Florida Department of

Memorandum **Environmental Protection**

TO: Rick Bradburn

FROM: Jonathan Holtom, P.E.

DATE: April 28, 2003

SUBJECT: CAM Applicability determination for Arizona Chemical – Panama City
Project #: 0050001-014-AV

Rick,

From my review and discussions with Khalid Hasna, I have determined that the three units in question are not subject to CAM. That leaves the thermal oxidizer, which was addressed in the last revision, and I don't believe they have made any changes to it. If they have, I can update the existing CAM table, or you can. It doesn't matter to me. The SOB should contain statements about CAM applicability for the emissions units. What follows is some possible language for you to use if you wish.

SOB Material:

EU005 – CTO Acidulation Plant, White Liquor Scrubber Stack: is not subject to CAM for TRS because pre-controlled potential emissions of are less than 100 TPY (roughly 3 tons per year).

EU019 – Rosin Flaking, Dust Collector Stack: collection system is in place to recover usable product. Collected product is either recycled back into the raw material for reprocessing or bagged and sold. The Torit Dust collector contains filter cartridges that prevent fugitive PM emissions during the product recovery operation. Because this dust collection device is used for product recovery purposes, this emissions unit is not subject to CAM.

EU028 – Resin Flaking and Drumming, Dust Collector and Mist Eliminator Stack: collection system is in place to recover usable product. Collected product is either recycled back into the raw material for reprocessing or bagged and sold. The Torit Dust collector contains filter cartridges that prevent fugitive PM emissions during the product recovery operation. Because this dust collection device is used for product recovery purposes, this emissions unit is not subject to CAM.

(Note: The PM emission limits for the above collectors have a rule citation of 62-296.320(4), which is the process weight standard. The dust collector is connected to a hood that collects fugitive emissions from the bagging operation in order to recover usable product. There does not appear to be a chemical or physical during this bagging process. Therefore, I question the imposition of the process weight standard as an applicable requirement for this operation. It would appear that this emissions unit would be more appropriately classified as an insignificant (or possibly unregulated) emissions unit.)

Arizona CHEMICAL

Subject: Dust recoverd for sale and rework vs. dust produsd (1% of flaked resin)
Date: 25-Apr-03
For: Jonathan Holtom - FDEP Tallahassee, CAM Plan Evaluation

Rosin Flaking Rate - Dust Collector
EU019

Month	Prod., lbs	1% loss	Dst Sk Rwrk lb	Dst Sk Sold lb
Jan	2,601,600	26,016		7,565
Feb	2,616,700	26,167		10,704
Mar	3,047,600	30,476		11,724
Apr	2,988,200	29,882		0
May	2,855,900	28,559		56,316
Jun	3,080,140	30,801		14,498
Jul	3,668,960	36,690		0
Aug	3,110,400	31,104		29,286
Sep	2,815,850	28,159		0
Oct	3,071,800	30,718		0
Nov	2,539,250	25,393		0
Dec	1,410,450	14,105		2,870
Total 02	33,806,850	338,069		132,963

132,963

39.33%

Resin Flaking Rate - Dust Collector
EU028

Month	Prod., lbs	1% loss	Dst Sk Rwrk lb	Dst Sk Sold lb
Jan	1,352,000	13,520		5,398
Feb	1,873,000	18,730		7,638
Mar	2,437,000	24,370		14,153
Apr	2,836,000	28,360		0
May	2,597,000	25,970		18,697
Jun	2,152,000	21,520		0
Jul	2,773,000	27,730		18,045
Aug	2,620,000	26,200	14,000	13,009
Sep	2,318,000	23,180	5,000	0
Oct	2,590,000	25,900	5,000	11,192
Nov	2,456,000	24,560	5,000	0
Dec	2,164,000	21,640	14,800	8,470
Total 02	28,168,000	281,680	43,800	96,602

