

REGULATORY & ENVIRONMENTAL SERVICES DEPARTMENT

Air and Water Quality Division



Mr. Clair H. Fancy, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

SEP 04 2001

BUREAU OF AIR REGULATION

RE: Duval County – Air Pollution
Cedar Bay Generating Company, L.P.
Title V Permit No.: 0310377-002-AV/PSD-FL-137(A)
Site Certification PA 88-24
Installation of Pug Mills for Ash Loading

Dear Mr. *Clair* Fancy:

The City of Jacksonville, Regulatory and Environmental Services Department, Air and Water Quality Division (AWQD) has reviewed Cedar Bay Generating Company (Cedar Bay) request dated August 21, 2001 for modifications to the fly ash handling system. Cedar Bay has proposed to locate pug mills within each existing ash silo structure to improve handling and reduce fugitive particulate matter emissions in the ash disposal process. AWQD has no objections to the incorporation of these devices provided that they meet all existing applicable notification terms and conditions, emission limitations and standards, and permitting requirements.

Should you have any questions concerning this matter, please contact me at (904) 630-4900.

Very truly yours,

Robert Steven Pace, P.E.
Air Quality Branch Manager

RSP/RR/tf

- c: Ernest Frye, P.E., FDEP NE District
- Bruce Smith, General Manager, Cedar Bay Generating Company
- Ken Kosky P.E., Golder and Associates
- David Dee, Landers and Parsons
- Greg Radlinski, OGC

*ok with everyone,
but should be included
in PSD & TS revisions

Process with Pet coke
submitted Sep. Appl. Since
Pet coke Stalled.*



**PG&E National
Energy Group**

Cedar Bay
Generating Plant
Owner: Cedar Bay Generating Company, L.P.

POB 26324
Jacksonville, FL 32226-6324

904.751.4000
Fax: 904.751.7320

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AUG 22 2001

BUREAU OF AIR REGULATION

August 21, 2001

Clair H. Fancy, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Steven R. Pace, Manager, Air Quality Branch
Air and Water Quality Division
Regulatory and Environmental Services Department
City of Jacksonville
117 W. Duval Street, Suite 225
Jacksonville, Florida 32202-3718

RE: Title V Permit 0310377-002-AV/PSD-FL-137(A)
Site Certification PA 88-24
Installation of Pug Mills for Ash Loading

Dear Messrs. Fancy and Pace:

Cedar Bay Generating Company, L.P. (Cedar Bay) desires to improve the flexibility for ash handling at and transportation from the site with the installation of pug mills. The pug mill is an apparatus that will mix water with the ash in an enclosed system to improve handling and ultimately reduce fugitive emissions. They will be located within each existing ash silo structure.

Cedar Bay previously modified the conditions of certification to allow for changes in the method of handling ash with notification of the Department and RESD (Section IX. Solid Waste Storage and Disposal). Currently, ash generated at Cedar Bay is removed for disposal by the current coal supplier in rail cars and by sealed truck for recycling. We have informed both of your agencies of the possible loss of the coal contract and the potential need to find alternate ash disposal. Approval of the use of the pug mill and alternate trucks will give Cedar Bay the necessary flexibility to secure alternate disposal options.

The current fly ash system involves either placing dry ash in a rail car and spraying water to control fugitive emissions or loading dry ash into sealed trucks. Condition B.4.b. of the Title V Permit allows ash to be directly removed, as dry ash, from the property. The removal of

August 21, 2001

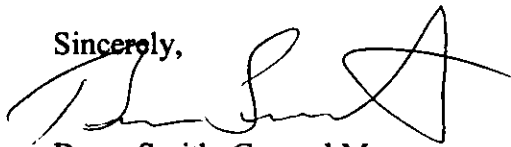
Page 2

ash from the site is only authorized under Title V permit by rail cars and sealed trucks. In addition, prior approval is required from the Department of Environmental Protection (FDEP) and the City of Jacksonville Air and Water Quality Division (AWQD) for removal of ash from the site by other than sealed trucks and rail (Condition B.4.b.4.).

