



Lessons Learned

Industrial Pretreatment in Decatur, Alabama

May 10, 2012

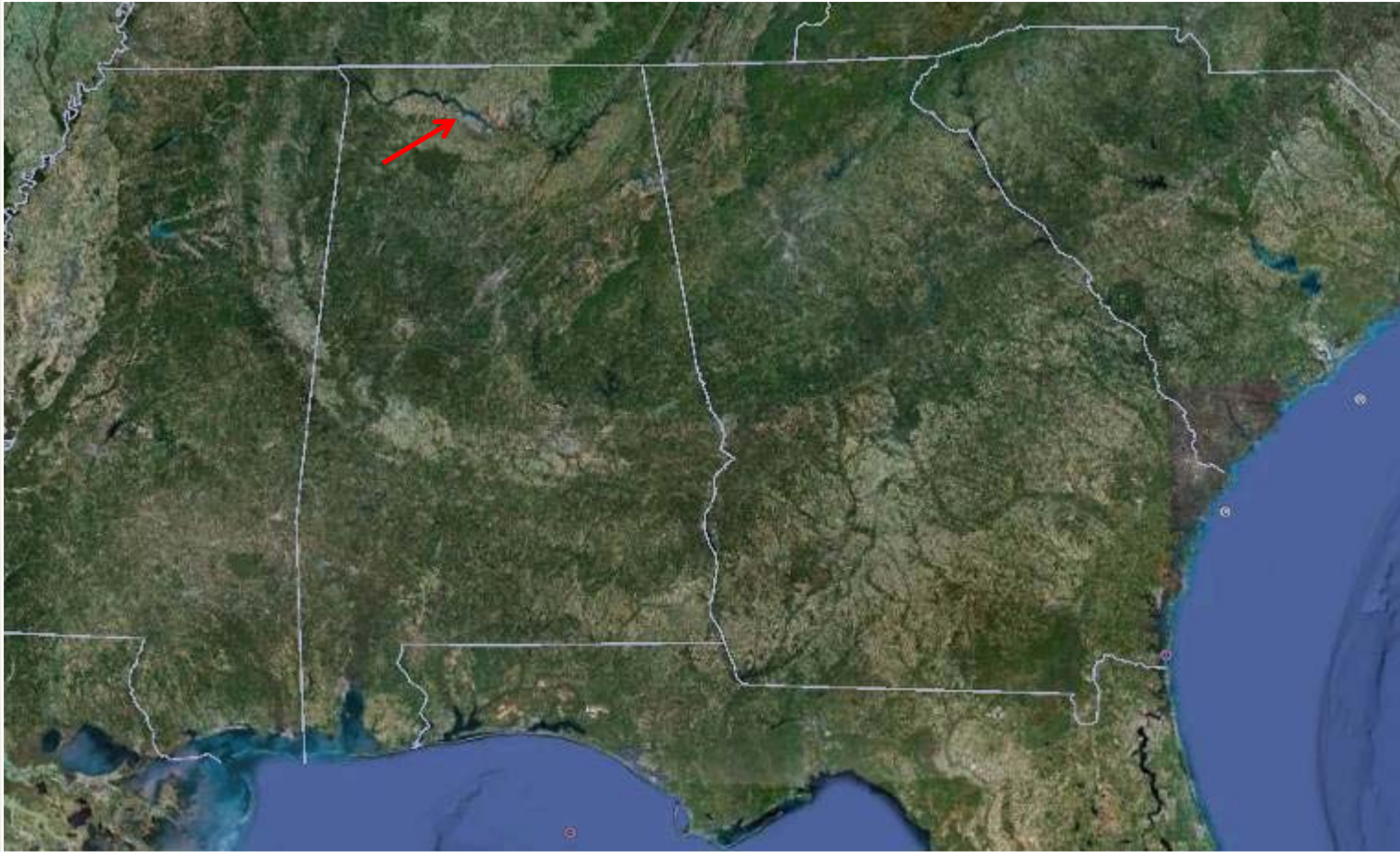


Lessons Learned in Decatur

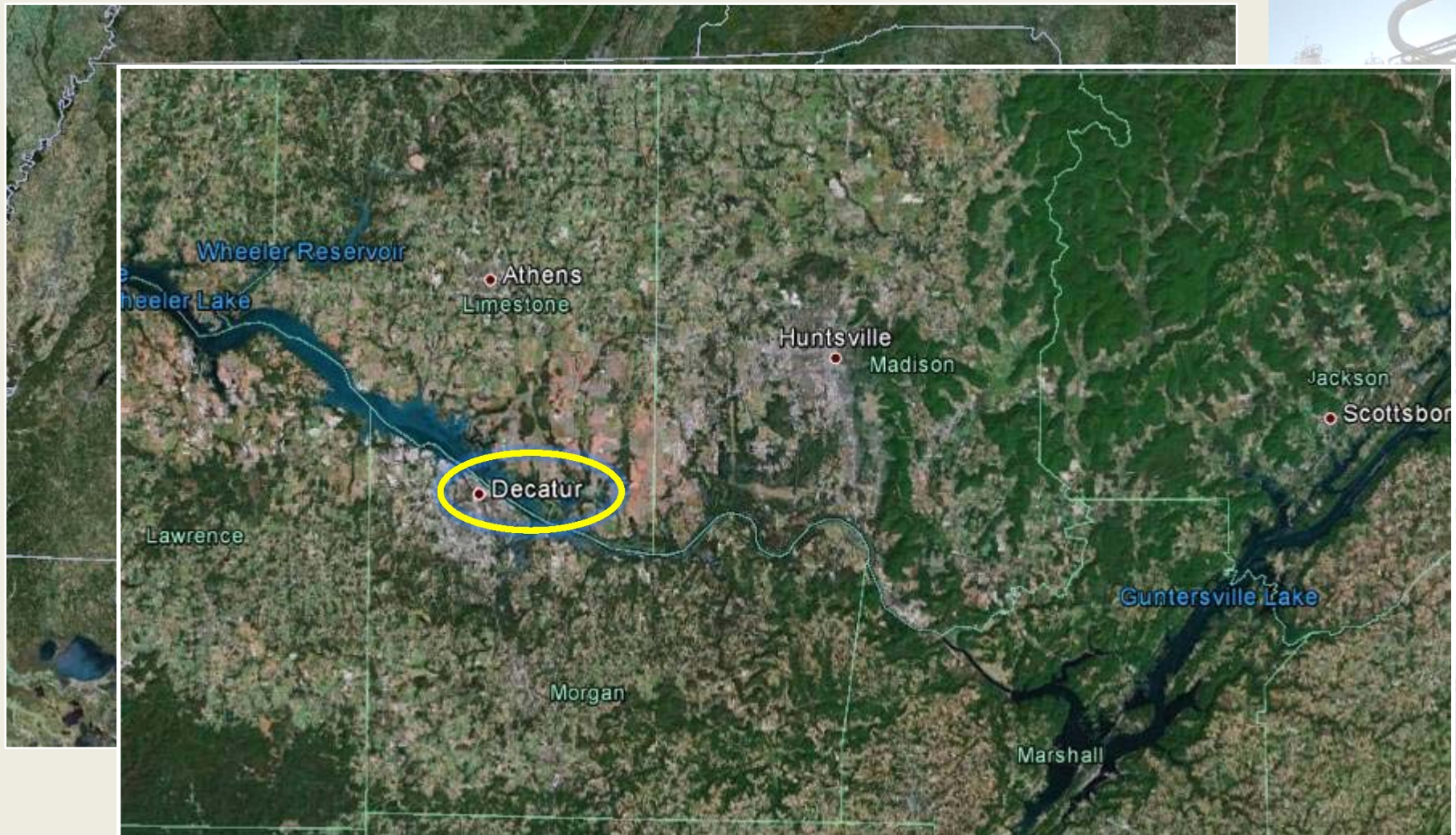
- 2006 events led to major improvements
- Revamped the Industrial Pretreatment Program
- Improved monitoring and enforcement systems
- Improved systems at WWTP to better handle variations in influent



The Decatur Story



The Decatur Story



Decatur Demographics

- Population: 55,683 *
- Housing units: 24,538 *
- 60 major industrial customers
- 1 central WWTP (Dry Creek WWTP)
 - 36 MGD capacity
 - 20 MGD average daily flow
 - ~ 70% of flow is industrial