140,402

49.84%

Post-it® Fax Note 7671	Date 4/28/03	# of pages ▶ 3 + 1
To Jonathan Holtom	From K. Hasna	
Co./Dept. FDEP	Co. Arizona Chemical	
Phone # (850) 488-1344	Phone # (850) 914-8256	
Fax # (850) 921-9533	Fax # (850) 784-2751	

Arizona CHEMICAL

SUBJECT: Panama City - Title V Renewal
Tall Oil Rosin Flaking
019

VARIABLE	NUMBER	units	REFERENCE
Production	18,000	lb/hr	
	78,840	tpy	lb/hr X 8760 hrs/yr / 2000 lb/ton
Dust	1%		Assumption
Dust Collector Efficiency	98%		Assumption
PM Emission	15.77	tpy	Production X Dust X (1-Eff)
	3.60	lb/hr	

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To Jonathan Holtom | From K. Hasna

Co./Dept. FDEP | Co. Arizona Chemical

Phone # (850) 488-1344 | Phone # (850) 914-8256

Fax # (850) 921-9533 | Fax # (850) 784 2751

Arizona CHEMICAL

SUBJECT: Panama City - Title V Renewal
Resin Plant Flaking
028

VARIABLE	NUMBER	units	REFERENCE
Production	10,000	lb/hr	
	43,800	tpy	lb/hr X 8760 hrs/yr / 2000 lb/ton
Dust	1%		Assumption
Dust Collector Efficiency	98%		Assumption
Mist Eliminator Emission - PM	0.37	lb/hr	AOR Report
PM Emission	10.38	tpy	Production X Dust X (1-Eff) + Mist X 8760 hrs/yr / 2000 lbs/ton
	2.37	lb/hr	tpy / 8760 hrs/yr X 2000 lb/ton

Arizona CHEMICAL

SUBJECT: Panama City - Title V Renewal
Tall Oil Acidulation Plant

VARIABLE	NUMBER	units	REFERENCE
CTO Feed	32,500	tpy	
Conversion	55%		Soap to CTO
Soap Fed	59,091	tpy	CTO Demand / Conversion
VOC Emission			
Emission Factor	4.97	lb/tCTO	NCASI TB 701, Table 16 (White Liquor) Average of TORA, TORMC, TORMD
Emission	80.71	tpy	CTO Tpy X Emission Factor / 2000 lb/ton
TRS/H2S Emission			
Emission Factor			
Dimethyl Disulfide	0.0044	lb/tCTO	NCASI TB 701, Table 16 (White Liquor) Average of TORA, TORMC, TORMD
Dimethyl Sulfide	0.0769	lb/tCTO	NCASI TB 701, Table 16 (White Liquor) Average of TORA, TORMC, TORMD
H2S	0.4700	lb/tCTO	NCASI TB 701, Table 16 (White Liquor) Average of TORA, TORMC, TORMD
Methyl Mercaptan	0.0732	lb/tCTO	NCASI TB 701, Table 16 (White Liquor) Average of TORA, TORMC, TORMD
TRS Emission Limit	0.05	lb/tCTO	Panama City Title V Permit Condition A.3
Emission			
Dimethyl Disulfide	0.07	tpy	CTO Tpy X Emission Factor / 2000 lb/ton
Dimethyl Sulfide	0.00	tpy	CTO Tpy X Emission Factor / 2000 lb/ton
H2S	0.00	tpy	CTO Tpy X Emission Factor / 2000 lb/ton
Methyl Mercaptan	0.00	tpy	CTO Tpy X Emission Factor / 2000 lb/ton
TRS	0.07	tpy	Sum of Components
TRS Emission Limit	0.81	tpy	CTO Tpy X Emission Limit / 2000 lb/ton **Use this emission rate**
HAPs			

	TORA	TORMC	TORMD
Acetaldehyde		6.0E-04	1.1E-03
Acetophenone			

NEW TORIT® DOWNFLO® II

Three important new options allow the Downflo II to handle applications that until now have typically been handled only by baghouse or cyclone collectors, such as those involving abrasive and/or high particulate loading

The Abrasion Resistant Inlet is used to promote early particle drop-out where abrasive or high loading particulate is present; or to act as a low-cost transition into the collector in order to simplify ductwork

