

Vega, Johnny (RER)

From: Fraxedas, Ricardo <ricardo.fraxedas@amecfw.com>
Sent: Thursday, November 03, 2016 7:55 PM
To: Palomino, Susana (RER)
Cc: Vega, Johnny (RER); Alejandro; Ana Ruiz; Alfredo
Subject: Revisions to ATRG RAI for Permit 0303329-002-WT
Attachments: ATRG RAI Response Revised 11-3-16.pdf; ATRG Solid Waste Permit modification attachment revised text 11-3-16.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Susana,

Please see the attached revisions to the RAI response for the ATRG permit modification application to increase the processing capacity of the plant. The clarifications we discussed today and additional information have been addressed in the attached documents. Please replace the pages previously submitted with those attached. Thanks again for all your assistance and please let me know if there are any remaining questions.

Best regards,

Ricardo Fraxedas

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Florida Department of Environmental Protection
Waste Tire Processing Facility Permit Application for
Modification of Permit 0303329-002-WT

Part III – Attachments

A. Facility Design

There has been no change to the facility design since the original construction permit for the facility was issued. Two primary shredders and one secondary shredder have been replaced due to wear and tear (and failure) of the original equipment. The replacement machines are of similar capacity to the original permitted equipment. The replacement machines were manufactured in the USA whereas the original equipment was manufactured in China.

Specifically, 2 Eco Green Shredders were replaced with 2 CM Dual-Speed primary Shredders and 1 Eco Grater was replaced with 1 CM (CM4R) Liberator secondary shredder. The second Eco Grater will be replaced with another CM4R Liberator secondary shredder in December 2016. The manufacturer specifications for the replacement equipment have been provided with the initial attachments for the permit modification application.

B. Facility Operation

There have been no changes to the operation of the facility since the approval of permit 0303329-002-WT. The previously permitted storage capacity will remain the same whereas the production rate is requested to be increased from 12,000 tires per day to up to 28,000 tires per day as a result of the equipment replacement described in Section A - Facility Design and the increased production up time.

Primary shredder capacity - The capacity of the CM Dual-Speed Shredders is over 900 tires (10 tons) per hour each (1,800 tires per hour for both) or approximately 28,800 tires per 16 hours. The capacity of the primary shredders is based on the current configuration of the equipment and manual “feeding” of tires into the process.

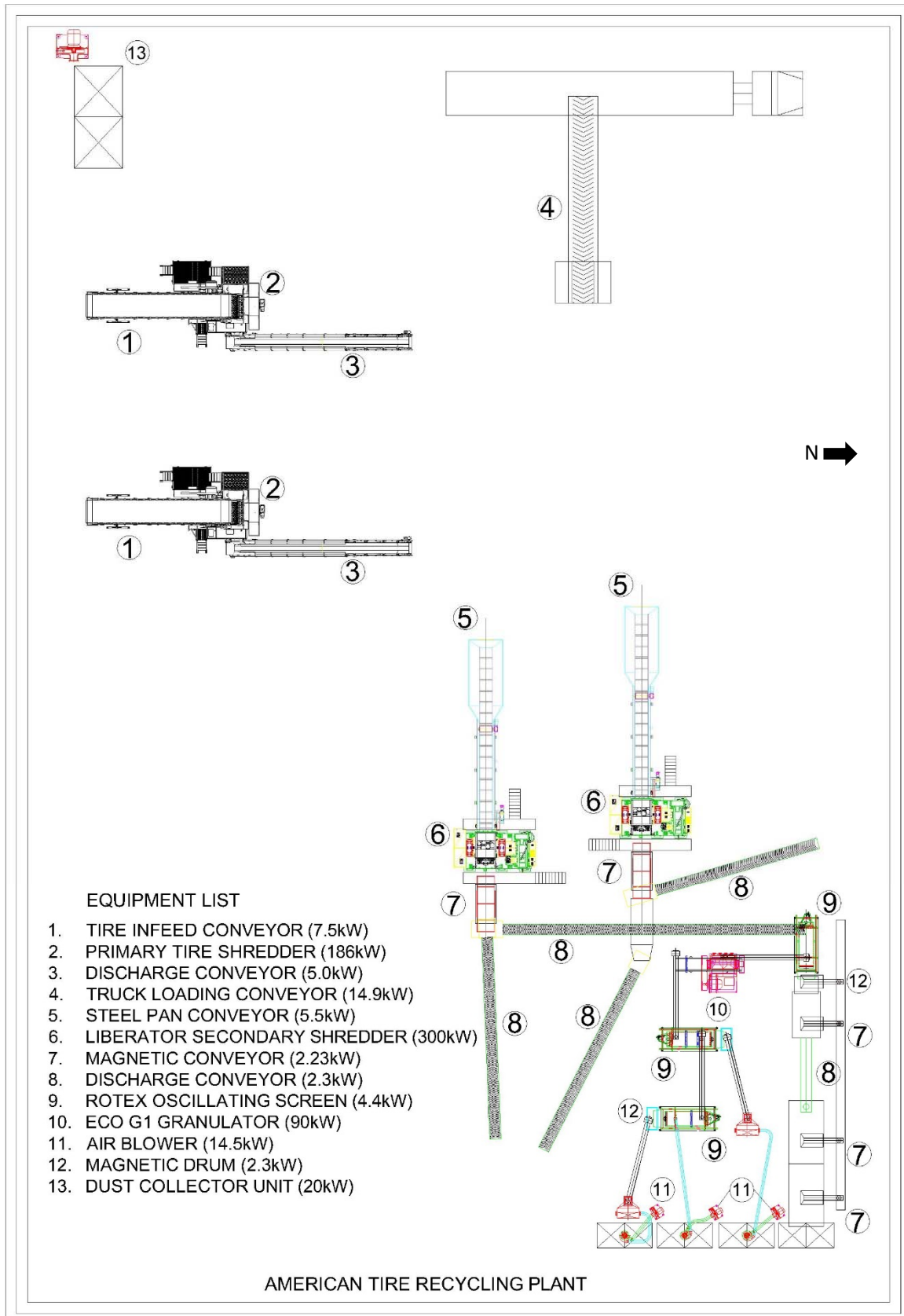
Secondary shredder capacity - The current capacity of the secondary shredders is: 1) the CM4R Liberator approximately 10 tons per hour (900 tires per hour) and 2) the Eco Grater approximately 5 tons (450 tires) per hour. Combined current secondary shredder capacity is approximately 15 tons (1,350 tires) per hour or 21,600 tires per 16 hours. As shown on the Actual Production Flow Chart, the facility is currently processing approximately 12,000 tires per day. When the second Eco Grater is replaced with a CM4R Liberator in December 2016 as described in Section A - Facility Design, the installed capacity of the plant will be approximately 20 tons (1,800 tires) per hour for secondarily shredded product. The specifications provided for the CM4R Liberator secondary shredders indicate that each secondary shredder can produce up to 9 tons per hour, however, the production amount does not include the separated steel and fiber that is also produced and sold from the secondary shredding. Please also note that it is not necessary to process all tire material through both a primary and a secondary shredder to produce a marketable product. Some product is sold after processing only through a