* 2010 U.S. Census



Decatur Industrial Pretreatment

Pretreatment Programs in Alabama:

- Regulated by ADEM
(Alabama Dep't of Environmental Management)
- ADEM issues "SID" Permits
(State Indirect Discharger)
- Local Limits are set in SID Permits



Decatur Industrial Pretreatment

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

WATER DIVISION - WATER QUALITY PROGRAM

VOLUME I

DIVISION 335-6

**1400 Coliseum Boulevard
Montgomery, Alabama 36110
(334) 271-7700**

CITE AS

ADEM Admin. Code r. 335-6-x-xx



Decatur Industrial Pretreatment

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT WATER DIVISION - WATER QUALITY PROGRAM

CHAPTER 335-6-5 INDIRECT DISCHARGE PERMIT AND PRETREATMENT RULES

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Decatur Industrial Pretreatment

(3) The Department shall develop and enforce any specific local limits required to ensure compliance with the requirements of this rule and, where

5-9

335-6-5-.03

appropriate, shall include these limits in SID Permits. Ordinance limits developed by publicly owned treatment works, that are based on a technical evaluation, shall be imposed as local limits in SID Permits, provided the publicly owned treatment works submits the limit and technical evaluation to the Department for review and approval and the limit is determined to be necessary to ensure compliance with the Department's rules.



Decatur Industrial Pretreatment

The world was
fine for
Decatur
Utilities
... until late
2006:



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Problems occurring at WWTP:

- Odor
- High chlorine demand
- High fecal coliform counts
- Discolored water
- Metal corrosion



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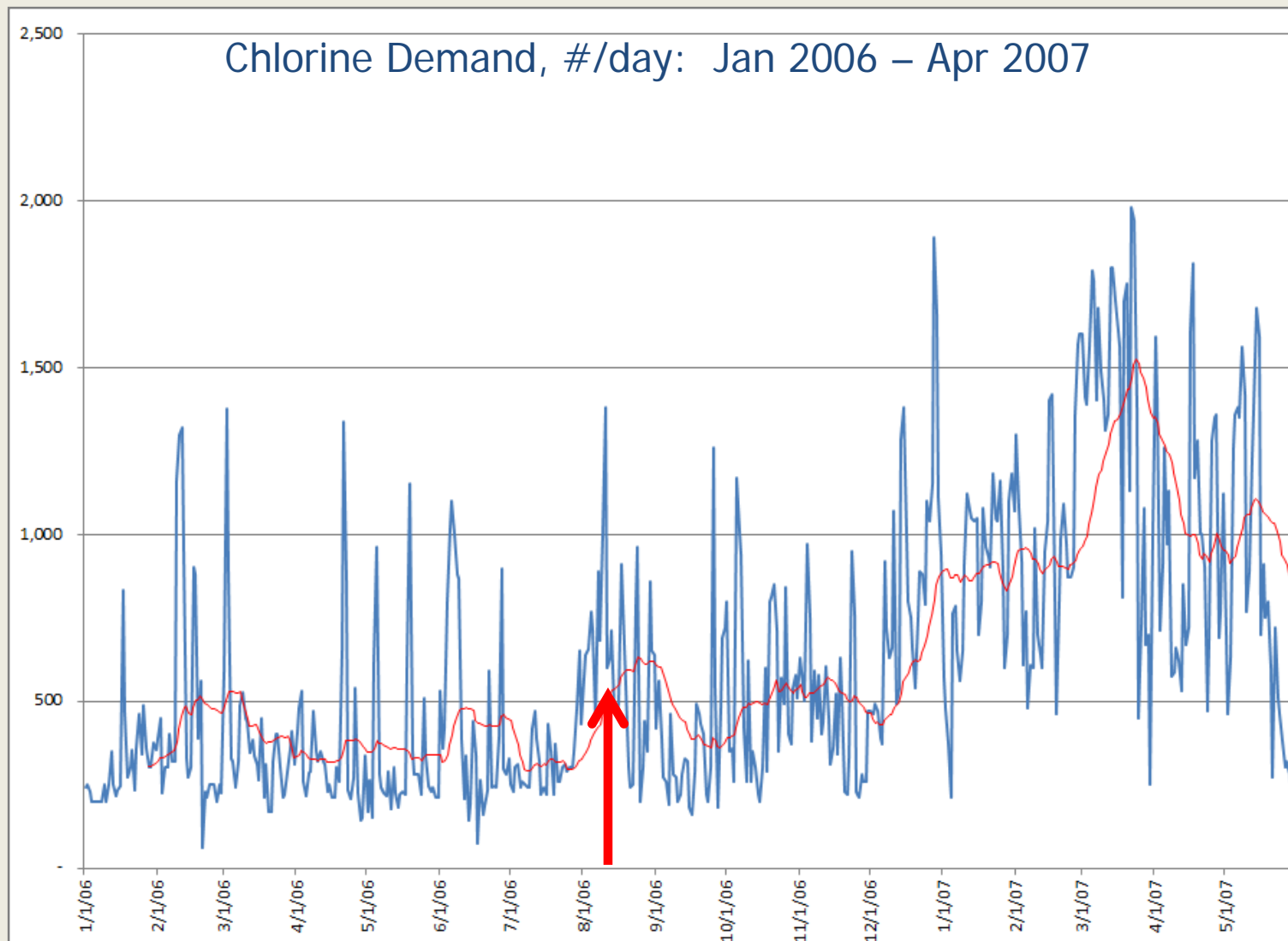
Decatur Industrial Pretreatment

