LDEQ - ST. ROSE – SHELL/IMTT OFFENSIVE ODOR EVENT AND RESPONSE

EPA REGION 6 ENVIRONMENTAL JUSTICE FORUM

June 2018
ST. ROSE ODOR EVENT & RESPONSE

• Introduction – EJ Community Liaison for Louisiana
• LDEQ
• Saint Rose, Louisiana, St. Charles Parish
• SHELL/IMTT
• EJ – A Chronology of Events & Collaborative Efforts
• Summary
• Conclusion
• Resources & Information
• LDEQ – Mission & Vision
  • “Protecting human health and the environment”
  • “Deemed as organization that provides environmental stewardship that exceeds expectations”

• Environmental Justice

  “When a community is adjacent to a plant, the plant has an obligation to be a good corporate neighbor. Plant officials should ask themselves, ‘What can we do as an organization to enhance the quality of life of the surrounding community?’”

Dr. Chuck Carr Brown
LDEQ Secretary
LOCATION
St. Rose, St. Charles Parish
ST. ROSE, LA – Demographics*

- Population 8,870
  - Mean Ages, 33 years old
    - 39% or older adults/seniors (40-65)
    - 32% children (0-17)
    - 28% younger adults (18-39)
- Race & Ethnicity
  - 49.6% Black
  - 45.4% White
  - 3.7% Hispanic

*https://statisticalatlas.com/place/Louisiana/St-Rose/Employment-Status
ST. ROSE, LA – Demographics (cont’d)

• Households & Income
  • Approximately 3,000 households
  • 47% of households with children under 18 are married

• 53% of households are single moms or dads, ~42% being single mothers

• Median income $48,000
ST. ROSE, LA – Demographics (cont'd)

• Households & Income
  • Income range: $21K - $140K
  • Median income $48,000
  • Median income by race
    • Hispanics - $64K
    • Whites - $55K
    • Blacks - 39.3K

Household Income Percentiles

Scope: households in Louisiana and St. Rose

<table>
<thead>
<tr>
<th>Percentile</th>
<th>St. Rose</th>
<th>Louisiana</th>
</tr>
</thead>
<tbody>
<tr>
<td>95th</td>
<td>$140.8k</td>
<td>292%</td>
</tr>
<tr>
<td>80th</td>
<td>$97.9k</td>
<td>203%</td>
</tr>
<tr>
<td>60th</td>
<td>$59.3k</td>
<td>123%</td>
</tr>
<tr>
<td>Median</td>
<td>$48.1k</td>
<td>100%</td>
</tr>
<tr>
<td>40th</td>
<td>$39.7k</td>
<td>82.4%</td>
</tr>
<tr>
<td>20th</td>
<td>$21.1k</td>
<td>43.9%</td>
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</tbody>
</table>
ST. ROSE, LA – Demographics (cont’d)

• Employment (24-65 ages)
  • 7.6% unemployment
  • 70% Blacks are employed
  • 69% White
  • 49% Hispanic

• 17.5% of the residents of St. Rose live in poverty.
• 85.7% of the residents are high school graduates or higher.
• 13.7% of the residents hold a bachelor’s degree or higher degree.
ST. ROSE – Tank Farm in 1927
ST. ROSE – SHELL/IMTT in 2018
ST. ROSE GROWTH

1927

2018
IMTT OVERVIEW

Geographic Footprint

- Lemont, Illinois
- Joliet, Illinois
- Richmond, California
- Alamogordo, New Mexico
- Geismar, Louisiana
- St. Rose, Louisiana
- Avondale, Louisiana
- Gretna, Louisiana (all on the Mississippi River)
- Arnold's Cove, Newfoundland
- Quebec City, Quebec
- Bayonne, New Jersey
- Richmond, Virginia
- Chesapeake, Virginia
- Savannah, Georgia
- Savannah North, Georgia
- Macon, Georgia
- Bremen, Georgia
- Montgomery, Alabama
- Moundville, Alabama

EPA REGION 6 ENVIRONMENTAL JUSTICE FORUM 2018
In order of appearance on this page, these are our Avondale, Gretna, and Geismar terminals (all in LA)

**IMTT – LA PRESENCE**

- Avondale, Gretna, and Geismar
CHRONOLOGY & COLLABORATION ON OFFENSIVE ODOR

• June 2014 – Began receiving odor complaints

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>2013</th>
<th>2014</th>
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</thead>
<tbody>
<tr>
<td>January</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>0</td>
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</tr>
<tr>
<td>April</td>
<td>0</td>
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<tr>
<td>May</td>
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</tr>
<tr>
<td>June</td>
<td>0</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>1</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>2</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>0</td>
<td>40</td>
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</tr>
<tr>
<td>October</td>
<td>1</td>
<td>36</td>
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</tr>
<tr>
<td>November</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4</td>
<td>155</td>
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</table>
CHRONOLOGY OF ODOR EVENTS