The addition of the pug mill will allow removal of ash from the site by other than sealed trucks. Since the pug mill will mix ash with water, the potential for fugitive dust emissions will be reduced and would be consistent with the requirements of Rule 62-296.320(4)(c) F.A.C. and Appendix TV-2, Condition 58 of the Title Permit. There will be no increase in emission rates in pounds per hour or tons/year. This correspondence is seeking FDEP's and AWQD's approval for the removal of ash by other than sealed trucks with the installation of the pug mill. Attached is information on the pug mill.

Please call Jeff Walker at 904-751-4000 extension 22 if you have any questions regarding this request.

Sincerely,



Bruce Smith, General Manager
Cedar Bay Generating Company, LP

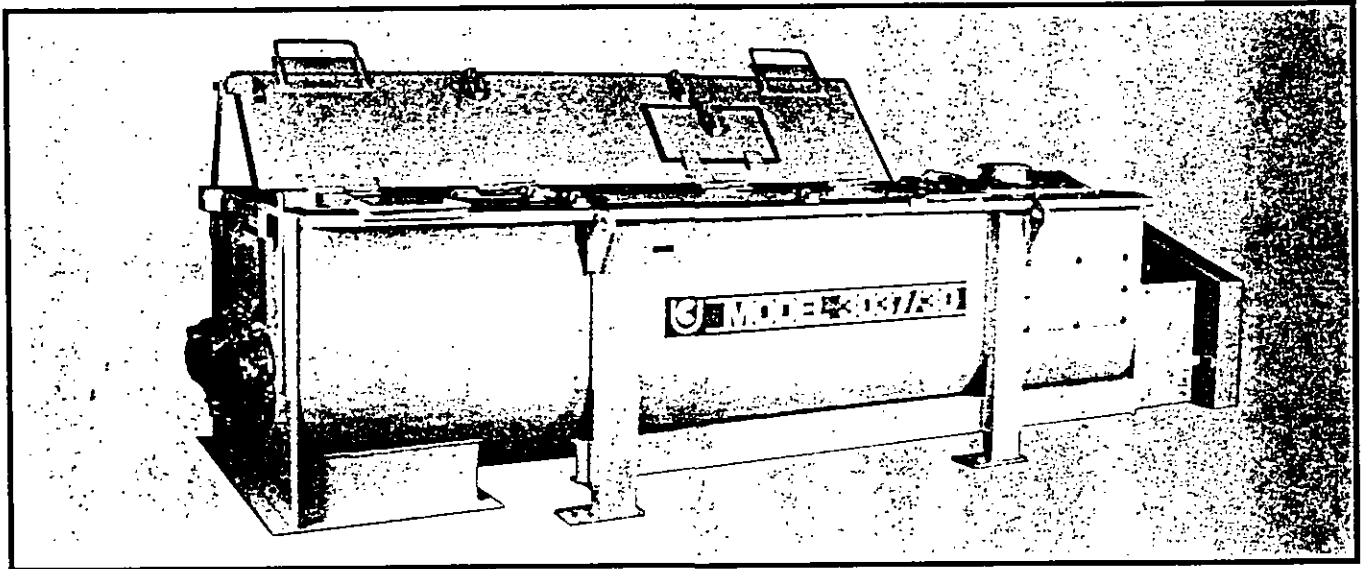
cc: H. S. Oven, P.E., FDEP Siting Coordination
A.A. Linero, FDEP
Ernest Frye, P.E., FDEP NE District
Jonathan Holtom, P.E. FDEP
Scott Gorland, FDEP Siting Coordination
Ken Kosky P.E. , Golder and Associates
David Dee, Landers and Parsons

Bc: J. Gasbarro
S. Sorrentino
B. DeHart
S. Busbin
F. Stallwood
J. Walker
M Golden

Prod DATA



UCC Offers Mid-Range Unloading Capacity With the 3037/30 Mixer/Unloader



United Conveyor Corporation has extended its line of mixer/unloaders with the Model 3037/30. This unit operates at a nominal discharge capacity of 150 tph, and is designed for use in unloading storage bins in smaller utility systems and larger industrial systems.