The Extended Dirty Air Plenum is used as a low-cost inlet transition for larger units to provide more uniform airflow, to decrease ductwork needs, and to allow the use of one inlet by lowering air velocity into the unit

The Air Management Module is used in conjunction with the Extended Dirty Air Plenum to promote particle drop-out when abrasive particulate, high grain loading or extra-heavy dust is present; and/or to provide flexibility in inlet placement

Introduced in 1983, the Torit Downflo was the first cartridge collector to use gravity and a downward airflow pattern to clean the air efficiently while consuming less energy

Today, the new Torit Downflo II takes the proven benefits of the original Downflo line even farther with exclusive new features and options

Continuously welded tube sheet protects against dust leakage

Combined with our improved cleaning process, a downward airflow pattern prevents dust re-entrainment during the filter cleaning cycle, resulting in low operating pressure drop and longer filter life

Like the original Downflo, air distribution baffles force air down through the filter cartridges for higher effectiveness and efficiency

Redesigned tube sheet hole decreases pressure drop through the unit

Reinforced yoke is inclined at 15° to make filter replacement quick and easy

Like the original Downflo, the Downflo II is engineered to work with the Ultra-Web® filter cartridge as a complete system

Non-plugging pressure tap provides reliable pressure readings to a Magnehelic® or Photohelic® gage

The Torit Downflo II provides even more airflow per filter—12% to 40% more, requiring fewer filters to do the same job

Ultra-Web filter cartridges offer 99.999% efficiency on submicron particulate and do a superior job of trapping dust on the surface for easy release during self-cleaning*

The Downflo II comes equipped with a new Ultra-Web filter cartridge with 12% more media for increased airflow

Improved filter cleaning makes the Downflo II even more effective, significantly lowering pressure drop for lower operating costs

For easier assembly, the Downflo II is shipped with Ultra-Web cartridges already installed

60° pyramidal hoppers readily accept multiple collection drums

Depending on the application, the Downflo II can handle the same airflow with a smaller size unit, reducing your initial capital investment, lowering delivery and installation costs, and saving valuable floorspace

Gasketed filter cartridges are supported at both ends to establish a positive airtight seal

The FLUENT® computer program allowed us to improve airflow patterns through the unit, giving the Downflo II more uniform airflow velocities overall, lowering pressure drop

Sloped roof prevents rust by eliminating collection of water

Low profile accommodates low ceiling clearance

External access simplifies filter change-out for safer maintenance

Self-centering porthole covers provide quick, easy alignment and positive airtight seal

High-quality exterior paint resists rust for at least 250 hours in a salt spray booth

Pleatloc™ assures uniform pleat spacing for better cleaning and longer filter life

"Lock-seam" super-strength outer seam offers greater durability

Coated outer liner and galvanized inner liner protect filter media and resist corrosion

New larger air inlet design significantly lowers inlet velocity and provides more uniform airflow, contributing to lower pressure drop

No loose filter hardware to fall off, rattle or get lost

Porthole covers require no tools to remove or replace

Cross-bracing on three sides provides strength and stability while allowing access to collection drums

The Downflo II Collector requires minimal field assembly, so you are up and running fast

Rugged construction is rated for Seismic Zone 3 and 100 MPH wind loads

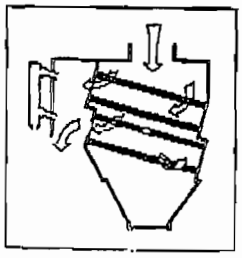
New sloped outlet allows for easier ductwork installation

New 20% larger outlet lowers exit losses and saves energy

Additional options and accessories for the Downflo II include slide gates, rotary airlocks, power packs, electrical control panels, service platforms and more, depending on your exact needs

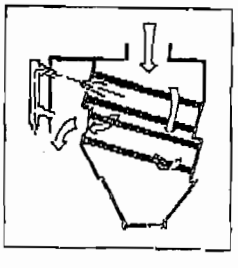
Available in units of 8 or more cartridges, the Torit Downflo II's modular design can easily be sized to meet your airflow requirements

Urethane filter gaskets provide an airtight seal for greater durability and longer filter life



Operational Explanation

During normal operation, dirty air enters the Downflo II dust collector through the top inlet and passes through the filter elements. Dust is collected on the outer surfaces of the elements and clean air flows through the center of the elements into the clean air plenum where it exits through the clean air outlet.



