

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Sample Date: 8/11/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 8/12/2025 through 8/18/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1550	9.23	2.69	52.5
26A	58-003	Stoneco	250	1.49	2.69	8.5
2NS	63-114	Highland	1150	6.95	2.65	39.0
Total Wt			2950	17.68		100.0

<----- Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	85.0	100.0	100.0	92.1	7.9	7.9
1/2"	39.4	98.4	100.0	68.0	24.1	32.0
3/8"	20.4	86.2	100.0	57.0	11.0	43.0
#4	2.2	14.7	98.8	40.9	16.1	59.1
#8	1.5	4.1	84.7	34.2	6.8	65.8
#16	1.3	2.2	69.7	28.0	6.1	72.0
#30	1.2	1.6	51.9	21.0	7.0	79.0
#50	1.2	1.5	24.2	10.2	10.8	89.8
#100	1.1	1.4	4.2	2.3	7.9	97.7
LBW	1.0	1.4	0.5	0.8	1.5	99.2

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



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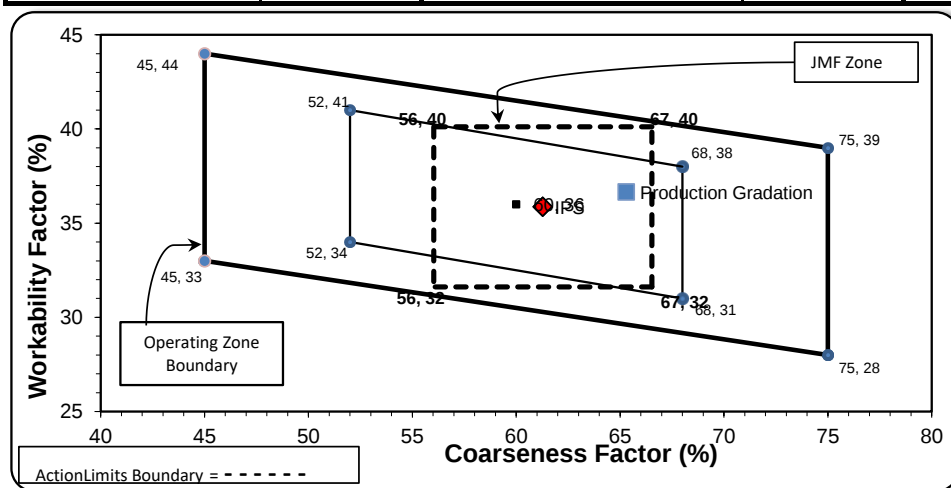
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	65	Workability Factor:	34	36.7
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Coarseness Factor:	61
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Workability Factor:	36
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Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.2	10.1	10.8
1/2"	70.7	18.5	29.3
3/8"	60.7	10.0	39.3
#4	44.4	16.3	55.6
#8	35.9	8.5	64.1
#16	27.3	8.6	72.7
#30	19.1	8.2	80.9
#50	7.4	11.7	92.6
#100	1.9	5.6	98.1
LBW	0.7	1.2	99.3

PREPARED BY:
SM, LLC Technical Service

Approved BY:

[Signature]



Daily Summary Report

Date Friday, August 15, 2025

Sample Id	-320370079	-1376933356	-1376934220	-1989638597	-674908945
Plant	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton	S103 Superior Brighton
Product	1051 6AA LS	1067 26A Mod LS	1022 2NS GR	7920 INTERMED AGG P1M LS	7919 COARSE AGG P1M LS
Specification	6AA LS	26A Mod LS Spec	2NS GR Spec	Intermed Agg P1M LS Target	Coarse Agg P1M LS Target
Sample Type	QA	QA	QA	QA	QA
2" (50mm)	100.0	100.0		100.0	100.0
1 1/2" (37.5mm)	100.0	100.0		100.0	100.0
1" (25mm)	100.0	100.0		100.0	58.7
3/4" (19mm)	85.0	100.0		100.0	19.6
1/2" (12.5mm)	39.4	98.4		87.4	7.6
3/8" (9.5mm)	20.4	86.2	100.0	66.1	4.7
#4 (4.75mm)	2.2	14.7	98.8	10.7	2.4
#8 (2.36mm)	1.5	4.1	84.7	3.8	2.2
#16 (1.18mm)	1.3	2.2	69.7	2.3	2.1
#30 (.6mm)	1.2	1.6	51.9	1.8	2.0
#50 (.3mm)	1.2	1.5	24.2	1.5	1.9
#100 (.15mm)	1.1	1.4	4.2	1.4	1.7
#200 (75µm)	1.08	1.4	0.7	1.4	1.6
Pan	0.00	0.0	0.0	0.0	0.0
FM			2.66		
Wash Loss (#200/75um)	1.0	1.4	0.5	1.3	1.5
Total Moisture	2.65	3.63	5.72	3.01	2.69

