



**Welcome**



# PORT OF SOUTH LOUISIANA

## Largest Tonnage Port in the Western Hemisphere



Over 291 million short tons transported via, on average, 4,000 vessels  
55,000 barges



Largest grain port in the U.S. (50% of all the nation's grain exports)

Seven grain elevators



Value:  
Over \$13 billion exports  
Over \$15 billion imports



#1 energy transfer port in the U.S.

Four major oil refineries &  
Seven crude oil storage terminals



Over 40 liquid and bulk terminals



Foreign Trade Zone #124 ranked second in the U.S.

- Received over \$50 billion in merchandise
- 12 subzones



# Jurisdiction



## EXISTING INDUSTRY

Dupont / Dow	17	Marathon Petroleum Corporation	33	Monsanto	49	Mosaik Phosphate
LaFarge Corporation	18	Pinnacle Polymers	34	Dow - St. Charles	50	St. James Stevedoring Sunshine Midstream Buoy
Motiva Enterprises - Convent	19	Cargill Terre Haute Elevator / Bulk Liquid	35	Galata Chemicals	51	Sunshine Anchorage
Air Products & Chemicals	20	ADM - Reserve	36	Occidental Chemical	52	Occidental Midstream Buoy
Yara North America	21	Globalplex Intermodal Terminal	37	Mosaik	53	Ryan Walsh Stevedoring Midstream Buoy
Zen-Noh Grain	22	Dupont Performance Elastomers	38	Entergy / Waterford 1, 2, 3	54	Grandview Anchorage
Nucor Steel Louisiana, LLC	23	El Dupont	39	Petroplex International, LLC	55	St. John Fleet Midstream Buoy
Occidental Chemical	24	Arcelor Mittal	40	Andino Energy Enterprises, LLC	56	Reserve Midstream Buoy
Convent Marine	25	Entergy / Little Gypsy	41	Plains All American	57	Reserve Anchorage
Mosaik - Uncle Sam	26	Momentive	42	Locap, Inc.	58	Capital Marine Tigerville Midstream Buoy
ADM - Paulina	27	Motiva Enterprises - Norco	43	Shell Pipeline	59	Gold Mine Fleet Midstream Buoy
Louisiana Sugar Refinery	28	Valero - St. Charles	44	NuStar	60	CGB Midstream Buoy
Noranda Aluminum	29	ADM - Destrehan	45	Ergon / Sun Fuel Midstream	61	Bonne Carré Anchorage
Rain Oil	30	Bunge North American	46	INCA Refining	62	ADM Midstream Buoy
Nalco	31	International Matex Tank Terminals (IMTT)	47	American Styrenics	63	Ama Anchorage
Evonik	32	ADM - Ama	48	Valero Asphalt	64	Kenner Bend Anchorage