DU Responses:

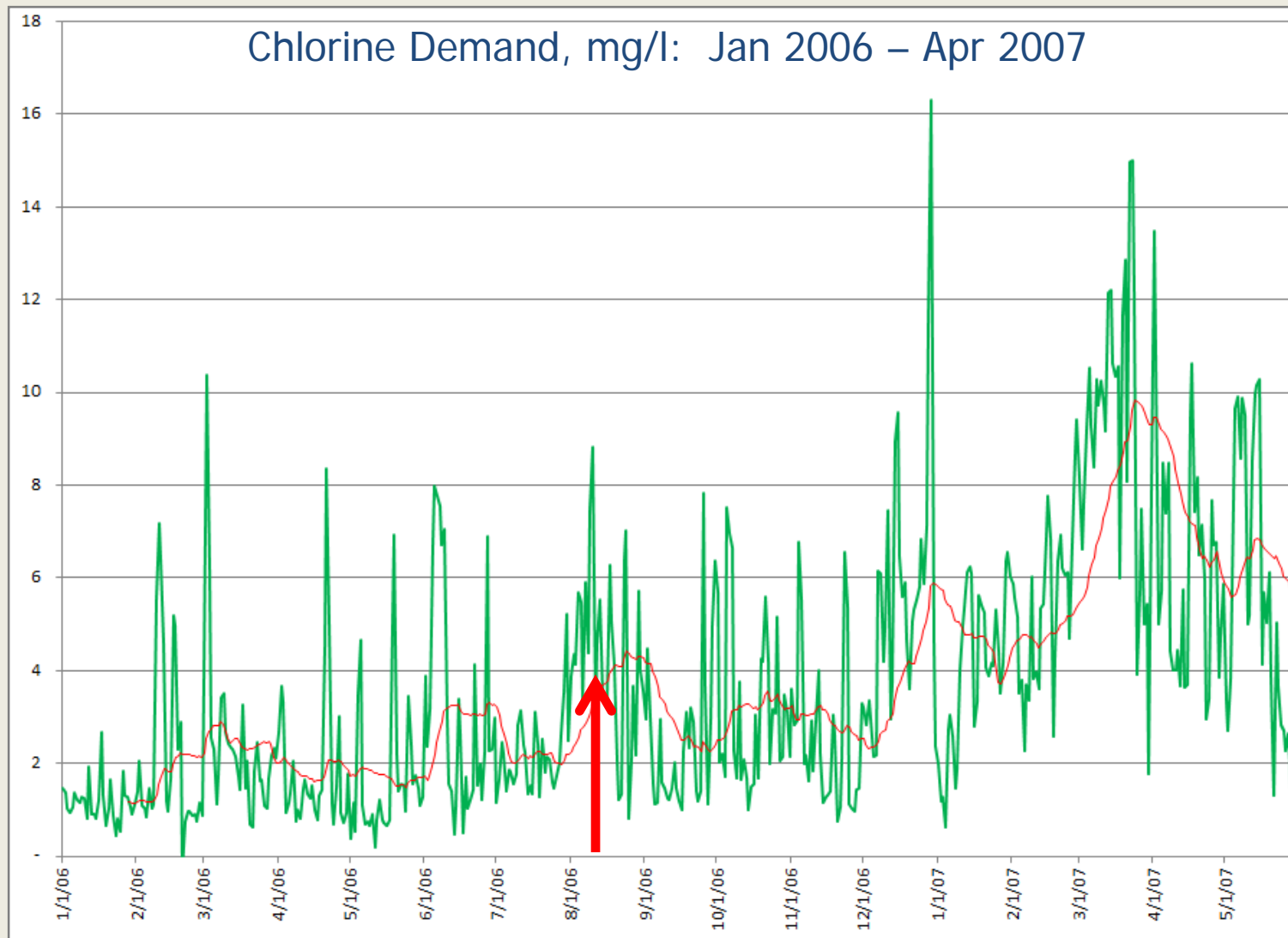
- Retain consultant to evaluate chlorine demand
- Survey industrial dischargers for possible source
- Retain consultant for WWTP optimization study