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **12**

Sample Date: **8/11/25**

Dates Test Represents: **8/12/2025** through **8/18/2025**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	150	0.92	2.62	5.2
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

<----- Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	95.3	100.0	100.0	97.4	2.6	2.6
3/4"	79.1	100.0	100.0	88.5	9.0	11.5
1/2"	39.0	97.5	100.0	66.2	22.3	33.8
3/8"	21.0	82.9	100.0	55.5	10.7	44.5
#4	2.7	20.4	96.8	40.9	14.6	59.1
#8	2.0	7.4	81.5	33.8	7.1	66.2
#16	1.9	3.9	63.9	26.5	7.2	73.5
#30	1.8	3.1	46.1	19.4	7.1	80.6
#50	1.8	2.8	22.2	9.9	9.5	90.1
#100	1.7	2.6	6.0	3.4	6.5	96.6
LBW	1.5	2.3	1.3	1.5	2.0	98.5

*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

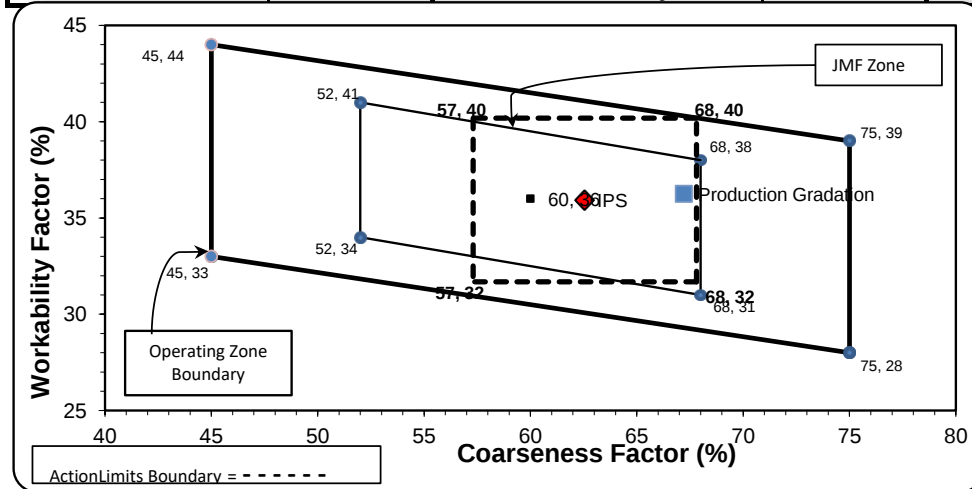


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Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	67	Workability Factor:	34	Adjusted WF	36.3
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Coarseness Factor:		63	
Workability Factor:		36	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By:

[Signature]

Daily Summary Report

Date Monday, August 11, 2025

Sample Id	-674974329	-674911686	-674978974
Plant	S000 Onsite Southfield	S000 Onsite Southfield	S000 Onsite Southfield
Product	1051 6AA LS	1022 2NS GR	1067 26A Mod LS
Specification		2NS GR Spec	26A Mod LS Spec
Sample Type	QA	QA	QA
2" (50mm)	100.0		100.0
1 1/2" (37.5mm)	100.0		100.0
1" (25mm)	95.3		100.0
3/4" (19mm)	79.1		100.0
1/2" (12.5mm)	39.0		97.5
3/8" (9.5mm)	21.0	100.0	82.9
#4 (4.75mm)	2.7	96.8	20.4
#8 (2.36mm)	2.0	81.5	7.4
#16 (1.18mm)	1.9	63.9	3.9
#30 (.6mm)	1.8	46.1	3.1
#50 (.3mm)	1.8	22.2	2.8
#100 (.15mm)	1.7	6.0	2.6
#200 (75µm)	1.59	1.6	2.4
Pan	0.00	0.0	0.0
FM		2.83	
-#200 (75um)		1.6	
Wash Loss (#200/75um)	1.5	1.3	2.3
Total Moisture	2.7	3.0	2.6

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **p11**

Sample Date: **8/11/25**

Dates Test Represents: **8/12/2025** through **8/18/2025**

Concrete Grade: **DM, 4500HP**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	150	0.92	2.62	5.2
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

<----- Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	96.9	100.0	100.0	98.3	1.7	1.7
3/4"	85.1	100.0	100.0	91.8	6.5	8.2
1/2"	48.5	99.1	100.0	71.5	20.3	28.5
3/8"	25.1	87.4	100.0	58.0	13.5	42.0
#4	3.4	23.8	96.3	41.2	16.7	58.8
#8	2.6	8.4	80.6	33.8	7.5	66.2
#16	2.4	4.4	64.1	26.9	6.8	73.1
#30	2.3	3.5	48.2	20.5	6.4	79.5
#50	2.2	3.1	24.9	11.2	9.3	88.8
#100	2.1	2.9	6.6	3.9	7.3	96.1
LBW	1.8	2.5	1.2	1.6	2.3	98.4

