> an
Altek	Stack	Stack
1200	1198	-0.12
1400	1397	-0.16
1600	1600	0.00
1800	1798	-0.09
:		

,	بر افر این پور پر	لې د ر		METHC	D 5 POST-TEST	METHOD 5 POST-TEST CONSOLE CALIBRATION	<b>SRATION</b>				
				ISN	NG CALIBRATED 3-POINT EN(	USING CALIBRATED CRITICAL ORIFICES 3-POINT ENGLISH UNITS	ICES				
Mei	Meter Console Information	ation			Calibration	Calibration Conditions			H	Factors/Conversions	S
Console Model Number	lber	MC522	<u> </u>	Date	Time	27-Dec-18	16:30		Std Temp	528	Å
Console Serial Number	ber	808024	<u> </u>	Barometric Pressure	ġ	28.9	in Hg		Std Press	29.92	in Hg
DGM Model Number		MS-4	1	Theoretical Critical Vacuum <sup>1</sup>	Vacuum	13.6	in Hg		<b>K</b> 1	17.647	oR/in Hg
DGM Serial Number		1502218		Calibration Technician	ian	N Sekulic					
alid test resul	ts, the Actual Vacu	For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.	ר. Hg greater than th	e Theoretical Crit	ical Vacuum shown s	above.					
Critical Orifice	Coefficient, K', mu	<sup>2</sup> The Critical Orifice Coefficient, K' must be entered in English units, (#3*oR1/2)/(in.Hg*min).	sh units, (ft3*oR1/2)	/(in.Hg*min).	Callbration Data						_
Run Time			Metering Console					Critical Orifice			
	DGM Orifice		Volume	Outlet Temp	Outlet Temp	Serial	Coefficient	Amb Temp	Amb Temp	Actual	
Elapsed	AH ( d)	Initial V · V	Final V. J	Initial A J	Final	Number	2	hitial	Final	Vacuum	
min	in H <sub>2</sub> O	cubic feet	cubic feet	, ⊐o	رس <i>ا</i> ک ه		see above2		(amb/	in Hg	
10.0	1.9	997.160	1004.830	62	64	OX63	0.5902	99	65	50	<b>.</b>
10.0	6.1	1004.830	1012.510	64	65	OX63	0.5902	65	65	20	
10.0	1.9	1012.510	1020.230	65	66	OX63	0.5902	65	65	20	
				Results					<b></b>		
	Standar	Standardized Data				Dry Gas Meter					
				Calibrati	Calibration Factor	Flowrate	Η	AH @	1 1		
Dry Gas Meter	s Meter	Critical Orifice	Orifice	Value	Variation	Std & Corr	0.75 SCFM	Variation			
(V <sub>m(std)</sub> ) cubic feet	(Q <sub>m(std)</sub> ) cfm	(Vcr <sub>(std)</sub> ) cubic faet	(Q <sub>cr(std)</sub> ) cfm	З	(ÅY)	(Q <sub>m(std)(corr</sub> )) cfm	(ΔH@) in H2O	(@H\\)			
7.510	0.751	7.435	0.744	0.990	0.00	0.744	1.904	0.006			
7.499	0.750	7.439	0.744	0.992	0.002	0.744	1:896	-0.001			
7.523	0.752	7.439	0.744	0.989	-0.001	0.744	1.893	-0.005			
Pretest Gamma	0.995	% Deviation	0.5	0.990	Y Average		1.897	∆H@ Average	CAL-MASTERMETER-WORKBOOK-203T-REV1	VORKBOOK-203T-REV	4
For Calibration	Factor Y, the ratio of	Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02	ration meter to the dry	gas meter, accepts	ble tolerance of individ	lual values from the av	rerage is +-0.02.				
y that the abo	ve Dry Gas Meter	I certify that the above Dry Gas Meter was calibrated in accordance with USEPA Methods, CFR Title 40, Part 60, Appendix A-3, Method 5, 16.2.3	ordance with USEP	A Methods, CFR	Title 40, Part 60, Ap	pendix A-3, Method	5, 16.2.3				
	Signature	111	MXL.					Date / 2 /	1/1/2/2		
	6				:						

808024

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### Meter Console Thermometer Post-Test Calibration Data Form

Meter Box:	808024
Calibrator:	NS
Date:	12/27/2018
Barometric:	28.88
Ambient Temp:	65
Deference Therm	omotory Altol