Decatur Industrial Pretreatment



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Stinky sewage smell sniffed out



What's causing a foul smelling odor that's making some people sick?

After almost a year of investigation, utility officials believe they've found the cause of the rotten stench.

For years, homeowners along Highway 20 in northwest Decatur have put up with a disgusting odor coming from the Decatur Utilities Waste Treatment Plant.

Earlier this year, WAFF 48 News interviewed Carolyn Vaughn.

Her house sits next to a sewage pumping station.

The sickening odor was preventing her from selling her house.

Nearby, the same foul odor blows through Cameron Lockett's neighborhood.

The smell so bad, it's hard for Lockett and his siblings to play outside.

"It smells real bad. Smell like somebody done died been in the river a long time," says Lockett.

Lockett says the smell is awful at night and especially in the hot summer.

"I'm tired of coming outside it smelling like cow manure. It's bad for people who can't breathe for real," says Lockett.

So what's all the stink about?

"According to a recent study, the problem causing the smell is industrial waste coming into the water treatment plant. The solution is to replace outdated old equipment to make the smell go away."



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Changes Recommended in Optimization Study:

- WWTP operational changes
 - Add ionization at influent pump station
 - Reduce number of primary clarifiers in use
 - Add ferric chloride and calcium nitrate at primary clarifiers
 - etc.
- WWTP capital improvements
 - Replace aeration basin diffusers and piping
 - Increase blower capacity
 - Add dissolved oxygen control @ aeration basins
 - etc.
- **Industrial Pretreatment Ordinance and Program**



Decatur Industrial Pretreatment

Elements of Industrial Pretreatment Program:

- Updated Limits
- Updated Surcharges
- Monitoring
- Enforcement



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Local Limits

- Consultant developed Local Limits through an Industrial Loading Survey
- DU and consultant sampled IUs up to daily
- Problem pollutants found to be:
 - Sulfates
 - Ammonia
 - Phosphates



Decatur Industrial Pretreatment

Surcharges

- Surveyed other cities' rates
- Solicited input from local industries
- Partnered with industries to get buy-in
 - Met individually
 - Held numerous workshops
 - Solicited comments, and responded to them
- Retained attorney with EPA experience



