1. Procedure summary

This procedure describes how to collect samples around a Decanter harvest to monitor performance

1.1. Related Procedures

Polymer Station Operations	CB-02-002-002
Saturation Tank Operations	CB-02-005-003
DAF Operation	CB-02-004-004
DAF Harvest Monitoring	CB-02-004-003

1.2. Procedure impacts and concerns

Safety		
Quality	Samples must be representative of the content in a specific process point. Non mixed samples will reflect incorrect numbers when reporting system performance.	<Additional notes>
Delivery	Sample should be collected in 1L jars	
Environmental	Algae material spill in the decanter area should be recorded and cleaned up as soon as possible	<Additional notes>
Cost		<Additional notes>
Compliance		

1.3. Responsibilities and owners

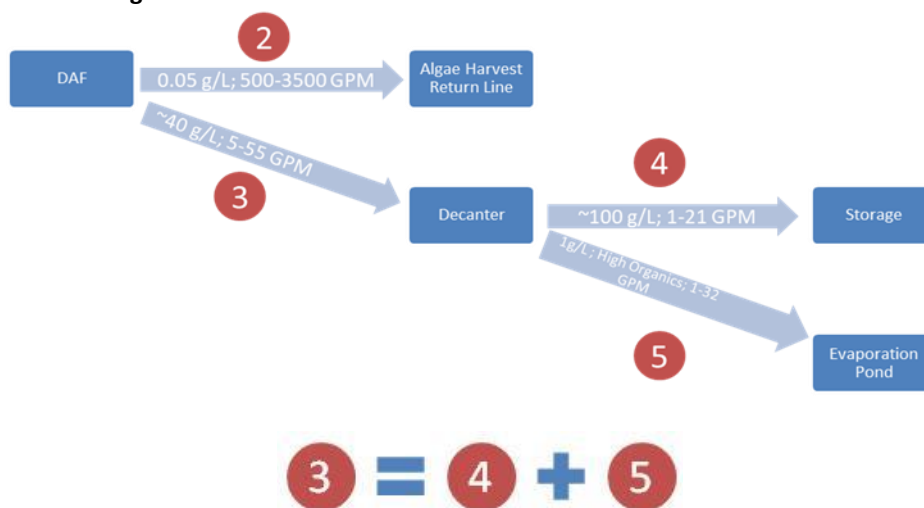|		
Document Owner	Manage content and distribution	Timothy Langer
Process Owner	Responsible for content and process validation	Marcos Delgado
Plant Manager	Responsible for implementation and conformance	Gil Jones

2. Process

2.1. Process diagram

Samples must be taken at each step in the DAF and Decanter harvest process

Total solids into the Decanter should equal the total of what comes out of the Decanter or else material is lost in the system.

Figure 1 Sampling of the DAF harvest.

2.2. Decanter sampling and performance monitoring

2.3.1 Decanter sampling

This method will outline how to sample the Decanter to determine the efficiency of the harvest and determine mass harvested through the system.

The process technicians are responsible for taking the samples from the processing equipment to monitor performance.
The third sample is taken from the float box in the DAF. This sample should be 1 L in volume.
The fourth sample is taken from the output of the decanter. This sample should be 1 L in volume. (AS-V912)
The fifth sample is taken from the Centrate of the Decanter. This sample should be 1 L in volume. (CEN-V100)
These samples should be taken at the beginning of the run, middle and end during a run. There are a total of 3 samples from each sampling point during the run.
These samples are then delivered to QAQC for analysis.

Daily: There are 3 samples taken from the DAF float box, Centrate and Decanter product during the day.

2.3.2 Active process performance monitoring (For Centrate Samples)

2.3.2.1 Using the NTU reader, fill the sample vial up with the centrate sample and record the NTU value.
2.3.2.2 This value needs to be as low as possible and reflects the operational performance of the decanter.
2.3.2.3 NTU values from samples need to be entered into pi process book and logged in the DAF operations sheet.

2.3.3 QAQC

2.3.3.1 The three samples from the DAF float box during a harvest run need to be combined/composited into equal parts for an average sample over the run.
2.3.3.2 The three samples from the centrate during a harvest run need to be combined/composited into equal parts for an average sample over the run.
2.3.3.3 The three samples from the Decanter product during a harvest run need to be combined/composited into equal parts for an average sample over the run.
2.3.3.4 Both samples need dry weight measurements done per the Harvest material Dry weight procedure.
2.3.3.5 Log data in pi processbook.

3. Required documents

3.1. Input documents

Harvest Record   <Input document number>

3.2.   Output documents
Harvest Record   <Output document number>

4.   Document control

4.1.   Revision history

R0 – Initial Release – Timothy Langer	March 23, 2012
R1 – Updated Decanter Sampling section – Marcos Delgado	August 15, 2012

4.2.   Document approval
<Name>   <Approval date>

4.3.   Document reviewers
<Name>   <Last reviewed date>
<Name>   <Last reviewed date>

5.   Risk analysis
<Risk name>   <Mitigation plan>

6.