Reference Thermometer: Altek Thermocouple Source

CAL-MASTERMETER-WORKBOOK-203T-REV1

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Reference	Thermometer	Difference	Thermometer	Difference	Thermometer	Difference
Temperature	Temperature	(%) mean	Temperature	(%) mean	Temperature	(%) mean
Altek	Oven	Inlet	Outlet	Outlet	Probe	Probe
0			· 0	0.00	0	0.00
100			99	-0.18	99	-0.18
200			201	0.15	201	0.15
300			301	0.13	301	0.13
400			397	-0.35	397	-0.35
500			498	-0.21	498	-0.21

Reference	Thermometer	Difference	Thermometer	Difference	Thermometer	Difference
Temperature	Temperature	(%) mean	Temperature	(%) mean	Temperature	(%) mean
Altek	Filter	Filter	Exit	Exit	Aux	Aux
0	1	0.22	1	0.22	1	0.22
100	99	-0.18	99	-0.18	99	-0.18
200	202	0.30	202	0.30	202	0.30
300	301	0.13	301	0.13	301	0.13
400	397	-0.35	397	-0.35	397	-0.35
500	498	-0.21	498	-0.21	498	-0.21

Reference	Thermometer	Difference
Temperature	Temperature	(%) mean
Altek	Stack	Stack
0	1	0.22
200	201	0.15
400	398	-0.23
600	600	0.00
800	802	0.16
1000	1001	0.07

Reference	Thermometer	Difference
Temperature	Temperature	(%) mean
Altek	Stack	Stack
1200	1199	-0.06
1400	1397	-0.16
1600	1601	0.05
1800	1799	-0.04



### **Pitot Tube Inspection Data**

Client Name: Date:	<b>Pre-Test</b> 9/18/2018	. Date:	Post-Test 12/28/2018
	Y	level?	Y
l onoitudinal B Flow	N	obstructions?	N
Longitudinal Tube Axis	N	damaged?	N
β <sub>1(-)</sub>	0	$-10^{\circ} < a_1 < +10^{\circ}$	1
	0	$-10^{\circ} < a_2 < +10^{\circ}$	0
A Flow	0	-5° < b <sub>1</sub> < +5°	1
β <sub>1(+)</sub>	0	-5° < b <sub>2</sub> < +5°	1
Back	1	γ	2
	0	θ	1
<u><u> </u></u>	0.980	A	0.980
	0.490	0.39375 < P <sub>*</sub> 0.5625	0.490
B	0.490	0.39375 < P.< 0.5625	0.490
Tw	0.375	$0.1875 \leq D_{15} = 0.375$	0.375
	0.017	A tan g < 0.125''	0.034
$ \alpha_1\rangle$ $ \alpha_1\rangle$ $ \alpha_2\rangle$	0.00000	A tan q < 0.03125"	0.01710
Transverse Tube Axis	TRUE	$P_{A} = P_{B} + - 0.063$	TRUE
	PASS	PASS/FAIL	PASS

**Comments:** 6' effective length M5 probe, with 3/8" pitot tips, K-type thermocouple attached to a heated M5 sheath

Pitot tube/probe number 5062 meets or exceeds all specifications and criteria and/or applicable design features (per 40CFR60 Appendix A; Method 2) and is heareby assigned a pitot tube calibration factor of 0.84.

CAL-SPITOT-WORKBOOK-200T-REV1

Signature: Date:



### **Thermocouple Calibration Data Form**

 Thermocouple ID:
 5062

 Calibrator:
 M. Krueger

 Reference Thermometer:
 Fluke S1 SN40430089WS

Date: Barometric:	<u>Pretest</u> 9/18/2018 29.1	<u>Post-test</u> 12/28/2018 29.77			
	Reference Point	Reference Source	NIST Traceable Thermometer Temp. (F)	Working Thermocouple Temp. (F)	Difference (%)
Pre-	T.C	Ice Water	33	32,3	0.14
Test		Ambient	75.8	75.4	0.07
		Heat Source	298.4	299	-0.08
	Reference	Reference	Reference Thermometer	Working Thermocouple	Difference
	Point	Source	Temp. (F)	Temp. (F)	(%)
Post-	T.C	lce Water	33.1	33.1	0.00
Test		Ambient	61.7	62.6	-0.17
		Heat Source	296.7	297.1	-0.05

a (temp. diff.) = (ref.temp + 460) - (Thermo. temp. + 460) / (ref. temp. +460) x 100 Where -1.5 < a < 1.5