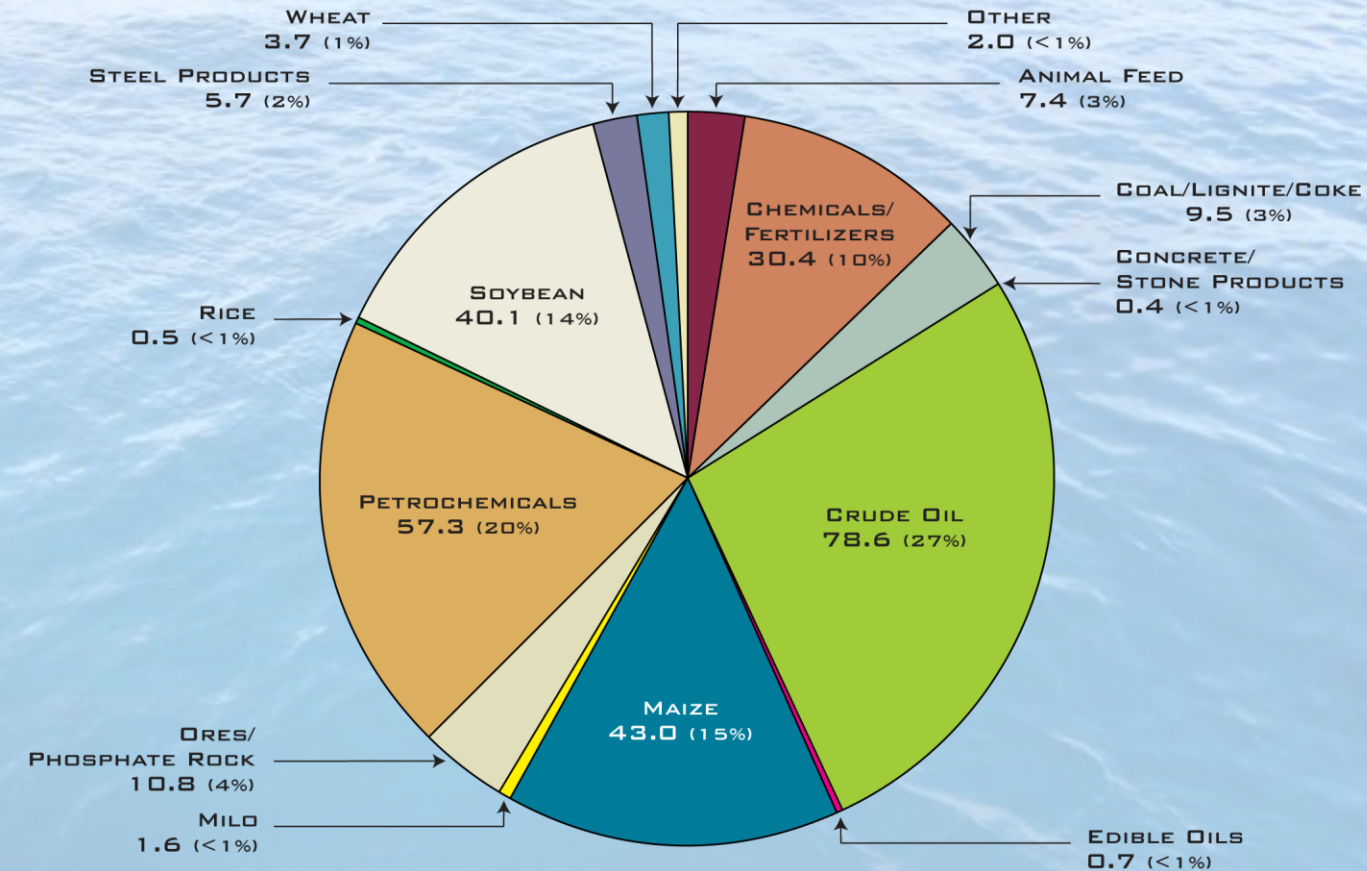
## HEAVY INDUSTRIAL SITES

65	Ancient Domain - 225 acres	81	Goldmine - 915 acres; 4,780' rf
66	Balot & Whitehall - 240 acres; 980' rf	82	Whitrose - 300 acres; 854' rf
67	Shady Grove - 231 acres; 1,690' rf	83	Willow Bend - 2,200 acres; 6,000' rf
68	Welham - 611 acres; 2,000' rf	84	Robert Brothers Farm - 1,582 acres; 8,448' rf
69	Safeland Storage, LLC - 425 acres; 2,133' rf	85	Goodwill Plantation - 500 acres; 750' rf
70	Hope Plantation - 283 acres; 1,500' rf	86	Succeed - 100 acres; 384' rf
71	Guidry Property - 84 acres	87	Rich Bend Plantation - 500 acres; 1,300' rf
72	Airline Industrial Park - 400 acres	88	Zeringue / St. Emma - 1,464 acres; 2,254' rf
73	Bunge - 378 acres; 2,460' rf	89	Savannah - 381 acres; 1,954' rf
74	Davis Lewert - 100 acres; 2,640' rf	90	Minnie & St. Louis (ironworks) - 900 acres; 2,482' rf
75	Esperanza Business Park - 680 acres	91	St. Alice - 321 acres; 670' rf
76	Home Place - 375 acres	92	Winchester / Whitney - 785 acres; 1,250' rf
77	Pelican-Occidental - 489 acres; 1,373' rf	93	Winchester / Acadia (bar iron skull) - 1,490 acres; 2,403' rf
78	SoLaPort - 99 acres; 263' rf	94	Eliana - 406 acres; 520' rf
79	St. Charles Riverpark - 1,200 acres; 3,500' rf	95	Dunhill - 66 acres; 1,600' rf
80	Glendale Hymelia - 2,500 acres; 5,808' rf		