During filter element purge, the control timer automatically selects the pair of filters to be cleaned and activates a solenoid valve which opens an air diaphragm valve. High pressure air pulses directly into the center of the selected filter, purging the collected dust off the filter elements. The dust is swept downward into the hopper by the prevailing airflow and by gravity.

Holtom, Jonathan

From: Khalid Hasna [Khalid.Hasna@ipaper.com]
Sent: Tuesday, April 22, 2003 6:10 PM
To: Bradburn, Rick; Holtom, Jonathan
Cc: Rick Frain
Subject: Re: FW: Arizona Chemical's CAM Plans (0050001, Bay County)

The stack test report summaries are in attachment X of the Title V renewal application, I can provide copies additional copies if needed.

EU005: TRS calculations (page 47 of renewal application) used permit limit to estimate TRS. Assuming a typical efficiency of 70% for liquor scrubber (Rick Frain) the estimated uncontrolled emission is (0.81 tpy/0.3%) is 2.7 tpy. Based on this estimate, we probably don't need a CAM plan for this unit.

EU019: Dust (PM) calculations (page54 of renewal application) assumes 1% of product fed to the belts are lost as dust. The belts throughput are limited, per Title V permit, to 18,000 lb/hour total for both belts. (18,000 lb/hour X 0.01 loss X 8760 hrs/yr)/2000 lb/ton = 788.4 tons per year uncontrolled PM estimated. Efficiency of the Torit Module DFT 4-16, a cartridge filter system, is 98%, assumed.

EU028: Dust (PM) calculation (page 55 of renewal application) assumes 1% of product fed to the belts are lost as dust. The belts maximum throughputs are estimated at 5,000 lb/hour per belt. for both belts (10,000 lb/hour X 0.01 loss X 8760 hrs/yr)/2000 lb/ton = 438 tons per year uncontrolled PM estimated. Efficiency of the Torit Module DFT 3-12 & Module DFT 4-16, cartridge filter systems, are 98%, assumed.

I hope this helps. If you have any questions or need more information, please let me know.

Thanks

"Bradburn, Rick" <Rick.Bradburn@dep.state.fl.us> on 04/21/2003 02:41:03 PM

To: "Khalid Hasna" <Khalid.Hasna@ipaper.com>
cc:
bcc:
Subject: FW: Arizona Chemical's CAM Plans (0050001, Bay County)

Hi Khalid, as we discussed. Thanks for your help. Rick Bradburn

> -----Original Message-----
> From: Holtom, Jonathan
> Sent: Monday, April 21, 2003 2:04 PM
> To: Bradburn, Rick
> Subject: RE: Arizona Chemical's CAM Plans (0050001, Bay County)
>
> Rick,
>

> If you can, in order to expedite my review, please answer the following
> questions:
>
> Do you have test results handy? Also, do you have any information about
> control efficiencies and pre-control potential emissions?
>
> EU 005: TRS allowable emissions are only 0.81 TPY. Do you believe they
> would be over 100 tpy without the scrubber? I thought scrubbers were
only
> around 80-90% efficient. To be over 100 tpy before controls, this
scrubber
> would need to be 99.992% efficient.
>
> EU019: PM allowable emissions are 4.55 TPY. They claim control
efficiency
> to be 99.5%. If fully utilized, uncontrolled PM emissions could reach
910
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> are?
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> EU028: PM allowable emissions are 42.66 TPY. Is a "Torit Module
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> dust collector a baghouse? What is it's efficiency?
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most collected as Sellable Product

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of what doesn't get into the collection Boop

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>
>

Florida Department of
Environmental Protection

Memorandum

TO: Jonathon Holtom, DARM, MS 5505

FROM: Rick Bradburn

DATE: March 26, 2003

SUBJECT: Arizona Chemical Panama City Plant

For your review.