Signature Date

11\$ 12

CAL-T/C-TEMPLATE-201T-REV2

MAT Asphalt, LLC: Chicago, Illinois December 2018 Asphalt Plant Drum Mixer Baghouse Stack Compliance Test

## APPENDIX F TEST PROGRAM QUALIFICATIONS





### **Test Program Qualifications**

Montrose operates as a diversified environmental company that provides premier nationwide environmental testing services including analytical laboratory services, emission source testing, regulatory affairs support, and sustainability services. We provide reliable and timely environmental data, collected using the highest technical and ethical standards, and with the least interruption to our client's business goals. With more than 40 regional offices located across the country and nearly 1,000 employees, Montrose can easily staff the largest programs without delays or logistical problems.

Montrose has established a quality management system that led to accreditation with ASTM Standard D-7036 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose completed multiple functional assessments for ASTM D7036-04 which were conducted by the American Association for Laboratory Accreditation (A2LA). A2LA granted accreditation for the Montrose quality management system in February 2016. Montrose quality management system performance data is available upon request.

We are also certified to conduct regional emissions testing by the Virginia Environmental Laboratory Accreditation Program (VELAP), the California Air Resources Board under their Independent Contractor program, the South Coast Air Quality Management District (Laboratory Approval Program), and the Louisiana Environmental Laboratory Accreditation Program (LELAP).

Our project managers have been certified under the qualified source testing individual (QSTI) program instituted by the Source Evaluation Society (SES). All testing is overseen and supervised on site by at least one Qualified Individual (QI), as defined in 40 CFR 72.2 and pursuant to the requirements of ASTM D7036.

Our analytical laboratories within our Environmental Testing division include six laboratories across the country servicing air, water, soil, and tobacco testing under the brands Enthalpy Analytical, Curtis & Tompkins, and Nautilus Environmental. Among others, our laboratories hold accreditations from National Environmental Laboratory Accreditation (NELAC); Environmental Laboratory Accreditation Program for California (CAELAP), Louisiana (LELAP), Nevada (NVELAP), Oregon (ORELAP), and Virginia (VELAP); New Jersey Department of Environmental Protection (NJDEP); Texas Commission on Environmental Quality (TCEQ); and Pennsylvania Department of Environmental Protection (PADEP).

Finally, our Sustainability Services division operates under the brand of ES Engineering and through this division, we work with governments and industry to create biogas (renewable energy), treat and reuse water, remediate soil, and manage waste for clients across the country.

The key personnel involved in the test program were as follows:



### Steven Flaherty

Title: District Manager, Chicago North Office

Education: University of Illinois – B.S. in Environmental Science and Natural Resources

**Background:** Mr. Flaherty's background is in environmental air emissions testing, project management, and administration. During the past 17 years, he has managed emission compliance and CEM certification testing projects for a wide variety of industries with particular emphasis on pollution control systems, process optimization, CEMS performance, and emission compliance testing associated with the petrochemical industry.

**Experience:** 17 years of experience in environmental consulting, field testing, project management, and administration.

Qualifications: Certified as a QSTI by the SES pursuant to the requirements of ASTM D7036-04.

### Robert Burton

Title: Client Project Manager, Chicago North Office

Education: Northern Illinois University – Liberal Arts major

**Background:** Mr. Burton's background is in environmental air testing and project management. During the past 12 years, he has managed emission compliance and CEM certification testing projects for a wide variety of industries with particular emphasis on pollution control systems, process optimization, CEMS performance, and emission compliance testing associated with the ethanol and biodiesel industries.

**Experience:** 12 years of experience in environmental field testing and project management.

Qualifications: Certified as a QI by the SES pursuant to the requirements of ASTM D7036-04.

### Alan Morales

Title: Field Technician, Chicago North Office

Education: Illinois State University – B.S. in Physics and Geology

**Experience:** Experience specializing in stack sampling equipment preparation, set-up, calibration, and maintenance as well as field sampling for a wide variety of manufacturing facilities located throughout the U.S.