Decatur Industrial Pretreatment

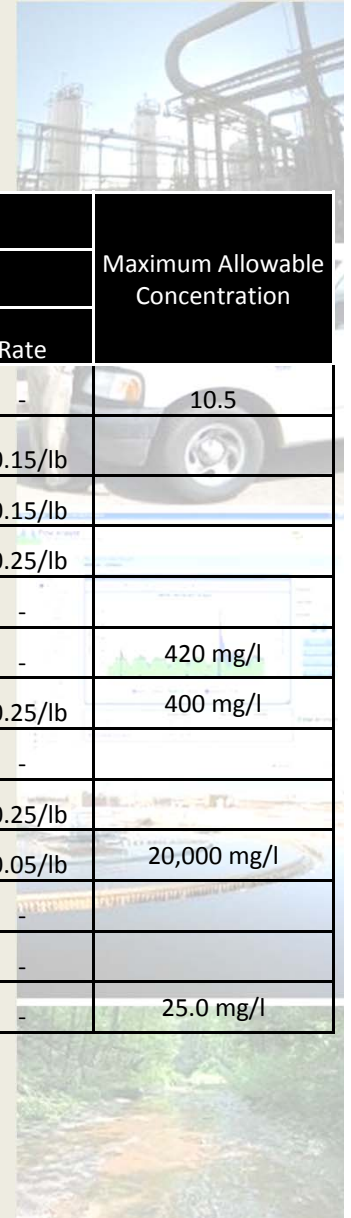
Surcharges prior to updates

Pollutant	Allowable (mg/l)	Surcharge (\$/lb)
BOD	250	\$0.02
TSS	250	\$0.04
Oil & Grease	100	\$0.10



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Surcharges after updates



Parameter	Base Allowance	Surcharge						Maximum Allowable Concentration
		Step 1		Step 2		Step 3		
		Conc.	Rate	Conc.	Rate	Conc.	Rate	
pH	5.0-10.5	-	-	-	-	-	-	10.5
BOD ₅	250 mg/l	250-1,000 mg/l	\$0.03/lb	1,001-3,000 mg/l	\$0.06/lb	>3,000 mg/l	\$0.15/lb	
COD	500 mg/l	500-2,000 mg/l	\$0.03/lb	2,001-6,000 mg/l	\$0.06/lb	>6,000 mg/l	\$0.15/lb	
TSS	250 mg/l	250-700 mg/l	\$0.08/lb	701-3,000 mg/l	\$0.16/lb	>3,000 mg/l	\$0.25/lb	
Oil & Grease	100 mg/l	>100 mg/l	\$0.20/lb	-	-	-	-	
TKN	60 mg/l	-	-	-	-	-	-	420 mg/l
Ammonia	50 mg/l	50-100 mg/l	\$0.05/lb	101-200 mg/l	\$0.10/lb	201-400 mg/l	\$0.25/lb	400 mg/l
Phosphorus	20 mg/l	>20 mg/l	\$0.25/lb	-	-	-	-	
Sulfates	250 mg/l	250-500 mg/l	\$0.05/lb	501-800 mg/l	\$0.10/lb	>800 mg/l	\$0.25/lb	
Chlorides	1000 mg/l	1,000-2,000 mg/l	\$0.01/lb	2,000-5,000 mg/l	\$0.02/lb	>5,000 mg/l	\$0.05/lb	20,000 mg/l
Chlorine Demand	15 mg/l	>15.0 mg/l	\$0.05/lb	-	-	-	-	
Molybdenum	1 mg/l	>1.0 mg/l	\$1.00/lb	-	-	-	-	
Total Toxic Organics	5 mg/l	-	-	-	-	-	-	25.0 mg/l

Decatur Industrial Pretreatment

Monitoring

- Surveyed industrial customers
- Hired full-time engineer to monitor compliance
- Compliance inspections
- Implemented data management system – “PIMS”



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PIMS

- Pretreatment Information Management System
- Electronic data management system
- Web-based user interface
- Microsoft SQL database back end



Decatur Industrial Pretreatment

http://192.168.1.201 - MAWSS Pretreatment - Windows Internet Explorer

pretreatment data management system

Logged in as: Demo User
Log Off

Industrial FOG Administration

Administration
Industrial Facilities

Sampling
SMR/DMR Data
Sample Results

Inspections
CEI Inspections Due
CSI Inspections Due
View CEI Inspections
View CSI Inspections

ABC Building Materials Corporation
123 Main Street Anytown AL 35555

General Contract Info DSN Permit Inspection Documents

State Permit Values
Configure Parameters

Parameter	SampleType	Monitoring Freq	Daily Min	Daily Max	Monthly Avg	Units
-----------	------------	-----------------	-----------	-----------	-------------	-------