*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

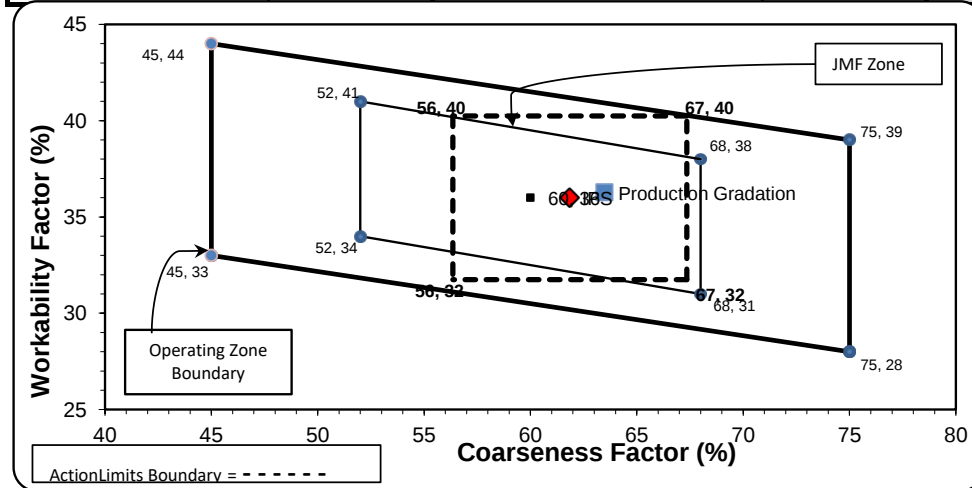


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Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	63	Workability Factor:	34	36.3
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Coarseness Factor:		62	
Workability Factor:		36	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY:
 SM, LLC Technical Service

Approved By:

[Signature]

Daily Summary Report

Date Wednesday, August 13, 2025

Sample Id	-1989629434	-674926225	-674907676	-674940643	-674973969
Plant	S000 Onsite Jefferson	S000 Onsite Jefferson	S000 Onsite Jefferson	S000 Onsite Jefferson	S000 Onsite Jefferson
Product	1022 2NS GR	7919 COARSE AGG P1M LS	1051 6AA LS	7920 INTERMED AGG P1M LS	1067 26A Mod LS
Specification	2NS GR Spec	Coarse Agg P1M LS Target		Intermed Agg P1M LS Target	26A Mod LS Spec
Sample Type	QA	QA	QA	QA	QA
2" (50mm)		100.0	100.0	100.0	100.0
1 1/2" (37.5mm)		98.1	100.0	100.0	100.0
1" (25mm)		35.7	96.9	100.0	100.0
3/4" (19mm)		7.0	85.1	96.4	100.0
1/2" (12.5mm)		3.1	48.5	75.9	99.1
3/8" (9.5mm)	100.0	2.7	25.1	50.8	87.4
#4 (4.75mm)	96.3	2.6	3.4	12.5	23.8
#8 (2.36mm)	80.6	2.5	2.6	5.9	8.4
#16 (1.18mm)	64.1	2.4	2.4	4.3	4.4
#30 (.6mm)	48.2	2.3	2.3	3.8	3.5
#50 (.3mm)	24.9	2.2	2.2	3.5	3.1
#100 (.15mm)	6.6	2.0	2.1	3.3	2.9
#200 (75µm)	1.5	1.7	1.94	3.0	2.7
Pan	0.0	0.0	0.00	0.0	0.0
FM	2.79				
-#200 (75um)	1.5				
Wash Loss (#200/75um)	1.2	1.6	1.8	2.9	2.5
Total Moisture	3.8	0.2	1.9	1.1	2.9

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-02**

Sample Date: 8/11/25

Concrete Grade: **DM, 4500HP**

Contractor: _____

Dates Test Represents: 8/12/2025 through 8/18/2025

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1605	9.82	2.62	55.2
26A	71-47	Presque Isle	150	0.92	2.62	5.2
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6
Total Wt			2905	17.69		100.0

<----- Verify this number is 100%

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	82.6	100.0	100.0	90.4	9.6	9.6
1/2"	38.9	96.6	100.0	66.1	24.3	33.9
3/8"	20.9	85.0	100.0	55.5	10.5	44.5
#4	4.7	20.0	97.2	42.1	13.4	57.9
#8	2.5	5.5	82.0	34.1	8.0	65.9
#16	2.1	2.9	64.9	27.0	7.1	73.0
#30	2.0	2.4	48.1	20.3	6.7	79.7
#50	1.9	2.2	25.3	11.2	9.1	88.8
#100	1.8	2.1	7.6	4.1	7.1	95.9
LBW	1.5	1.8	1.4	1.5	2.6	98.5

*Maximum % Retained must be above the 3/8" sieve.