#### <u>Henry Taylor</u>

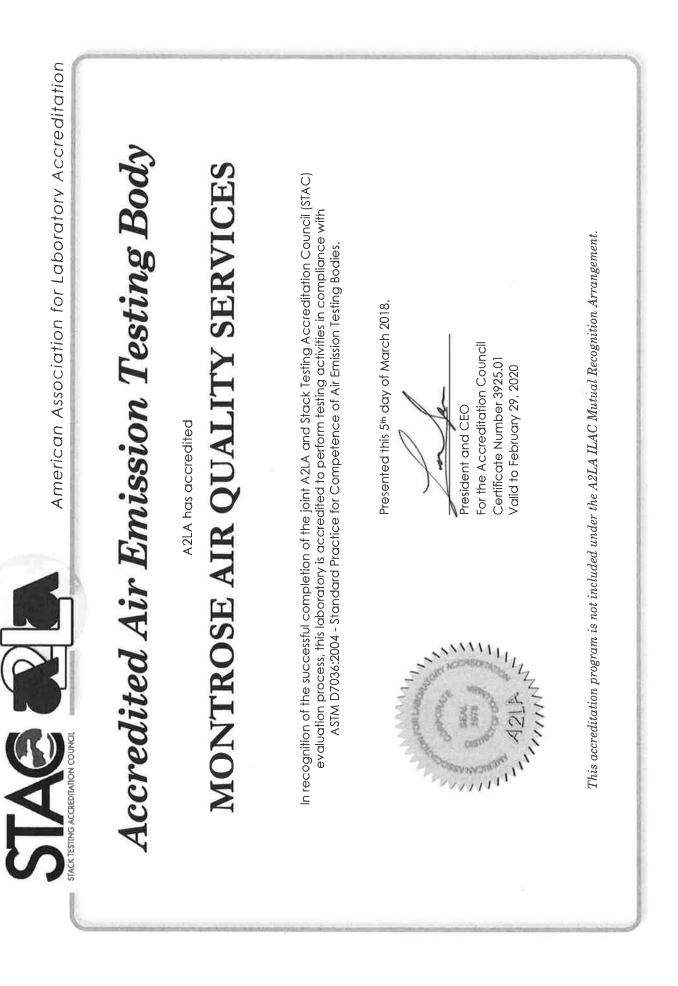
Title: Quality Assurance Manager, Source Testing - Chicago North Office

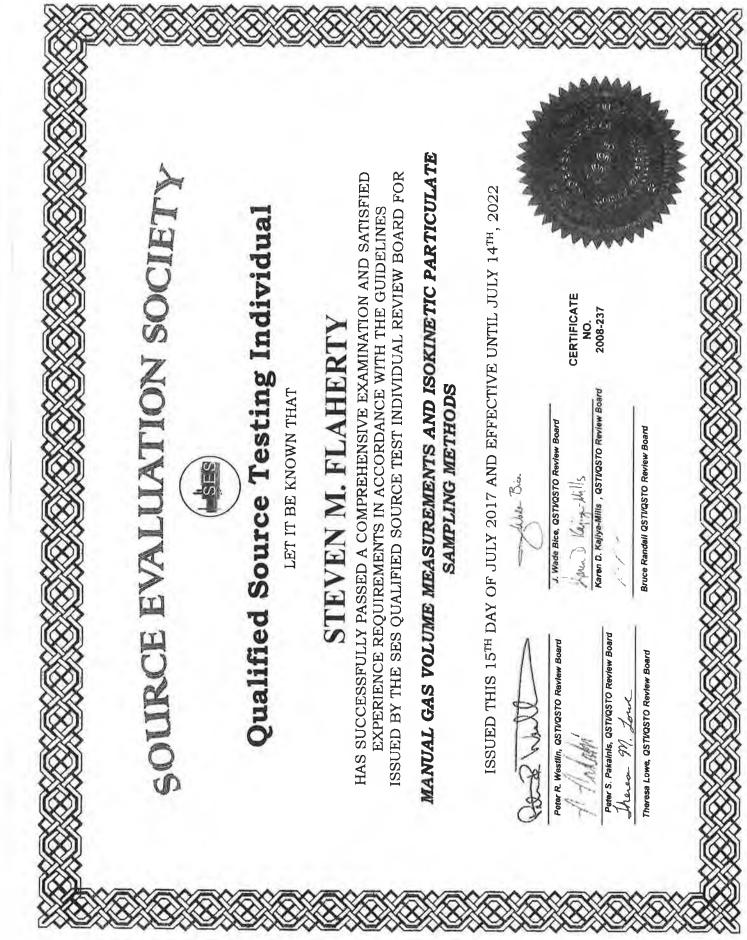
Education: University of Oklahoma – Double major in Chemistry and Mathematics