# Port Throughput

2014 TOTAL THROUGHPUT (IN MILLION SHORT TONS)



291.83 MILLION SHORT TONS

# VESSEL CALLS: 4,377 | # BARGE MOVEMENTS: 57,350

# Economic Development

	<i>Parish</i>	<i>Capital Investment</i>	<i># Direct Jobs Created</i>	<i>Average Salary</i>
Yuhuang Chemical	St. James	\$1.85 billion	400	\$85K
South Louisiana Methanol	St. James	\$1.3 billion	63	\$66K
Eurochem	St. John	\$1.5 billion	200	\$58K
AM Agrigen Industries	St. Charles	\$1.25 billion	150	\$55K
Marathon Petroleum	St. John	\$2.2 billion		
Nucor Steel	St. James	\$3.4 billion		
Gavillon Trading	St. James	\$250 million	100	
Petroplex International	St. James	\$300 million	60	

*Announced Future Projects: \$12 billion capital investment and at least 973 direct jobs*

# Yuhuang Chemical, Inc.



- 4,950 metric tons per day (MTPD) plant
- Port of South Louisiana (St. James Parish)
- First Chinese company to announce locating a major industrial project in Louisiana
- \$1.85 billion investment
- 400 jobs
- \$85K average salary

# Yuhuang Chemical, Inc.



## OVERVIEW – SHANDONG YUHUANG CHEMICAL CO., LTD.

- Fixed assets of 32 billion yuan (*\$5 billion dollars*)
- More than 5,600 employees
- 13 subsidiaries
- Turnover 22.495 billion yuan (*\$3.6 billion dollars*)
- Ranked as 456<sup>th</sup> of the top 500 Chinese companies and 24<sup>th</sup> of China's top 25 chemical companies

*\*all based on 2013 data*

# Yuhuang Chemical, Inc.



## OVERVIEW –YUHUANG CHEMICAL, INC. (YCI)

- A subsidiary of Shandong Yuhuang Chemical Co., Ltd.
- Headquarters located at 10777 Westheimer Road | Houston, Texas
- Chief Executive Officer: Charles Yao
- Project Location: Port of South Louisiana, St. James Parish