The Model 3037/30 mixer/unloader conditions dry material – fly ash, bottom ash/fly ash mixture or spent bed material – with water to minimize dust and feeds the conditioned material to trucks or rail cars.

Efficient, Low Maintenance Drive Train

A 30-horsepower electric motor, supplied with the unit, drives two shaft mounted reducers through a double sided timing belt. The timing belt saves energy and provides even power distribution while maintaining a smooth, constant output speed. Power is distributed evenly between the two paddle shafts minimizing stress and deflection. Also, special couplings and chain lubrication are no longer needed because there is no metal-to-metal contact.

Corrosion-Resistant Mixing Chamber

The completely enclosed, durable mixing chamber is coated to resist corrosive substances. Inclined mixing paddles, arranged in a helix on a pair of counter-rotating shafts, efficiently mix the material with water and move the material toward the mixer/unloader discharge chute. To help keep mixing chamber wear to a minimum, ash moves through the mixer/unloader on a stationary bed that builds up between the paddle tips and the trough wall. A rigid mixing trough prevents twisting or deforming due to loads incurred in the mixing process.

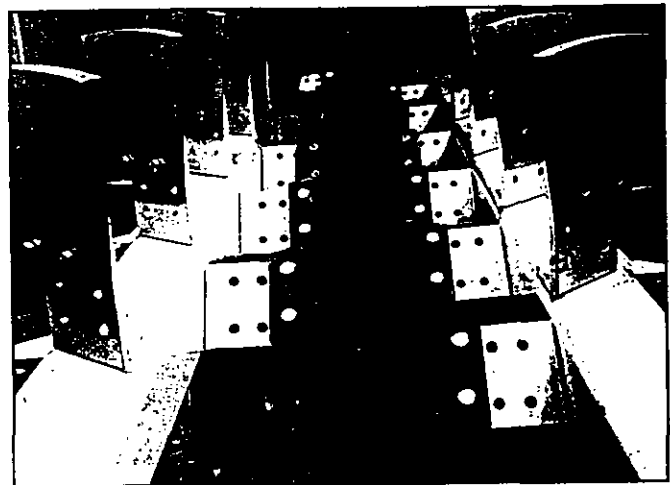
The uniformly moistened material is discharged through a chute at the bottom of the mixing chamber. When the feed of material stops, the mixer paddles continue to rotate so that all material can clear the mixing chamber.

Packing Requires Minimum Maintenance

Spring loaded, self-adjusting packing-type seals eliminate the need to tighten packing glands manually. The packings stay in contact with the shaft, resulting in a dust-tight seal and longer packing life.

Precise, Economical Ash Feed and Water Spray

Eighteen specially configured nozzles located above the mixing paddles spray the ash with a precisely regulated volume of water during the mixing process. The spray pattern is different at each row of nozzles to provide complete watering and a homogenous mix. UCC's system begins moistening the incoming ash while it's still airborne, and the wide intersection of the ash and water paths allows for complete and uniform wetting. This ensures properly conditioned ash and prevents air pollution during unloading and transport.



Variable Sweep Diameters

Multiple paddle positions on paddle mounting brackets make it easy to change volumetric discharge capacity. Through the use of different paddle sweep diameters, the mixer can be run at 100% loading (paddles completely covered with ash) at different discharge rates. This provides for the best mixture quality combined with minimal paddle wear and minimum dust. The six discharge rates available are:

	37 RPM	30 RPM
28" Sweep Dia.	7,500 CFH	6,000 CFH
25" Sweep Dia.	6,000 CFH	4,800 CFH
22" Sweep Dia.	4,500 CFH	3,600 CFH

CFH = cubic feet per hour

Durable Mixing Paddles Keep the Ash Moving

AR 500 (Abrasion Resistant) steel mixing paddles are designed for maximum exposure of ash to water and for efficient movement of wet and dry material. Because the shafts rotate slowly, paddle wear is minimized. Ceramic tipped A36 steel mixing paddles, which provide extended wear with highly abrasive materials such as spent bed ash are available. TIVAR¹ mixing paddles, which prevent high CaO ash mixtures from sticking to the paddles during operation making cleanup easier, are also available. Full length flip-up covers allow unobstructed access to paddles and shafts.