- Investigations pinpointed the IMTT/Shell site as the likely source of the odors.
- Joint asphalt manufacturing operation was identified as the suspected generator of the odors.
- LDEQ and Shell performed monitoring during and after the odor event.
- LDEQ deployed the agency’s Mobile Air Monitoring Laboratory to the area.
# Chronology - Monitoring

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<thead>
<tr>
<th>Month</th>
<th>Sampler</th>
<th>Type of Sample</th>
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<tbody>
<tr>
<td>Jun-14</td>
<td>LDEQ</td>
<td>Canister (6/11 – 6/19)</td>
</tr>
<tr>
<td></td>
<td>Shell (TES)</td>
<td>Hand-held (6/12 – 6/18)</td>
</tr>
<tr>
<td></td>
<td>LDEQ</td>
<td>Hand-held (6/16)</td>
</tr>
<tr>
<td></td>
<td>LDEQ</td>
<td>MAML (6/12 – 6/20)</td>
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<tr>
<td>Aug-14</td>
<td>LDEQ</td>
<td>Hand-held (8/12)</td>
</tr>
<tr>
<td></td>
<td>Shell (TES)</td>
<td>Hand-held (8/12 – 8/13)</td>
</tr>
<tr>
<td>Oct-14</td>
<td>LDEQ</td>
<td>Hand-held (10/23 – 11/6)</td>
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<tr>
<td></td>
<td>LDEQ</td>
<td>Canister (10/23 – 11/6)</td>
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<tr>
<td></td>
<td>LDEQ</td>
<td>MAML (10/23-10/26, 10/28-10/30)</td>
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<tr>
<td>Nov-14</td>
<td>EPA</td>
<td>Hand-held (11/3 – 11/7)</td>
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<tr>
<td>Dec-14</td>
<td>LDEQ</td>
<td>MAML (12/3 – 12/5)</td>
</tr>
<tr>
<td></td>
<td>LDEQ</td>
<td>Canister (12/4 – 12/5)</td>
</tr>
<tr>
<td></td>
<td>LDEQ</td>
<td>MAML (12/20-12/22)</td>
</tr>
<tr>
<td></td>
<td>LDEQ</td>
<td>Canister (12/20 – 12/22)</td>
</tr>
<tr>
<td>Jan-16</td>
<td>EPA</td>
<td>GMAP, Spod (1/25-1/27)</td>
</tr>
</tbody>
</table>
• Capable of monitoring for
  • Criteria Pollutants
  • $H_2S$
  • VOC's
  • Mercury

• Captures Meteorological Data
  • wind speed, wind direction, temperature, barometric pressure and relative humidity
CHRONOLOGY – ACTIONS

• Actions Taken – 2014, 2015
  • LDEQ monitoring continued
  • SHELL discontinued a certain crude feedstock
  • Products produced from that crude was “worked off”
  • IMTT RTO bakeout conducted
  • Secondary controls installed (4 carbon beds)
  • IMTT Odor Patrols performed
  • EPA NEIC conducted multi-media inspection Nov 2015
CHRONOLOGY – ACTIONS

• 2016
  • Secretary Visit
  • Community Monitor
  • IMTT implemented more stringent product vetting process
  • EPA NEIC Jan 2016 returned with GMAP van
  • Story documented in EDMS – See AI 4885
CONCLUSION & IMPROVEMENTS

• Odors were significantly reduced

<table>
<thead>
<tr>
<th>IMTT St. Rose Complaints</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
</tr>
<tr>
<td>Month</td>
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</tr>
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</tbody>
</table>
CONCLUSION & IMPROVEMENTS

• No national ambient air quality standard (NAAQS) had been exceeded

• EPA Site Investigations yielded no significant findings

• Outreach, Education
  • Community Using LDEQ hotline & complaint form
CONCLUSION & IMPROVEMENTS

• IMTT
  • Organized a Community Advisory Panel
  • Established 24/7 hotline
  • Imposed more stringent product vetting
  • Improved response time to odor complaints
  • Developed Odor Response Plan for refinery
  • With SHELL, installed secondary controls for asphalt storage and loading

• Community Monitoring
RESOURCES

• Fixed Community Monitor
  • Air Monitoring Data & AQI
  • Monitor location & monitored constituents
• See Data
  • [http://airquality.deq.louisiana.gov/Data](http://airquality.deq.louisiana.gov/Data)
RESOURCES

• Community Voice
  • File a complaint or report an incident
    • http://deq.louisiana.gov/page/file-a-complaint-report-an-incident

• SPOC (Single Point of Contact)

• IMTT Community Advisory Panel (CAP)
Q&A
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