Scrubber ≈ 70% eff 0.81 TPY / 30% = 2.7 TPY uncontrolled — No CAM
even if 99% eff, Pot ems = 81 TPY

COMPLIANCE ASSURANCE MONITORING PLAN

ARIZONA CHEMICAL – PANAMA CITY, FL PLANT
Crude Tall Oil Acidulation Plant

I. Background

A. Emission Unit

Description:	CTO Acidulation Plant
Identification:	EU005
Stack designation:	White Liquor Scrubber Stack
Facility ID No.:	005001
Facility:	Arizona Chemical – Panama City, FL

6 x 8760 = 52,560

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	Title V Permit
Regulated pollutant:	Total Reduced Sulfur (TRS)
Emission Limit:	TRS shall not exceed 0.05 pounds per ton of CTO produced (12-hour avg.)
Monitoring requirements in Permit:	Maximum allowable operating rate shall be 32,500 tons of CTO produced per year (12-month rolling average)

+6 TPD/hr = 0.3 lb/hr ⇒ 1.31 TPY
0.8125 TPY TRS
99.992% eff.

C. Control Technology: Packed bed Scrubber using White Liquor as scrubbing fluid.

≥ 4 gal/min (A.8.)

II. Monitoring Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table - CTO1.

I. Background

CTO is produced by reacting Black Liquor Soap (BLS) with sulfuric acid and subsequently processing the oil by filtering, decanting, washing, and drying. The major equipment in the CTO plant includes reaction vessels, process tanks, storage tanks, decanting vessels, and screen filters. Exhaust gases from the CTO reactor, screen filter, and decanter tanks are vented to a packed bed scrubber that uses white liquor from the adjoining pulp mill as the scrubbing fluid. TRS scrubbing is performed with white liquor. The minimum white liquor make-up flow rate shall be 4 gallons per minute with less than 75% carbonation to control TRS emissions. This emissions unit is a regulated emissions unit in accordance with Rule 62-296.404(3)(b)1., F.A.C., Tall Oil Plants.

II. Rationale for Selection of Performance Indicators

The White liquor feed rate was selected because of the ability to control and because the flow is directly related to scrubbing efficiency.

It has been shown that at the maximum permitted rate of tons per hour of CTO production, the control efficiency was achieved and the emissions were at 0.048 pounds per tons of CTO

III. Rational for Selection of Indicator Ranges

The selected indicator range is "Minimum 5 GPM of white liquor flow during CTO production." When an excursion occurs corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. The selected QIP threshold level is 12 excursions in a six month period. This level is less than 0.05 percent of the allowable process operating time (based on 8,760 hours/year). If the QIP threshold is exceeded in the specified period, a QIP will be developed and implemented.

If test rate was 5 gpm = 0.048 $\frac{lb}{ton}$, then no room for corrective action & test results?

TABLE - CTO1: MONITORING APPROACH

	Indicator No. 1
I. Indicator Measurement Approach	White Liquor Flow
	Fisher-Porter Readout
II. Indicator Range	Minimum White Liquor Make-up Flow of 5 GPM during CTO production.
III. Performance Criteria A. Data Representativeness	The flow meter installed as an integral part of the scrubber. Tolerance + 5%?
B. Verification of Operational Status	Not Applicable
C. QA/QC Practices and Criteria	Annual Calibration.
D. Monitoring Frequency	Flow meter is measured continuously and recorded every two hours.
Data Collection Procedures	The flow is recorded every 2 hours. √ A.G.
Averaging Period	2-hour Instantaneous
Air Pollution Control Device (APCD) Bypass Monitoring	N/A

COMPLIANCE ASSURANCE MONITORING PLAN

ARIZONA CHEMICAL – PANAMA CITY, FL PLANT
Resin Flaking and Drumming

I. Background

A. Emission Unit

Description:	*Resin Flaking and Drumming*
Identification:	EU028
Stack designation:	The Dust Collector and Mist Eliminator Stack
Facility ID No.	005001
Facility:	Arizona Chemical – Panama City, FL

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	Title V Permit
Regulated pollutant:	Particulate Matter (PM)
Emission Limit:	Opacity < 5% (9.74 lb. per hour) 42.6678 9
Monitoring requirements in Permit:	Maximum allowable operating rate shall be 5,000 lbs. per hour per belt and 10,000 for drumming.