Product Specifications

Paddle Speed Rotation	37 rpm			30 rpm		
	Motor	30 hp, 230/460 volts ac, 3-phase, 60 Hz				
Volumetric Capacity CFH	7,500	6,000	4,500	6,000	4,800	3,600
Paddle Diameter	28"	25"	22"	28"	25"	22"
Nominal Discharge Capacity (Dry) tph* @ 50 lb/ft ³	190	150	115	—	—	—
Nominal Discharge Capacity (Dry) tph* @ 70 lb/ft ³	—	—	—	210	170	125
Weight	4.4 tons					
Mixer Body Height	48-5/8"					
Overall Length	187-7/8"					
Center Line Mixer Inlet to Center Line Mixer Outlet - Rotary Vane Feeder	123-3/4"					
Center Line Mixer Inlet to Center Line Mixer Outlet - Ash Feed Valve	132" or 115-1/2" (depending on position of ash feed valve.)					
Nominal Water Requirements - gpm (16% moisture - by total weight)	145	115	90	160	130	95
Mixing Chamber Body	3/8" mild steel					
Mixing Paddles	Abrasion-Resistant Steel (Ceramic and TIVAR Optional)					

*Capacities listed are for reference only.

¹TIVAR is a trademark of Poly Hi Solidur, Menasha Corporation

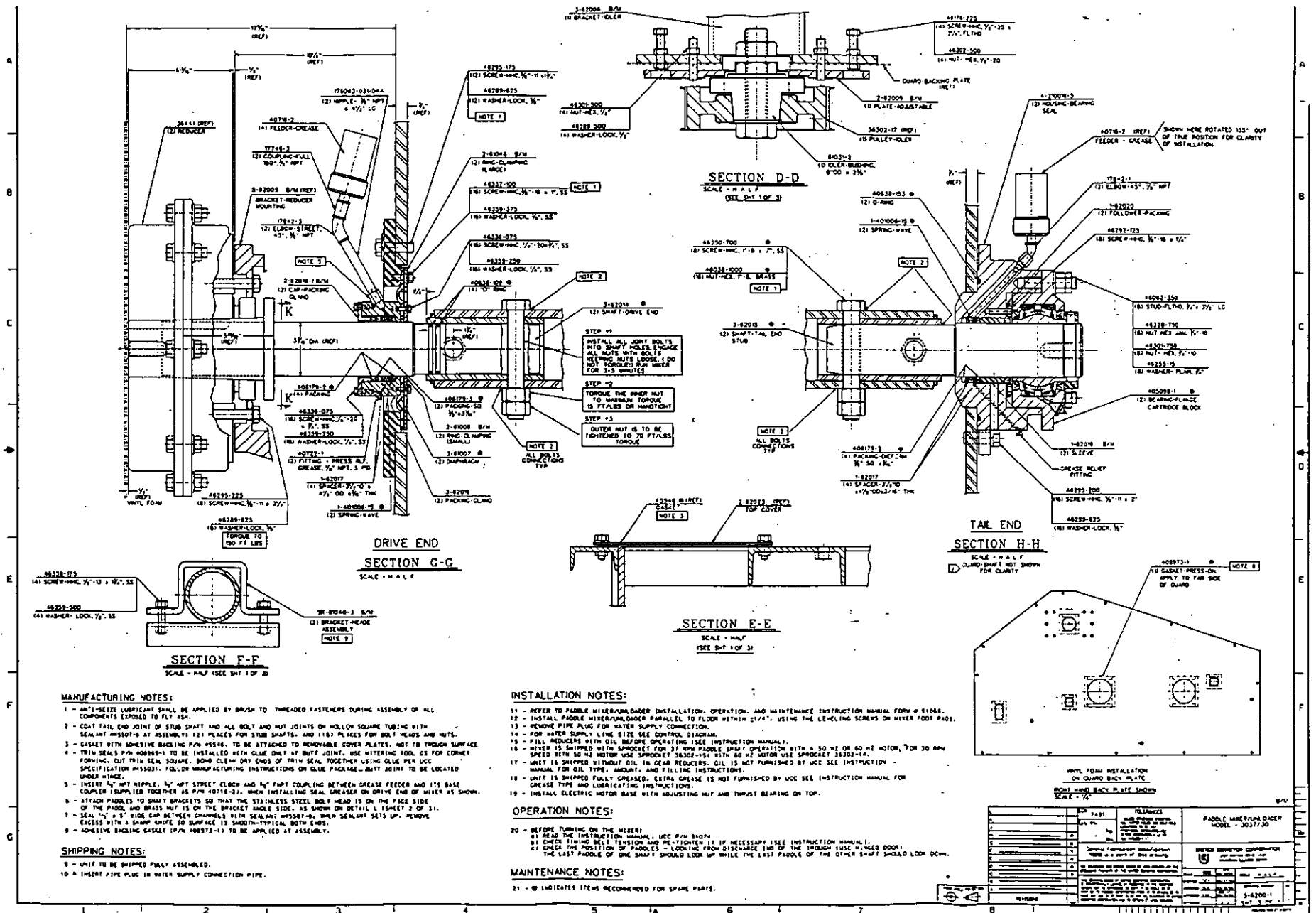
For additional information on ash conditioning and unloading equipment, contact UCC or your local UCC Sales Representative.