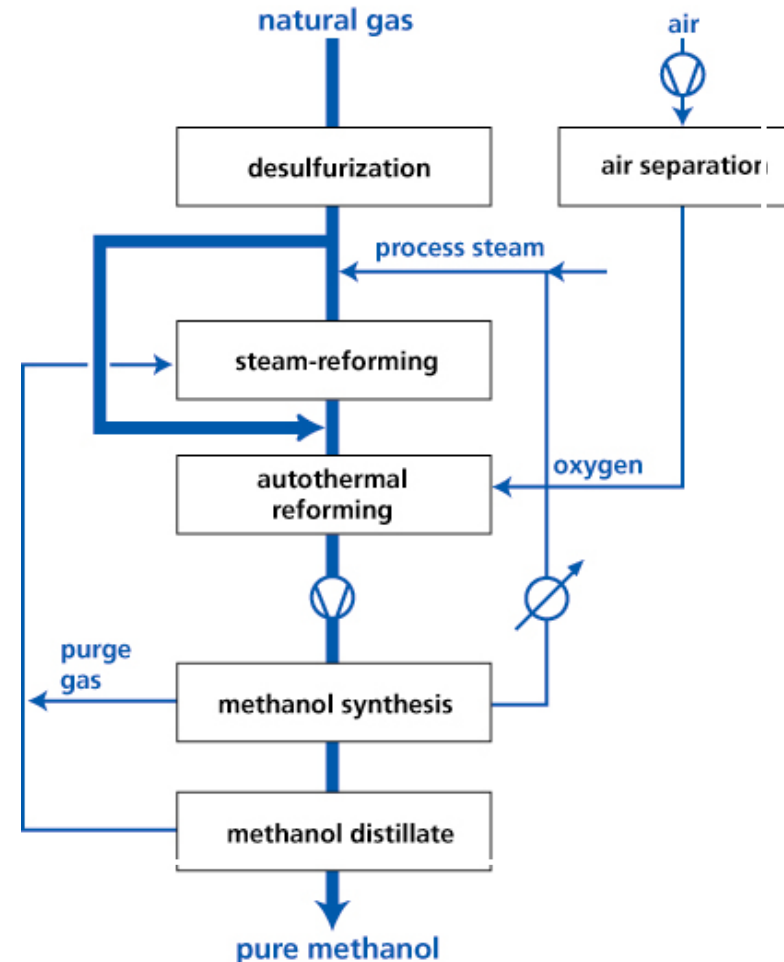




## PROJECT PROCESS – AIR LIQUIDE/LURGI MEGAMETHANOL® WITH NATURAL GAS FEEDSTOCK

Key process features:

- **Syngas Generation/Preparation**
  - Oxygen-based reforming
- **Methanol Synthesis**
  - Two-stage synthesis
  - Water-cooled reactor + gas-cooled reactor
- **Methanol Purification/Distillation**
  - Three-column design





## METHANOL PROCESS

1. **Syngas Preparation** for methanol synthesis is done using steam reforming of the natural gas feedstock. Once sulfur is removed, the natural gas is steam reformed with combined reforming with a steam reformer furnace followed by an oxygen-blown autothermal reformer (ATR)
2. **Methanol Synthesis** – the syngas is sent to a gas-phase synthesis technology. This is a world scale capacity methanol synthesis loop process with copper-based catalysts
3. **Methanol Purification/Distillation** – the crude methanol produced in the methanol synthesis unit contains water, dissolved gases, and small quantities of unavoidable byproducts –partly higher and partly lower boiling than methanol. The purpose of distillation is to remove these impurities at a minimum loss of methanol so that pure, chemical-grade methanol is obtained



## METHANOL END USES

- The three largest derivatives of methanol are formaldehyde, methyl tertiary butyl ether (MTBE) and acetic acid.
- Methanol is seeing growing demand, especially in Asia, in fuel applications such as dimethyl ether (DME), biodiesel, and the direct blending into gasoline.
- Other uses:
  - The largest solvent use for methanol is as a component of windscreen wash antifreeze
  - Used to extract, wash, dry, and crystallize pharmaceutical and agricultural chemicals
  - Methylamines are used as intermediates in a range of specialty chemicals with applications in water treatment chemicals, shampoos, liquid detergents and animal feeds





## METHANOL END USES (CONT'D)

- Other uses:
  - Methyl methacrylate (MMA) is employed in the production of acrylic polymers
  - Dimethyl terephthalate (DMT) is used to make polyesters although PTA is the preferred feedstock
  - Methanol and sodium chlorate are used to produce chlorine dioxide, a bleaching agent for the pulp and paper industry
  - Glycol ethers are solvents used in acrylic coatings and newer high-solids and waterborne coatings
  - Methyl mercaptan is used as an intermediate in the production of DL-methionine, an amino acid supplement in animal feeds



