

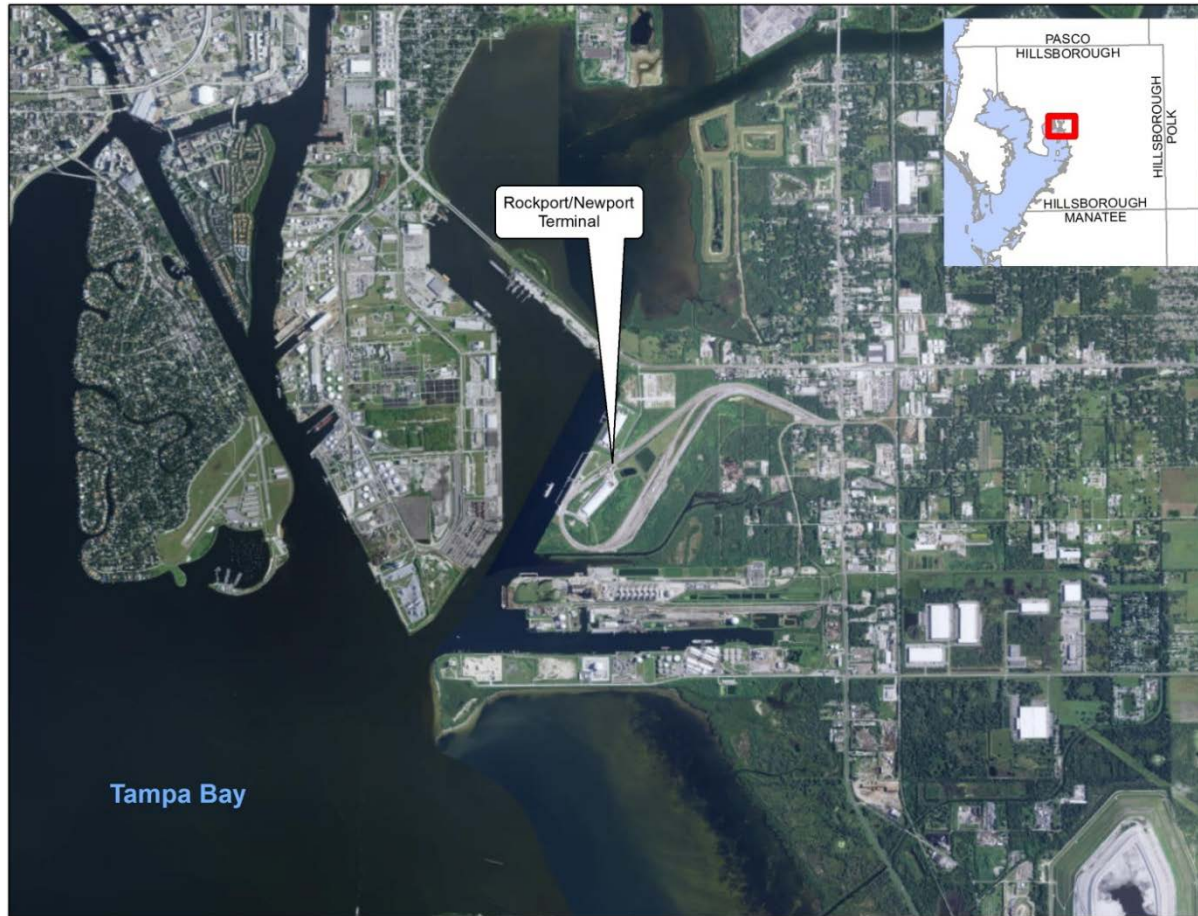
**CSX AIR PERMITTING SUCCESS**  
**PHOSPHATE FERTILIZER FACILITY**  
*2015 RAILROAD ENVIRONMENTAL CONFERENCE*  
*OCTOBER 27 & 28, 2015*

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HOW TOMORROW MOVES



# CSX Rockport/Newport Terminal Tampa, Florida



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# CSX Rockport/Newport Terminal “The History”