Descriptions of UCC equipment and services stated herein do not constitute a warranty or a guarantee of performance, nor is any warranty implied.

M0695-733

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MANUFACTURING NOTES:

- 1 - ANTI-SEIZE LUBRICANT SHALL BE APPLIED BY BRUSH TO THREADED FASTENERS DURING ASSEMBLY OF ALL COMPONENTS EXPOSED TO FLY ASH.
- 2 - COAT TAIL END JOINT OF STUB SHAFT AND ALL BOLT AND NUT JOINTS ON HOLLOW SQUARE TUBING WITH SEALANT #HS507-9 AT ASSEMBLY. (12) PLACES FOR STUB SHAFTS, AND (16) PLACES FOR BOLT HEADS AND NUTS.
- 3 - CASSET WITH ADHESIVE BACKING P/N #5514, TO BE ATTACHED TO REMOVABLE COVER PLATES. NOT TO TOUCH SURFACE.
- 4 - TRIM SEALS P/N #4069-1 TO BE INSTALLED WITH GLUE ONLY AT BUTT JOINT. USE MITERING TOOL CS FOR CORNER FORMING. CUT TRIM SEAL SQUARE. BOND CLEAN DRY ENDS OF TRIM SEAL TOGETHER USING GLUE PER UCC SPECIFICATION #5503-1. FOLLOW MANUFACTURING INSTRUCTIONS ON GLUE PACKAGE. BUTT JOINT TO BE LOCATED UNDER WING.
- 5 - INSERT 1/2" IPT RIPPLE, 1/2" IPT STREET CLOAK AND 1/2" IPT COUPLING BETWEEN GREASE FEEDER AND ITS BASE. COUPLER SUPPLIED TOGETHER IS P/N #2314-31. WHEN INSTALLING SEAL GREASER ON DRIVE END OF METER AS SHOWN.
- 6 - ATTACH PADDLES TO SHAFT BRACKETS SO THAT THE STAINLESS STEEL BOLT HEAD IS ON THE FACE SIDE OF THE PADDLE AND BRASS NUT IS ON THE BRACKET ANGLE SIDE, AS SHOWN ON DETAIL 1, SHEET 2 OF 31.
- 7 - SEAL 1/2" x 3/4" SIDE GAP BETWEEN CHANNELS WITH SEALANT #HS507-9. WHEN SEALANT SETS UP, REMOVE EXCESS WITH A SHARP KNIFE SO SURFACE IS SMOOTH-TYPICAL, BOTH ENDS.
- 8 - ADHESIVE BACKING CASSET (P/N #4067-1) TO BE APPLIED AT ASSEMBLY.

