

**Lab Report**

[Redacted]

Company:

[Redacted]

Contact:

[Redacted]

Salesman:

[Redacted]



**TRIPLE / S  
DYNAMICS  
INC.**

Subject: Separation Evaluation of Spent Potliner

Equipment: Tyler Rotap, Laboratory V-135 Gravity Separator equipped with a #81C deck, 1'x 3' Texas Shaker with 1/2" and Tyler 16 mesh screens.

- Procedure: 1) Using Jones splitter, obtained representative sample for sieve analysis. See attached for results.
- 2) Separated sample as received on V-135 Separator. Collected three fractions identified as Run # 1 Heavies, Mids and Lights. Note: Due to small scale size of equipment, scalping at 1/2" was necessary to prevent bridging of feeder. Also, screened at 16 mesh for dust control.
- 3) After inspection of the -1/2", +16 mesh fractions, screening was our next step to improve Separator performance. Recombined material from step 2 and screened at 1/2", 1/4", 8 mesh (2.36 mm co.) and 16 mesh (1 mm co.)
- 4) Separated all splits from screening except the +1/2" and -16 mesh splits. Samples identified as Run #2. Note: If desirable, the -16 mesh split could be separated after further screening.
- 5) Performed bulk densities on all separated fractions.

**Run #1 Test Results:**

		<u>Wt.</u>	<u>%</u>		
Screening:	+1/2"	3.5#	10.3		
	-1/2",+16m	28#	82.3		
	-16 mesh	2.5#	7.3		
Separation (-1/2",+16 mesh)		<u>Wt.</u>	<u>%</u>	<u>Bulk Density</u>	
Feed Rate:	Heavies	9.5#	33.9	77.7 pcf	
450 lbs/hr.	Mids	9#	32.1	70.5	
	Lights	9.5#	33.9	61.7	

**Run #2 Test Results:**

		<u>Wt.</u>	<u>%</u>
Screening:	+1/2"	6.5#	10.1
	-1/2",+1/4"	27.5#	42.9
	-1/4",+8m	15.5#	24.2
	-8m,+16m	7.5#	11.7
	-16 mesh	7#	10.9

**Separation:**

-1/2",+1/4"	<u>Wt.</u>	<u>%</u>	<u>% of Total</u>	<u>Bulk Density</u>	<u>Feed Rate.</u>
Heavies	9.1#	35	15	75.5 pcf	550 lbs/hr.
Mids	11.3#	43.5	18.6	62.8	
Lights	5.6#	21.5	9.2	46	

-1/4",+8m					
Heavies	5.9#	43.4	10.5	79.7 pcf	500 lbs/hr.
Mids	6.4#	47	11.4	62.9	
Lights	1.3#	9.5	2.1	45.9	

-8m,+16m					
Heavies	2.9#	42.8	5	80.4 pcf	350 lbs/hr.
Mids	3.4#	50.6	5.9	64.3	
Lights	.44#	6.5	.8	49.5	

The difference of the bulk densities between Run #1 and Run #2 justifies screening. Small grab samples from each separation, +1/2" and -16m splits have been taken for XXXXXXXXXX inspection.

Triple/S Dynamics Lab,

Brad Penner

SIEVE ANALYSIS

DATE: [REDACTED]

PRODUCT: Rock

SALESMAN: [REDACTED]

COMPANY: [REDACTED]

SCREEN TIME: 3 MIN.

SIEVE NO.	WT. (gr.)	PERCENT	ACCUM. %
<u>+ 1/2"</u>	<u>68</u>	<u>5.9</u>	<u>5.9</u>
<u>+ 3/8"</u>	<u>145</u>	<u>12.5</u>	<u>18.4</u>
<u>+ 5/16"</u>	<u>178</u>	<u>15.4</u>	<u>33.8</u>
<u>+ 3m</u>	<u>157</u>	<u>13.6</u>	<u>47.4</u>
<u>+ 4m</u>	<u>180</u>	<u>15.6</u>	<u>63</u>
<u>+ 6m</u>	<u>87</u>	<u>7.5</u>	<u>70.5</u>
<u>- 6m</u>	<u>341</u>	<u>29.5</u>	<u>100%</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

TOTAL: 1156 gr.

BULK DENSITY \_\_\_\_\_