## METHANOL END USES

- Largest derivatives: formaldehyde, methyl tertiary butyl ether (MTBE) and acetic acid.
- Growing demand in fuel applications: dimethyl ether (DME), biodiesel, and direct blending into gasoline.
- Other uses:
  - Component of windscreen wash antifreeze, its largest solvent use
  - Used to extract, wash, dry, and crystallize pharmaceutical and agricultural chemicals
  - Methylamines (*an intermediate*) used in water treatment chemicals, shampoos, liquid detergents and animal feeds
  - Methyl methacrylate (MMA) employed in the production of acrylic polymers
  - Dimethyl terephthalate (DMT) used to make polyesters (*although PTA is the preferred feedstock*)
  - Methanol and sodium chlorate used to produce bleaching agent for the pulp and paper industry (*chlorine dioxide*)
  - Glycol ethers are solvents in acrylic coatings and newer high-solids and waterborne coatings
  - Methyl mercaptan (*an intermediate*) used in production of an amino acid supplement in animal feeds (DL-methionine)



## PROJECT OVERVIEW

4,950 MTPD METHANOL PROJECT

70% FOR EXPORT TO CHINA; 30% FOR U.S. CONSUMPTION

- Location: Port of South Louisiana along the Mississippi River in St. James Parish
- Area: 1,300 acres
- Methanol technology licensed by: Air Liquide/Lurgi
- Oxygen supplied by: Air Liquide
- FEED contractors: HQC and Technip
- Project management team (IPMT): YCI, Worley Parsons, and HQC
- Detailed engineering contractor: Pending
- Construction contractor: Pending