SHIPPING NOTES:

- 9 - UNIT IS TO BE SHIPPED FULLY ASSEMBLED.
- 10 - INSERT PIPE PLUG IN WATER SUPPLY CONNECTION PIPE.

INSTALLATION NOTES:

- 11 - REFER TO PADDLE METER/UNDER INSTALLATION, OPERATION, AND MAINTENANCE INSTRUCTION MANUAL FOR 6 SIDES.
- 12 - INSTALL PADDLE METER/UNDER PARALLEL TO FLOOR WITHIN 1/4". USING THE LEVELING SCREWS ON METER FOOT PADS.
- 13 - REMOVE PIPE PLUG FOR WATER SUPPLY CONNECTION.
- 14 - FOR WATER SUPPLY LINE SIZE SEE CONTROL SIZING CHART.
- 15 - FILL REDUCERS WITH OIL BEFORE OPERATING (SEE INSTRUCTION MANUAL).
- 16 - METER IS SHIPPED WITH SPROCKET FOR 37 RPM PADDLE SHAFT OPERATED WITH A 50 Hz OR 60 Hz MOTOR, FOR 30 RPM SPEED WITH 60 Hz MOTOR USE SPROCKET 38302-151. WITH 60 Hz MOTOR USE SPROCKET 38302-14.
- 17 - UNIT IS SHIPPED WITHOUT OIL IN GEAR REDUCERS. OIL IS NOT FURNISHED BY UCC SEE INSTRUCTION MANUAL FOR OIL TYPE, AMOUNT, AND FILLING INSTRUCTIONS.
- 18 - UNIT IS SHIPPED FULLY GREASED. EXTRA GREASE IS NOT FURNISHED BY UCC SEE INSTRUCTION MANUAL FOR GREASE TYPE AND LUBRICATING INSTRUCTIONS.
- 19 - INSTALL ELECTRIC MOTOR BASE WITH ADJUSTING NUT AND THRUST BEARING ON TOP.

OPERATION NOTES:

- 20 - BEFORE TURNING ON THE METER:
 - a1 - READ THE INSTRUCTION MANUAL, UCC P/N 3074.
 - a2 - CHECK FIRMING BELT TENSION AND RE-TIGHTEN IT IF NECESSARY (SEE INSTRUCTION MANUAL).
 - a3 - CHECK THE POSITION OF PADDLES - LOOKING FROM DISCHARGE END OF THE TROUGH USE WINGED DOOR. THE LAST PADDLE OF ONE SHAFT SHOULD LOCK UP WHILE THE LAST PADDLE OF THE OTHER SHAFT SHOULD LOCK DOWN.

MAINTENANCE NOTES:

- 21 - @ INDICATES ITEMS RECOMMENDED FOR SPARE PARTS.

WHITE FOAM INSTALLATION ON QUARD BACK PLATE
SCALE - 1/2" = 1"

REV	DATE	ISSUES	PADDLE METER/UNDER MODEL - 3077/30
1	01/11/81	ISSUED FOR PRODUCTION	
2	02/11/81	REVISIONS TO PADDLE METER/UNDER	
3	03/11/81	REVISIONS TO PADDLE METER/UNDER	
4	04/11/81	REVISIONS TO PADDLE METER/UNDER	
5	05/11/81	REVISIONS TO PADDLE METER/UNDER	
6	06/11/81	REVISIONS TO PADDLE METER/UNDER	
7	07/11/81	REVISIONS TO PADDLE METER/UNDER	
8	08/11/81	REVISIONS TO PADDLE METER/UNDER	
9	09/11/81	REVISIONS TO PADDLE METER/UNDER	
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13	01/11/82	REVISIONS TO PADDLE METER/UNDER	
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15	03/11/82	REVISIONS TO PADDLE METER/UNDER	
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