C. Control Technology: Line A: Torit Model DFT3-12, Line B: Torit Model DFT4-16.

II. Monitoring Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table - TR1.

I. Background

The Terpene monomer blends from the terpene refinery are polymerized in xylene to produce crude resin solution. Crude resin solution is then processed using flash vaporization and steam sparging to separate the resin from the solvent. Resins are either sold in bulk, or is drummer or flaked.

In the resin warehouse, there are four resin hold tanks, a drumming station where hot resin is drummed, and two flaker belts where hot resins is poured in pastilles (droplets) on top of a moving belt. Water is sprayed on the bottom of the belts to cool the hot resin. The pastilles are conveyed to hoppers for bagging. A Monsanto Brinks Mist Eliminator controls fugitive visible emissions, HAP and VOC from the hot ends of the flaker belts, the hold tanks, and the drumming station. Dust emitted from each flaker belt, conveyer and bagging operation is collected and controlled by a dust collector. Line A utilizes a Torit Module DFT3-12 dust collector and Line B utilizes a Torit Module DFT4-16 dust collector. The facility has a production capacity (drumming operation and both flaker belts) of 20,000 pounds resin per hour; 5,000 pounds per hour per each belt and 10,000 pounds per hour for drumming. The resin flaking area is a regulated emission unit.

II. Rationale for Selection of Performance Indicators

The differential pressure for the filter was chosen to the indicator as recommended by the manufacturer as an indicator for performance.

It has been shown that at the maximum permitted rate of 5,000 pounds per hour per each belt, the control efficiency was achieved and the opacity limit of 5% was not exceeded.

what about Pressure VS PM emissions? where are Tests

III. Rational for Selection of Indicator Ranges

The selected indicator range is "less than 6 PSI at all times." When an excursion occurs corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. The selected QIP threshold level is 12 excursions in a six month period. This level is less than 0.05 percent of the allowable process operating time (based on 8,760 hours/year). If the QIP threshold is exceeded in the specified period, a QIP will be developed and implemented.

An opacity test of the dust collector stack was conducted annually for the past 5 years, using EPA Method 9. Three test runs (1hour each) were conducted during the performance test with the belts feed rate at or within 10% of the maximum permitted rate. The results indicate an opacity of less than 5% meeting the permit requirements.

TABLE - TR1: MONITORING APPROACH

	Indicator No. 1
I. Indicator	Differential pressure less than 6 PSIG for both the Dust Collector and the Mist Eliminator during belts operation
Measurement Approach	Photohelic gauge Readout
II. Indicator Range	An excursion is defined as any differential pressure over 6 PSI for over two hours period, trigger investigation. An excursion will trigger an investigation of the occurrence, corrective actions, and a reporting requirement.
III. Performance Criteria **A. Data Representativeness**	The photohelic gauge readout is installed on the filter as an integrated part of the dust collecter's design. The sensor measures differential pressure from 0 to 10 PSI. The standard tolerance is ±0.1 PSI.
B. Verification of Operational Status	Not Applicable
C. QA/QC Practices and Criteria	Annual Calibration.
D. Monitoring Frequency	Differential pressure is monitored continuously and recorded once every 8 hours. or once/day recpd
Data Collection Procedures	Manual reading and recording on log.
Averaging Period	If differential pressure is over 6-PSI for over 2-hour Instantaneously
Air Pollution Control Device (APCD) Bypass Monitoring	Manual

