



**Blended CFB Ash
and Limestone
Base Course**

by
Mike Jackson, Scott Schultz and Lindsay Schopp

WOCA 09 Conference
Lexington, Kentucky
May 4-7, 2009

JRE Jackson Research Engineers **JEA**

PRESENTATION AGENDA

- Overview of JEA (formerly Jacksonville Electric Authority)
- Circulating Fluidized Bed (CFB) Process
- Byproduct Utilization Environmental Approval Process
- EZBase Production
- EZBase Applications
- EZBase "Plus" Production
- EZBase "Plus" Applications
- Questions?

JEA General Information

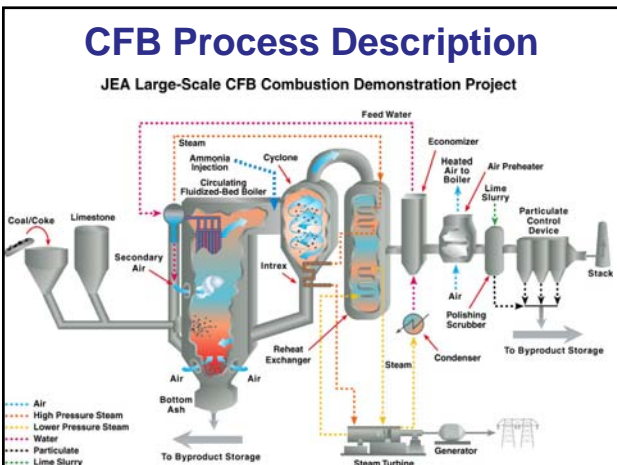
- **Largest Municipally Owned Utility in FL, 8th Largest in US**
 - Service in Four Counties (Duval, Clay, Nassau, St. Johns)
- **450,000 Electric Customers**
 - 2360 Megawatts Generation Capacity
 - 1160 Megawatts Solid Fuel
- **Treat/Produce 110 MGD Water**
- **Treat 85 MGD Wastewater**
- **Northside Generating Station**
 - Units 1 & 2, 640 megawatts
 - 1.4 million tons pet coke/year
 - 200,000 tons coal/year
 - 600,000 tons limestone/year
 - 600,000 tons byproduct (ash)/year











CFB Combustion Byproducts



EZBase Processing

Ash Storage Silos

Slurrying Process

Ash mixed with water (slurry) at 75% bed ash/25% fly ash ratio

48 hours of reaction time

$CaO \rightarrow CaOH$

EZBase Processing

Material excavated from slurry pit after 48 hours

Material placed in wind row for drying

Material spread for milling

Material milled to <3.5 inches

Material collected and stockpiled

EZBase loaded for transport to customers

The Future...

- EZBase Plus
 - Improved Constructability
 - Reduced Moisture Sensitivity
 - Improved In-Place Density
 - Proven Performance
 - JaxPort
 - 160 Acres
 - 300,000 Tons