- Two similar phosphate fertilizer export facilities
  - Railcar unloading
  - Indoor ground storage
  - Shiploading
- CSX operated Rockport terminal as a synthetic minor facility or FESOP (federally enforceable state operating permit) facility
- Eastern Terminals operated Newport terminal as a major source Title V facility



# CSX Rockport/Newport Terminal

## The Process: Railcar Unloading



# CSX Rockport/Newport Terminal

## The Process: Indoor Storage Building



# CSX Rockport/Newport Terminal

## The Process: shiploading





# CSX Rockport/Newport Terminal

## “The Success”

- CSX acquired Newport terminal in 2013
- Currently, CSX operates the combined Rockport/Newport facility under one synthetic minor (FESOP) air operation permit
- Benefits of combined facility
  - Increased operational flexibility for existing products such as phosphate fertilizer
  - Increased opportunities for new products such as wet rock
  - Increased marketability of Rockport/Newport Terminal for new business opportunities



# CSX Rockport/Newport Terminal Advantages of FESOP vs. Title V

- No annual statement of compliance
- No annual Title V fees
- No compliance assurance monitoring (CAM) plan
- Less frequent regulatory inspections



# CSX Rockport/Newport Terminal

## “How’d we do it?” – Permitted Throughputs

- Fact-based review of all permitted annual product throughputs
- Joint effort by terminal management, Environmental, and Commercial

Permitted Annual Throughputs (tpy)		
	Previous Permit	Current Permit
<b>Rockport</b>		
Phosphate fertilizer (MAP/DAP/GTSP)	6,100,000	3,600,000
Wet phosphate rock	1,000,000	0
<b>Newport</b>		
Phosphate fertilizer (MAP/DAP/GTSP)	3,600,000	3,600,000
Wet phosphate rock	5,600,000	3,000,000
Dry phosphate rock	1,250,000	0



# CSX Rockport/Newport Terminal

## “How’d we do it?” – Emission Factors

- AP-42 drop equation
  - $E = k \times (0.0032) \times [(U \div 5)^{1.3} \div (M \div 2)^{1.4}]$ 
    - E = emissions factor (lb/ton)
    - k = particle size factor (dimensionless; 0.35 for PM<sub>10</sub>, 0.053 for PM<sub>2.5</sub>)
    - U = mean wind speed (8.3 miles per hour)
    - M = moisture content (%)



# CSX Rockport/Newport Terminal

## The Process: Wet Phosphate Rock Storage Pile



# CSX Rockport/Newport Terminal

## “How’d we do it?” – Emission Factors

- Moisture content of wet phosphate rock

Moisture Content of Wet Rock (%)		
Basis	Moisture Content (%)	Source
Original permit	15	?
CSX proposed	2.5	Industry norm
HCEPC <sup>1</sup> proposed	0.7	AP-42 mean for crushed limestone

<sup>1</sup> Hillsborough County Environmental Protection Commission



# CSX Rockport/Newport Terminal

## “How’d we do it?” – Emission Factors

- Potential emissions from handling of wet phosphate rock

Potential Emissions				
	Emissions Factor (lb/ton)		Potential Emissions (tpy)*	
Moisture Content (%)	PM	PM <sub>10</sub>	PM	PM <sub>10</sub>
0.7	2.69E-2	9.41E-3	211.8	74.1
2.5	4.52E-3	1.58E-3	35.6	12.5

\*Based on 10 transfer points, both controlled and uncontrolled.



# CSX Rockport/Newport Terminal

## “How’d we do it?” – Compliance

- Must maintain a minimum moisture content of 2.5%
- Must conduct visible emissions (VE) test during initial handling of wet phosphate rock
- Must maintain moisture content records of each train shipment and test prior to reclaiming from outdoor storage pile
- Must have a documented training program
- Proactively, CSX is sampling the moisture content of storage pile monthly using an in-house moisture meter





# CSX Rockport/Newport Terminal Keys to Success

- Collaborative effort between Terminal Management, Environmental, Commercial and HCEPC
- Fact-based review of existing permit conditions
- Flexibility in negotiating new permit conditions
- Excellent working relationship with the regulatory agency



# Special Thanks

- Rick Nath, Environmental
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- Commercial Team
- Hillsborough County Environmental Protection Commission