Mawss Permit Values
Configure Parameters

Biological Oxygen Demand	Composite	Weekly	0	280	0	mg/l
Chemical Oxygen Demand	Composite	Weekly	0	0	900	ppd
Flow	Totalizing Meter	Continuous	0	0	0.005	MGD
Oil & Grease	Grab	Weekly	0	200	0	mg/l
Pentachlorophenol	Calculated	1/ Batch	0	0	0	mg/l
pH	Grab	Weekly	6	10	0	s.u.
Temperature	Grab	Weekly	0	0	0	F°
Total Suspended Solids	Composite	Weekly	0	250	0	mg/l
Trichlorophenol	Calculated	1/ Batch	0	0	0	mg/l

Save Back to DSN



Decatur Industrial Pretreatment

frmReportViewer - Windows Internet Explorer

http://192.168.1.20/pretreatmentdev/frmReportViewer.aspx?ID=0de30574-5ea0

1 of 3 100% crystal

Compliance Evaluation Inspection

CSI

Facility Name: ABC Building Materials Corporation
Address: 123 Main Street Anytown, AL 35555

Inspection Date: 10/09/2008
Entry Date Time: 10/9/2008 1:15:11 PM
Exit Date Time: 10/9/2008 2:45:11 PM
Contacted: False

Discharger Type: Category III

Responsible Official Information		Inspection Participants	
Kirk Alvarez, Environmental Coordinator 2400 Emagene Street Mobile, AL 36606		Kirk Alvarez-G.A.P. J. Kevin Wooten-MAWSS	

Name(s) On-Site Representative(s)	Title(s)	Name(s) On-Site Representative(s)
Kirk Alvarez	Environmental Coordinator	(251) 450-8269

SECTION II - Areas Evaluated During Inspection (S=Satisfactor, M=Marginal, U=Unsatisfactory, N=Not Evaluated, *See Comments)

Permit: S	Flow Measurement: S	Treatment System/Operation and Maintenance: S	Other: N
Facility Site Review: S	Sampling: S	Sludge Disposal: S	
Records / Reports: S	Laboratory: N	Effluent/Receiving Waters: S	
Other Comment:			

Parts A - J: N/A = Not Applicable or Not Evaluated. * = See Comments

Part A - Permit	Part B - Facility Site Review
Yes (1) Copy of Permit and Contract on hand Yes (2) Facility is as described in Permit Yes (3) Number and Location of Discharge points are as described in Permit Yes (4) Correct Name and Location of receiving water or POTW	Satisfactory

Part C - Records and Reports



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http://192.168.1.207 - MAWSS Pretreatment - Windows Internet Explorer

pretreatment data management system

Logged in as: Demo User
Log Off

Industrial FOG Administration

General
Program Fees
Industrial Surcharges
Violations
Billing Summary
Incomplete Reporting Period

Violations

Industrial FOG

Industrial Facility Violations

Facility	Compliance Period	Comments	Violation Amount
ABC Building Materials Corporation	08/2006		0
Open Road Transportation	08/2006		0
USA Oil Recovery Company	08/2006		0
Wholegrains Baking Co. Inc	08/2006		0

1 2

Facility: ABC Building Materials Corporation Compliance Period: 11/2006

Comments:

Amount: 0

Type	Level	Reported Value	Date Reported	Param Name	Description	Chronic
Permit	Significant	0.0754867	11/30/2006 12:00:00 AM	Flow	Reported Value Above Monthly Average	<input type="checkbox"/>

1

Save Cancel

Violation Letter

Facility: ABC Building Materials Corporation Letter: Chronic Generate Letter



Decatur Industrial Pretreatment

Enforcement – Escalating System

- Non-significant noncompliance
 - Letter from DU, no fine
- Significant noncompliance
 - Letter from DU, fine of \$100 to \$1,000
- Violation
 - Cease and desist order from DU,
fine of \$1,000 to \$10,000



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Back to DU's industrial user survey...



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87° ☁️ Partly Cloudy
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4/26/09 | 85 views

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People Toxic time bomb ticking in Decatur?

Former employee of defunct company says poisonous waste buried off Finley Island Road, firm bypassed DU sewer meter

Eric Fleischauer
Staff Writer



Sacks of waste
Alabama site
Environmental
liquid waste



Decatur Industrial Pretreatment

"We'd hook up whole tanker trucks full of whatever and just send it on down the drain because we weren't allowed to send any more to Decatur Utilities," he said.

A midnight shift began at Biological Processors in which employees' jobs were to release waste into the bypass line.