COMPLIANCE ASSURANCE MONITORING PLAN

ARIZONA CHEMICAL – PANAMA CITY, FL PLANT
Rosin Flaking

I. Background

A. Emission Unit

Description:	Rosin Flaking.
Identification:	EU019
Stack designation:	The Dust Collector Stack
Facility ID No.	005001
Facility:	Arizona Chemical – Panama City, FL

B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.:	Title V Permit
Regulated pollutant:	Particulate Matter (PM), Opacity
Emission Limit:	Opacity < 5% (1.03 lb. Per hour) => 4.55 TPY
Monitoring requirements in Permit:	Maximum allowable operating rate shall be 18,000 lbs.

C. Control Technology: Torit DFT 4-16 Dust Collector

II. Monitoring Approach

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are presented in Table - REF1.

I. Background

The Tall Oil Refinery; CTO is distilled into various fraction in the refinery. The refinery consists of No. 1, 2 and 3 distillation units, wiped film type evaporators, ancillary equipment, process tanks, hot wells, API separator and oily water cooling tower. The rosin fraction from the CTO distillation is either modified to make it more stable to air oxidation and sold as a product, disproportionated rosin (DR), or is used to make rosin esters, DR soaps and aqueous dispersion. Rosin acids from the tall oil distillation process are treated with caustic solutions to produce rosin esters.

DR and surfactants are produced in the treater kettles using heat, steam, nitrogen and a catalyst. Rosin esters are produced in treater kettles by reacting rosin with alcohol and a catalyst. The kettles operate under vacuum.

Rosin esters are either pumped to storage tanks, tank cars, tank trucks, or can be drummed. A portion of the rosin esters from the storage tanks is pumped to a flaker and cooled. The flakes are then collected in hoppers and are bagged. Emissions from the "hot end" of the cooling belt are uncontrolled. Emissions from the "cool end" are in the form of particulate matter from the hoppers, weigh scales and bag collection hood, and are controlled by a Torit DFT4-16 Dust Collector. The dust collector is designed and operated to be 99.5% efficient at removing particulate matter. The flaking operation is a regulated emission unit.

II. Rationale for Selection of Performance Indicators

The Flaker Belts feed rate was selected because of the ability to control and because the flow is limited by the permit.

It has been shown that at the maximum permitted rate of 18,000 lb. per hour the control efficiency was achieved by not exceeding the opacity limit of 5%.

III. Rational for Selection of Indicator Ranges

The selected indicator range is "less than 6 PSI at all times." When an excursion occurs corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. The selected QIP threshold level is 12 excursions in a six month period. This level is less than 0.05 percent of the allowable process operating time (based on 8,760 hours/year). If the QIP threshold is exceeded in the specified period, a QIP will be developed and implemented.

An opacity test of the dust collector stack was conducted annually for the past 5 years, using EPA Method 9. Three test runs (1hour each) were conducted during the performance test with the belts feed rate at or within 10% of the maximum permitted rate. The results indicate opacity of less than 5% meeting the permit requirements.

TABLE - REF1: MONITORING APPROACH

	Indicator No. 1
I. Indicator Measurement Approach	Differential pressure less than 6 at all times
	Photohelic gauge Readout
II. Indicator Range	An excursion is defined as any differential pressure over 6 PSI for over 2 hours per shift. An excursion will trigger an investigation of the occurrence, corrective actions, and a reporting requirement.
III. Performance Criteria A. Data Representativeness	The pressure drop sensor was installed on the dust collector filter as an integrated part of the collector's design. The sensor measures pressure from 0 PSIG to 10 PSIG. The standard tolerance is ±0.1.
B. Verification of Operational Status	Not Applicable
C. QA/QC Practices and Criteria	Annual Calibration.
D. Monitoring Frequency	Pressure drop is measured continuously and recorded once every 8 hours.
Data Collection Procedures	Manual Read and record.
Averaging Period	If differential pressure is over 6-PSI for over 2-hour
Air Pollution Control Device (APCD) Bypass Monitoring	N/A