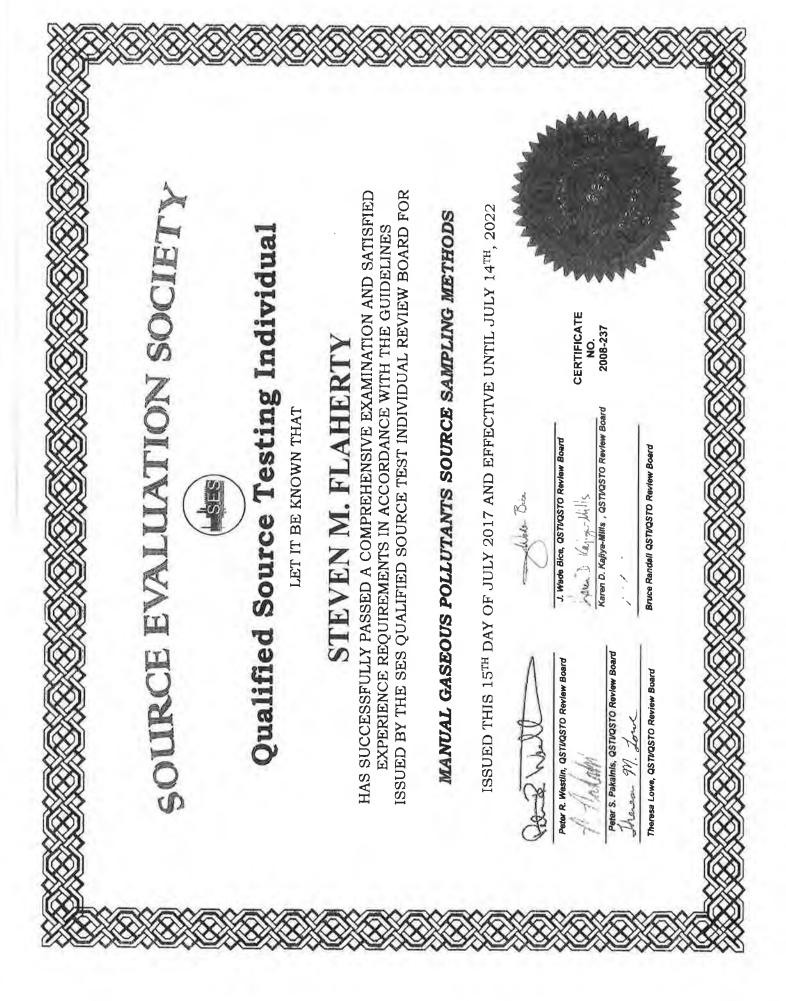
**Background:** Mr. Taylor's background is in research, fine particle technology, emissions testing, analytical services, and quality system management. During his 33-year career in environmental testing, he has served as an administrator, project manager, analytical services, and quality assurance manager. Currently, he provides independent review of source testing and laboratory test data and reporting as well as managing the quality system and accreditation status of the source testing and analytical groups.

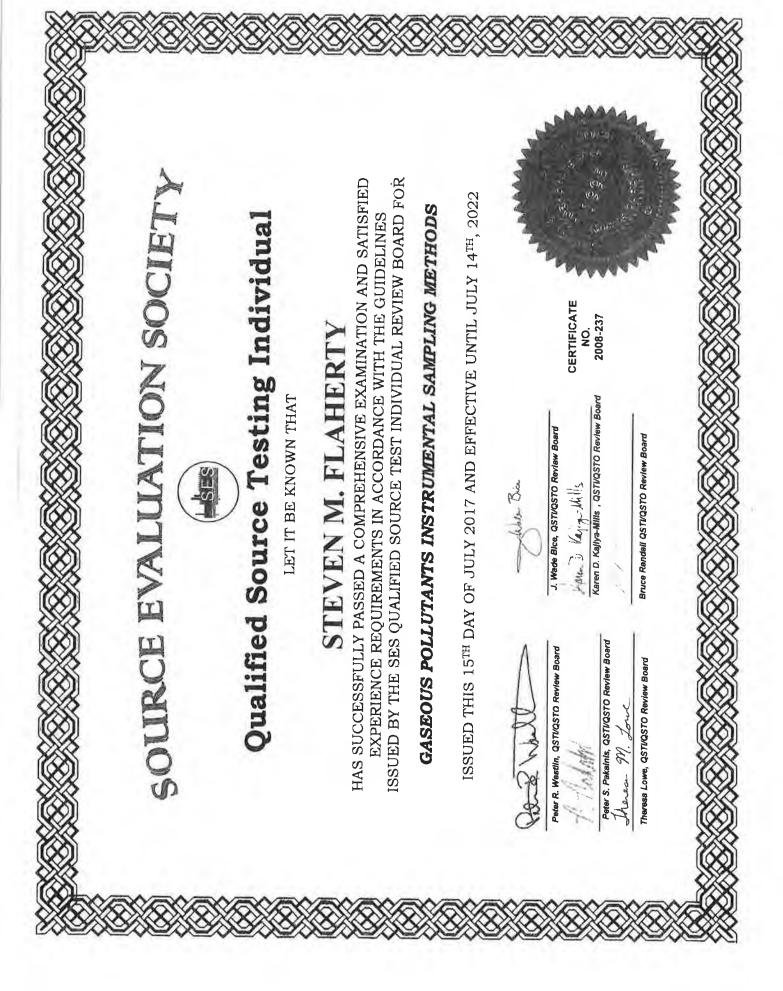
**Experience:** 25 years of experience in environmental consulting, field testing, and project management, and 8 years in quality system management and laboratory accreditation.