"For several months, someone would go in at about 12 o'clock at night and open up the discharge valve and let the water go," he said. "That was for like six or eight months."

*Quotes of Unnamed former BPA employee
In Decatur Daily, April 26, 2009*



Decatur Industrial Pretreatment

U.S. ENVIRONMENTAL PROTECTION AGENCY

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Biological Processors

Site Summary Profile

EPA ID: ALR000037929

Location: 611 Finley Island Road, Decatur, AL 35601

Lat/Long: 34.6217, -87.0519

Congressional District: 05

Affected Media: Soil

Cleanup Status: Ongoing

Site On Scene Coordinator: [Steve Spurlin](#)

- [Site Background](#)
- [Threats and Contaminants](#)
- [Site Cleanup Plan](#)
- [Enforcement Activities](#)
- [Community Involvement](#)
- [Future Work](#)
- [Site Administrative Documents](#)

Site Background

Biological Processors of Alabama located in Decatur, Alabama was referred to the Emergency Response and Removal Branch by the Alabama Department of Environmental Management (ADEM). BPA is a centralized waste treatment facility that collected, treated and discharged wastes to the Decatur Waste Water Treatment Plant. Wastes reportedly exceeded the limitations established by the Decatur WWTP and discharging was halted. ADEM placed an order on the facility following the violations reported by the Decatur WTP. Attempts to contact the property owners and operators have been unsuccessful.

On January 20, 2009 EPA On-Scene Coordinator Subash Patel visited the Site with representatives from ADEM.

[Top of page](#)

Threats and Contaminants

Hazardous substances, including phosphoric acid, hydrochloric acid, and [sodium hydroxide](#) are stored on-site. There are large portable storage tanks, fixed ASTs, tanker trailers, open pits and sumps, drums, storage totes, and significant process related equipment abandoned on the property. Releases were observed from the open pit, the ASTs, and the tanker. Leaks were observed from various piping, probably as a result of cracking due to winter freezing. It was also observed that liquid wastewater from a frac tank was released off-site via a roadside drainage ditch during a heavy rain event.

National Information

- [CERCLIS Site Profile](#)

Photos/Multimedia



Tanks and drums
[Additional Site Photos](#)

Additional Resources

- [Site Cleanup Terms](#) - can be found in EPA's glossary
- [EPA Guides to Cleanup Technologies](#)
- [Superfund Community Involvement \(PDF\)](#) (17 pp, 130K, [About PDF](#))

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Home

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People

Question

liability

Eric Fleisch



Sacks of waste
Alabama sit
Environment
liquid waste

Decatur Daily.com

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Home

4/26/09 | 85 views

Toxic ti

Former ex

Island Ro

Eric Fleisch

Staff Writer



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SHARE 

Companies pay EPA \$2.37 million for Decatur cleanup

Settlement participants


Most of the companies contributing to the \$2.37 million settlement with EPA were former customers of Biological Processors of Alabama.

Among the companies contributing to the settlement:


- Action Resources Inc.
- Armor Environmental Services Inc.
- Cedar Ridge Landfill Inc.
- Cytec Industries Inc.
- Hyundai Motor Manufacturing Alabama LLC
- Maverick Tube LLC
- Nemak USA
- OmniChem LLC
- One Stop Environmental LLC
- Premier Industrial Services LLC
- Printpack Inc.
- Quail Hollow Landfill Inc.
- Safety-Kleen Systems Inc.




Decatur Industrial Pretreatment




BIOLOGICAL PROCESSORS OF ALABAMA, INC.





Biological Processors of Alabama, Inc.

BPA-THE NATURAL SOLUTION



FACILITY ADDRESS	CORPORATE OFFICE
611 Finley Island Rd. Decatur, AL 35601 Ph: 256-200-1000 Fx: 256-200-2007	127 Highway 22 East Madisonville, LA 70447 504-782-1000 info@bparecycle.com

Rollover and click on spheres to enter site.

Office Hours
Mon.-Fri
7am - 5pm



Lessons Learned

Lessons Learned:

- Don't get too comfortable; keep up
- Know your Industrial Users
- ... and what they are doing
- Monitor, and monitor some more
- Data: manage it, and watch it
- Enforcement mechanisms, with consequences





Thank You