*Any two adjacent sieves must equal 10% except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for each sieve except max.,

nom. max., #100 and #200 sieves.

*% Retained must be at least 4% for the 3/4" sieve when

a 1.5" max. size (nom. Max. 1.0") aggregate is used.



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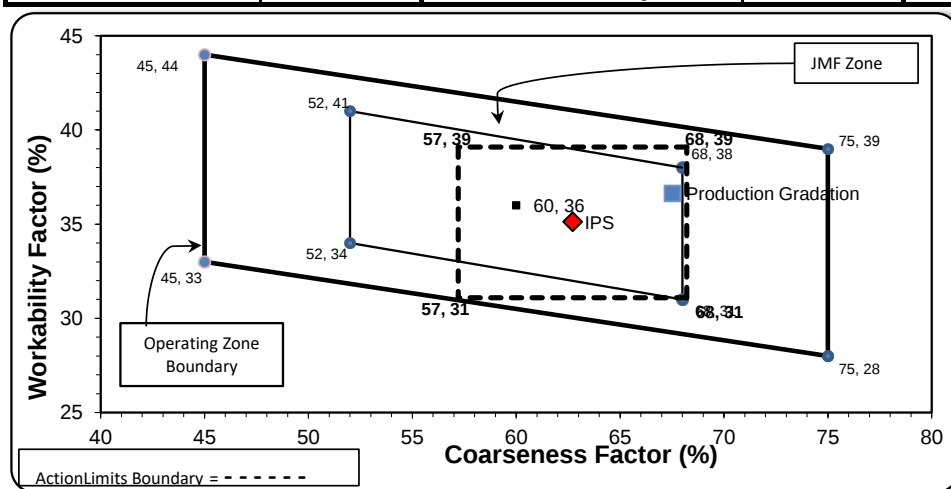
Production Gradation ☒ Batch Plant Gradations ☐ Aggregate Supplier Gradations

Adjusted WF Initial Production Sample (IPS)

Coarseness Factor:	68	Workability Factor:	34	36.6
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Coarseness Factor:	63
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Workability Factor:	35
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Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	95.1	4.9	4.9
1/2"	74.6	20.5	25.4
3/8"	59.3	15.3	40.7
#4	42.1	17.2	57.9
#8	35.1	7.1	64.9
#16	29.2	5.9	70.8
#30	21.9	7.3	78.1
#50	9.6	12.4	90.4
#100	2.4	7.2	97.6
LBW	0.9	1.5	99.1

PREPARED BY:
SM, LLC Technical Service

Approved By:

[Signature]



Daily Summary Report

Date Wednesday, August 13, 2025

Sample Id	-674929347	-674930747	-674937145	-674974948	-674946470
Plant	Superior Hoover	Superior Hoover	Superior Hoover	Superior Hoover	Superior Hoover
Product	7919 COARSE AGG P1M LS	7920 INTERMED AGG P1M LS	1022 2NS GR	1067 26A Mod LS	1054 6AA LS PI
Specification	Coarse Agg P1M LS Target	Intermed Agg P1M LS Target	2NS GR Spec	26A Mod LS Spec	6AA LS
Sample Type	QA	QA	QA	QA	QA
2" (50mm)	100.0	100.0		100.0	100.0
1 1/2" (37.5mm)	100.0	100.0		100.0	100.0
1" (25mm)	36.9	100.0		100.0	100.0
3/4" (19mm)	7.9	98.3		100.0	82.6
1/2" (12.5mm)	2.6	72.1		96.6	38.9
3/8" (9.5mm)	2.4	44.7	100.0	85.0	20.9
#4 (4.75mm)	2.2	6.3	97.2	20.0	4.7
#8 (2.36mm)	2.1	2.9	82.0	5.5	2.5
#16 (1.18mm)	2.0	2.2	64.9	2.9	2.1
#30 (.6mm)	2.0	1.9	48.1	2.4	2.0
#50 (.3mm)	1.8	1.7	25.3	2.2	1.9
#100 (.15mm)	1.6	1.5	7.6	2.1	1.8
#200 (75µm)	1.4	1.4	1.7	1.9	1.67
Pan	0.0	0.0	0.0	0.0	0.00
FM			2.75		
Wash Loss (#200/75um)	1.3	1.3	1.4	1.8	1.5
Total Moisture	0.05	0.25	5.19	4.17	3.49