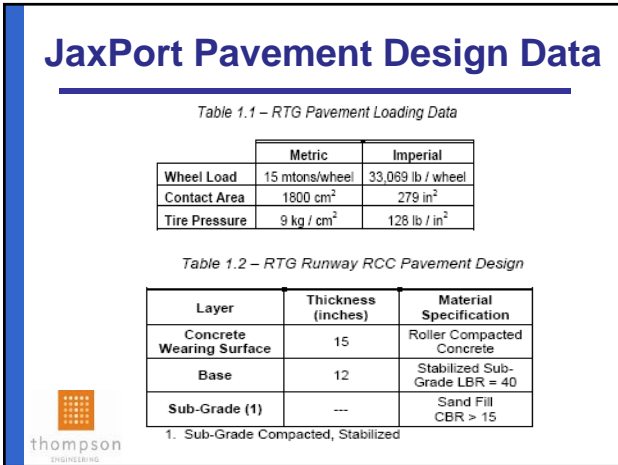
EZBase PLUS Processing

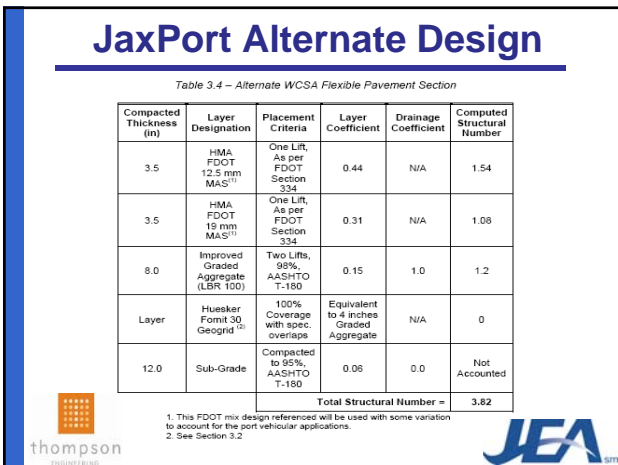


EZBase PLUS Processing









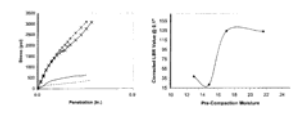
JaxPort Base Material Design

thompson
ENGINEERING
JOB # 07-02-034
LAB # 702

LABORATORY REPORT TEST PROJ
CLIENT: Thermo Asphalt
PROJECT: Jaxport Road
SAMPLE LOCATION: 08C-1
SAMPLE DESCRIPTION: 5% EZBase/50% Limestone
TEST METHOD: AASHTO T99
MAXIMUM DRY DENSITY: 108.2
OPTIMUM MOISTURE: 17.4
FIELD MOISTURE: 19.0

SAMPLE IDENTIFICATION	01	02	03	04
METHOD OF LABORATORY TESTING	AS	AS	AS	AS
% RETAINED ON #40 SIEVE	100	100	100	100
COMPLETION DATE	01/02/08	01/02/08	01/02/08	01/02/08
CONTRACT NO.	701	701	701	701
TESTER	AS	AS	AS	AS
LABORATORY	AS	AS	AS	AS
PROJECT NO.	07-02-034	07-02-034	07-02-034	07-02-034
TEST DATE	01/02/08	01/02/08	01/02/08	01/02/08
PREPARED BY	AS	AS	AS	AS
TESTED BY	AS	AS	AS	AS
APPROVED BY	AS	AS	AS	AS

EZBase Plus:
50% EZBase/
50% #67 Limestone
Max. Dry Density: 108.2 pcf
Opt. Moisture: 17.4 %
Maximum LBR: 140



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ENGINEERING

Signature

JEA

JaxPort EZBase Plus Placement

JaxPort
January, 2008



JEA

JaxPort
February 8, 2008

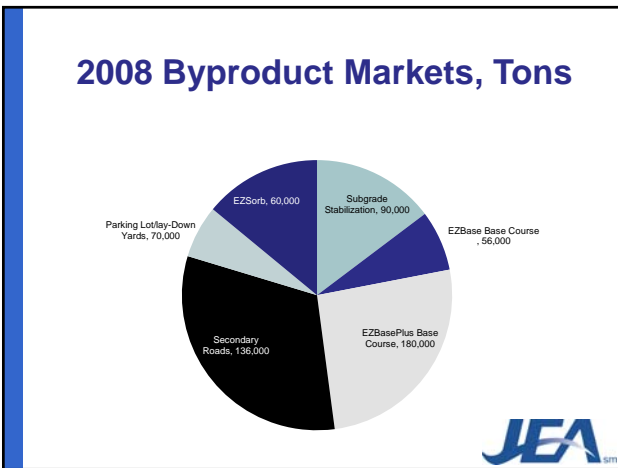












Questions/Comments

EZBase.org

JRE Jackson Research Engineers **JEA**

JaxPort Mitsui Terminal



For More Information

Contact: Dr. N. Mike Jackson, P.E.
Jackson Research Engineers, Inc.
132 Mill Cove Lane
Ponte Vedra Beach, FL 32082
(904) 307-0845
JREInc@Comcast.net