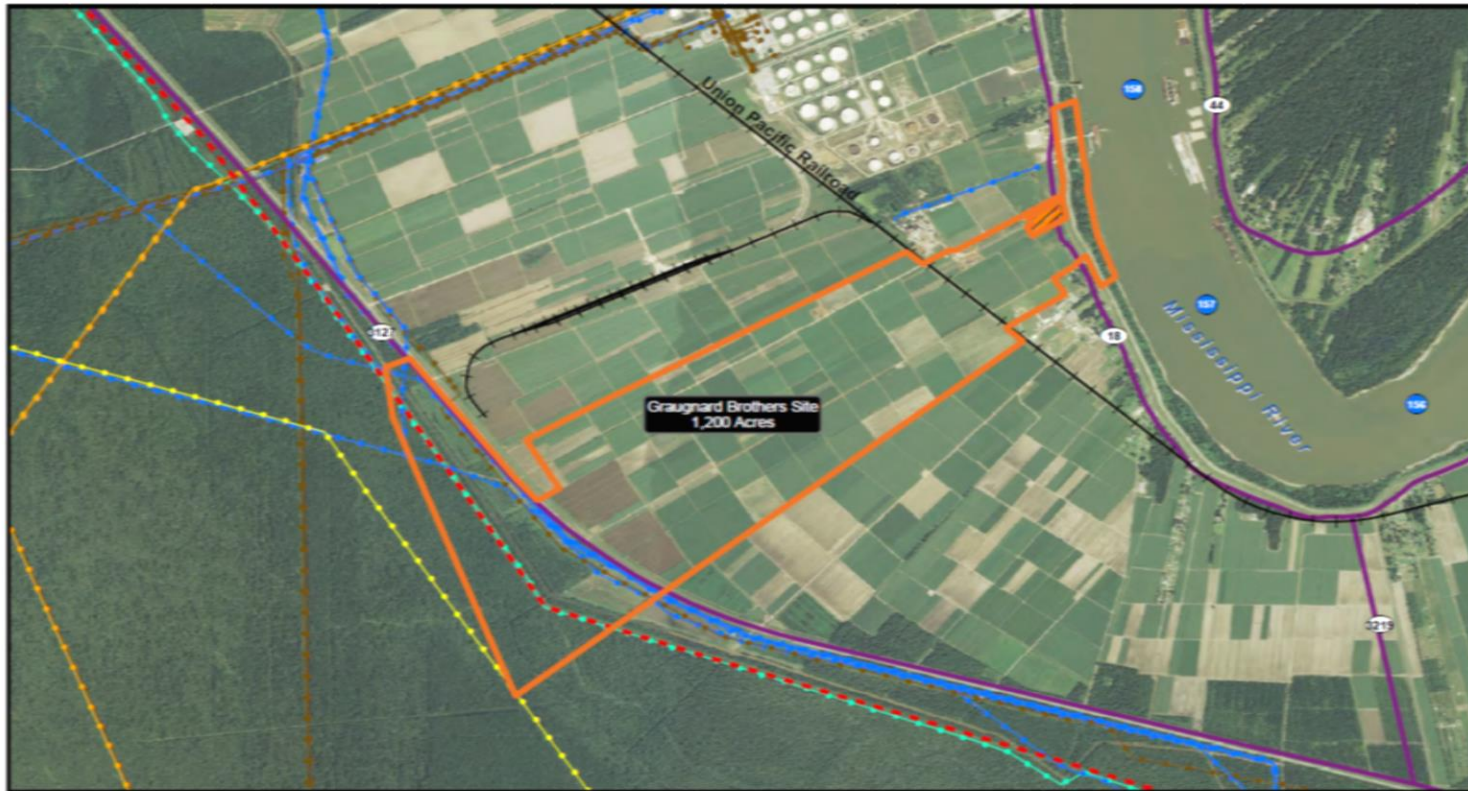


# Yuhuang Chemical, Inc.



**LED** LOUISIANA ECONOMIC DEVELOPMENT

## Graugnard Brothers Site - 1,200 Acres - St James Parish Selected Infrastructure Map



**St James Parish**



- Potential Site
- Currently Unavailable
- Railroad
- Transmission Power Lines
- River Mile Marker
- Highways**
  - Interstate
  - US Highway
  - LA State Highway

- St James Pipelines**
  - ALL OTHER PIPELINES
  - ANHYDROUS AMMONIA
  - PROPANE
  - CRUDE OIL
  - NATURAL GAS
  - NATURAL GAS LIQUID

Source:  
 -Aerial Photo: 2013 NAIP  
 -Base Map: ESRI, US Census, LDOT, LED  
 -Pipelines: NPMS 2013  
 -Transmission Power Lines: HTSI 2012  
 -Locations and Boundries are approximated  
 GIS Analyst: MDT 02/13/2014

Mapping conducted by:  
 Louisiana Economic Development  
 Business Intelligence  
 1051 N Third St  
 Baton Rouge, Louisiana 70802  
 (225) 342-3725  
 OpportunityLouisiana.com

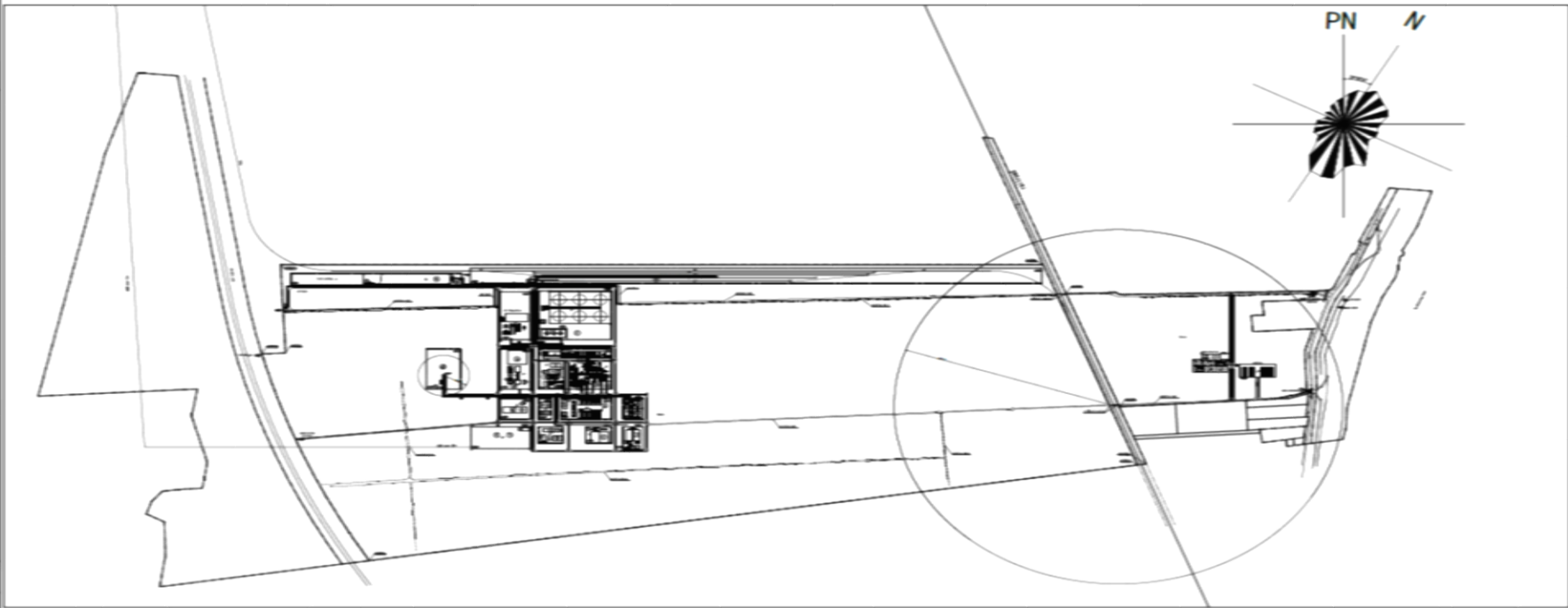
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# Yuhuang Chemical, Inc.