**Qualifications:** Certified as a qualified source testing observer (QSTO) by the SES pursuant to the requirements of ASTM D7036-04.









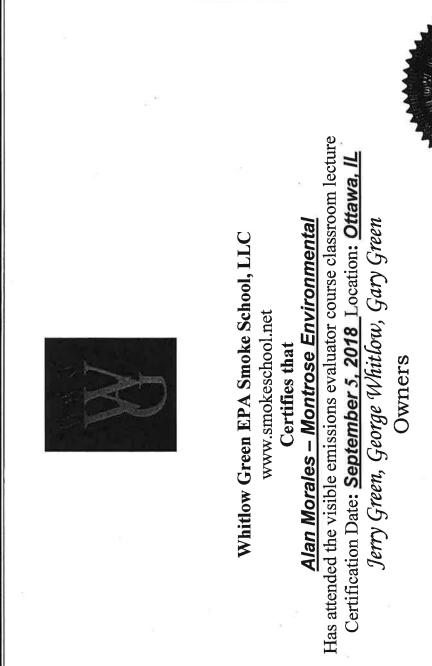
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CERTIFICATE OF COMPLETION CERTIFICATE OF COMPLETION ROBERT BUTCIN ROBERT BUTCIN This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7086-04 for the following method(s): Dativity of the following method(s): Particulate Sampling Methods Certificate Number. <u>024 2017 20</u> Particulate Sampling Methods Certificate Number. <u>024 2017 20</u> Tate Stricklet, Accreditation Director Tate Stricklet, Accreditation Director
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Robert Burton         This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 83 of ASTM D7086-04 for the following method(s):         Source Evaluation (QI) as defined in Section 83 of ASTM D7086-04 for the following method(s):         Source Evaluation (QI) as defined in Section 83 of ASTM D7086-04 for the following method(s):         Source Evaluation Society Group 