primary shredder. As such, the 28,000 tire per day processing capacity is achievable with the existing equipment operating at less than the primary shredder's maximum capacity.

C. Facility Closure Plan

The facility closure plan has not been changed and remains the same as previously approved by the Department.

1. American Tire Recycling Plant layout with Equipment list*



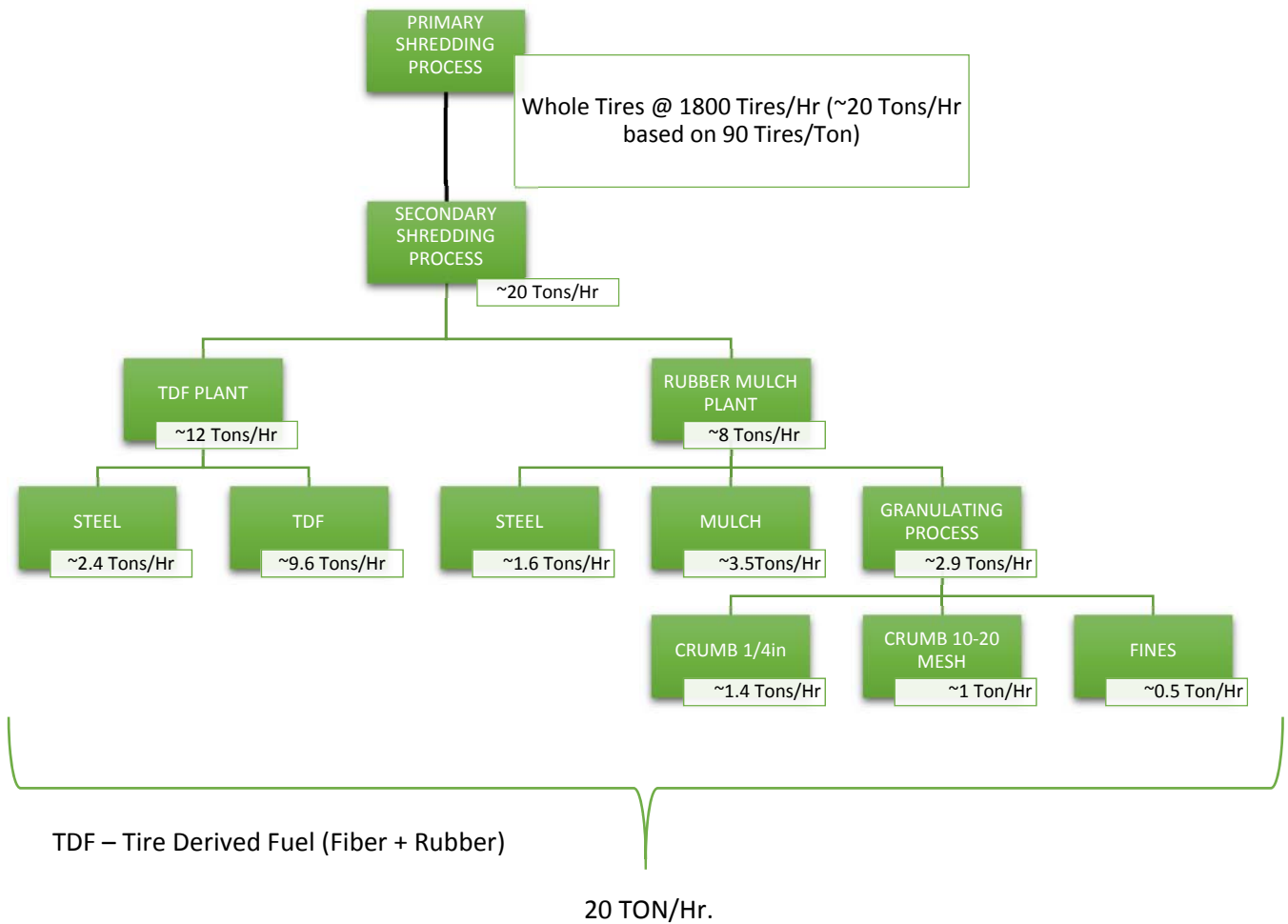
2. List and description of the equipment