The Plot Plan of Yuhuang 4950 MTPD Methanol Project, USA



NO.	Symbol	Name	NO.	Symbol	Name
1	---	Property Line	7	---	Existing road
2	---	Road	8	---	Fence
3	---	Railroad	9	---	Existing drain
4	---	Fire Risk	10	---	Ground elevation (elevation of 100' contour)
5	---	Storage Tank	11	---	Water
6	---	Battery Limit	12	---	Not to exceed

Item No.	Description	Item No.	Description	Item No.	Description
01	Methanol Plant	34	Water New System - Process New Substation	70	New Methanol Substation
02	Normal Gas Refueling	35	Cooling Water System	71	Power Distribution Center
03	Chase & Stormwater System	37	Fire Water Station	74	Methanol Plant Substation
04	Methanol Synthesis	40	Auxiliary Facilities	75	Water System Substation
05	Pressure Relief Absorption	41	Ammoniation Building	80	Storage & Transportation
06	Methanol Distillation	42	Offices	81	Intermediate Methanol Tank Farm
07	Air System	43	Guard House	82	Methanol Storage
08	Instrument & Plant Air System	44	Methanol Storage Area Service Lab	83	Methanol Storage Area & Warehouse
09	Water System	45	Fire Station	84	Crack Loading
10	Water New System - Process New Substation	46	Ammonium Sulfate	85	Oil Loading
11	Chase/Load Water	47	Auxiliary Drive & Power	86	Power Supply & Bus Substation

Scale: 1:1000  
 Date: 2010.10.20  
 Project: Yuhuang 4950 MTPD Methanol Project, USA  
 Drawing No.: PLOT PLAN

中国寰球工程公司 CHINA YUHUANG CHEMICAL CO., LTD. 寰球工程公司		项目负责人: [Name] 设计人: [Name] 审核人: [Name] 批准人: [Name]
二〇一〇年十月二十日 Yuhuang 4950 MTPD Methanol Project, USA PLOT PLAN		比例尺: 1:1000 图例: [Symbol]



## *WHY PORT OF SOUTH LOUISIANA (ST. JAMES PARISH)?*

### A GOOD PLACE FOR BUSINESS

- Low cost of natural gas in the area
- Excellent from a global logistics perspective (project and products)
- Louisiana, Port of South Louisiana, and St. James Parish are interested in new business and are experienced with energy and petrochemicals
- Experienced project and chemical operations staff are available in the area
- Greenfield site with good infrastructure potential (highways, railroad, etc.)
- Mississippi River deep water access (docks)
- Port of South Louisiana can assist in financing for the project



**Support  
Your  
Port!**



**Thank You**