3: EPA Gaseous Pollutants Instrumental Methods         Certificate Number: 0242017-27         MA M         JAE ALM         Jate Strickler, Accreditation Director         DATE OF ISSUE         DATE OF
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CERTIFICATE OF COMPLETION
Robert Burton
This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QJ) as defined in Section 8.3 of ASTM D7036-04 for the following method(s): Source Fushingtion Society Crown 4. EDA Hamdons Metals Meanmant Methods
Certificate Number: 024-2017-28
La Stall DATE OF ISSUE: 12/13/14
Tate Strickler, Accreditation Director       DATE OF         EXPIRATION:       12/13/19
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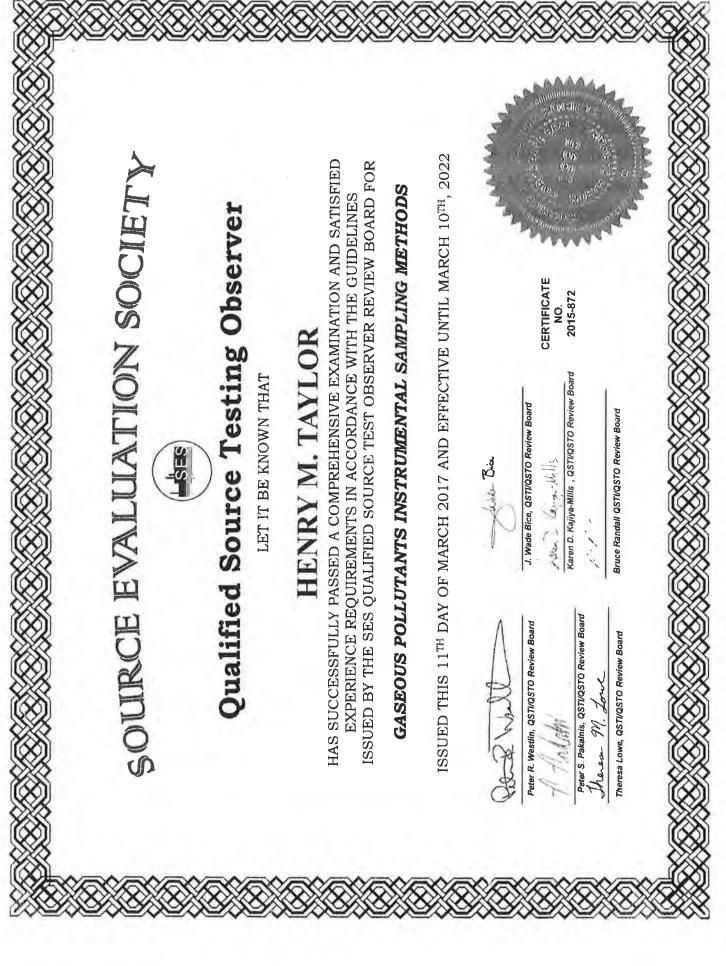
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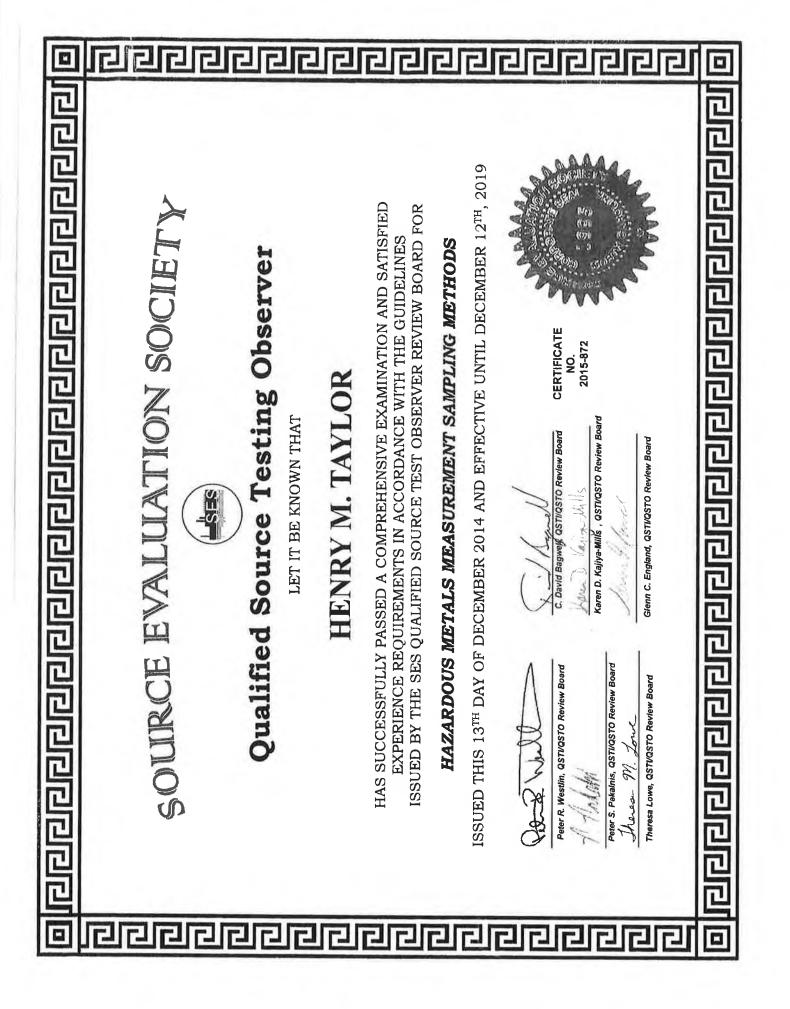
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If you have any questions, please contact one of the following individuals by email or phone.

Name:	Mr. Steve Flaherty
Title:	District Manager
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