1. TIRE INFEED CONVEYOR (7.5kW) Carries whole tires and delivers them into The Primary Shredder.
2. PRIMARY TIRE SHREDDER Manufacturer: COLUMBUS MAKINNON COPR, Model: CM Dual Speed Tire Shredder (186kW). Cut and shred tires in to a 3-inch tire chips.
3. DISCHARGE CONVEYOR (5.0kW) Catches the 3-inch tire chips and discharges them into a stock pile.
4. TRUCK LOADING CONVEYOR (14.9kW) Carries selected tire shred material to load trucks and truck trailers.
5. STEEL PAN CONVEYOR (5.5kW) Carries 3-inch tire chips and carries them into the secondary shredder machine.
6. LIBERATOR SECONDARY SHREDDER Manufacturer: COLUMBUS MAKINNON COPR Model: CM 4-Rotor Liberator (300kW). Crushes the shredded tires into smaller pieces and separates steel and fiber from rubber.*
7. MAGNETIC CONVEYOR (2.23kW) Extracts steel wires from the rubber as the material passes under the magnets.
8. DISCHARGE CONVEYOR (2.3kW) Catches the specific material and carries them into a pile or bucket.
9. ROTEX OSCILLATING SCREEN (4.4kW) Removes the remaining fiber from the rubber and separates the rubber into a different sizes depending on screen size and set up.
10. GRANULATOR, Manufacturer: ECOGREEN EQUIPMENT Model: ECO G1 (90kW) Material is crushed in to a smaller rubber granule.
11. AIR BLOWER (14.5kW) Pneumatic conveyor that transports granules to the bagging station.
12. MAGNETIC DRUM (2.3kW) Separates steel wires from rubber granules.
13. DUST COLLECTOR UNIT (20kW) Creates the necessary Vacuum to collect fiber and dust from production.

* Currently the secondary shredders (number 6 on the layout diagram) are comprised of one CM4R Liberator and one Eco Grater. In December 2016 the remaining Eco Grater will be replaced with a CM4R Liberator so that both secondary shredders will be CM4R Liberator secondary shredders.

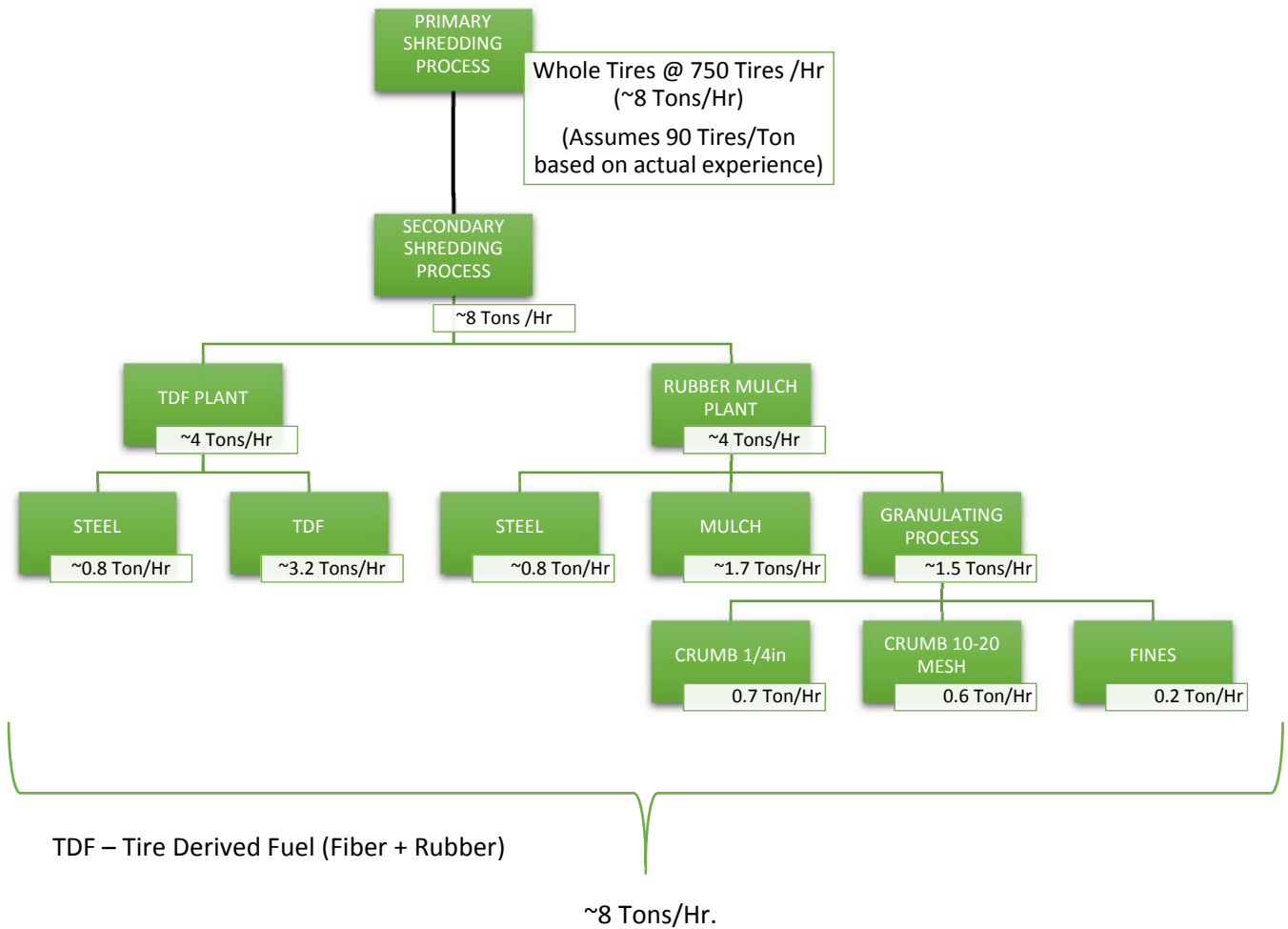
3. Flow chart of actual production and production installed capacities

3.1- INSTALLED PLANT CAPACITIES FLOW CHART



SHIFT	Production Hours	Tires/8 hr. Shift	~Tons/Shift
Day	8	1800 X 8 = 14,400	~20X8=~160 Tons
Night	8	1800 X 8 = 14,400	~20X8=~160 Tons
Total	16	Tires/Day = 28,800	~320Tons

3.2- ACTUAL PRODUCTION FLOW CHART



SHIFT	Production Hours	Tires/8 hr. Shift	Tons/Shift
Day	8	750X8 = 6,000	~8X8=~64 Tons
Night	8	750X8 = 6,000	~8X8=~64 Tons
Total	16	Tires/Day = 12,000	~128 Tons /day

4. Annual production chart

Actual numbers (Tons)

COMPONENT	%WEIGHTH	T/HOUR	T/DAY*	T/MONTH	T/YEAR
RUBBER	79%	6.3	100	2.100	25.200
STEEL	20%	1.6	25	525	6.300
NYLON FIBER & FINES	1%	0.1	1.6	33	396
TOTAL	100%	8	126.6	2.658	31.896

Notes:

1. Operating hours based on a 16hr/day 2 working shift
2. 21 production days per month
3. 12-month full operation per year

Future projection numbers (Tons)

COMPONENT	%WEIGHTH	T/HOUR	T/DAY*	T/MONTH	T/YEAR
RUBBER	79%	15.9	254.4	5.342	64.104
STEEL	20%	3.9	62.4	1.310	15.720
NYLON FIBER & FINES	1%	0.2	3.2	67	804
TOTAL	100%	20	320	6719	80.628

Notes:

1. Operating hours based on a 16hr/day 2 working shift
2. 21 production days per month
3. 12-month full operation per year
4. Tire weight varies dependent on mix of auto / truck tires (per tire weights vary from ~20 lbs. to ~23 lbs. per tire.