The DELCORA Experience

With

the PCB PMP

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January 30, 2007
sanitary and industrial waste is combined
- Health Mats
- PQ Corp
- CertainTeed
WRTP Influent

- Sunoco and Epsilon Sanitary waste from sumps
- Rhodia industrial waste only
- Florida Power and Light combined industrial and sanitary waste
- Sunoco Industrial waste after oil/water separator
- Gravity Flow
- Chester Force Main
- Delaware Interceptor
- Excelon (PECO)
- ACE Linen Services
- Booth St. Interceptor
- Naaman's Creek PS
- Marcus Hook PS
- Gravity Flow
- WRTP
- Flow Meters
- Stations Included
- Industrial Waste
- Sanitary Waste
Agenda

- On-Site PCB Reduction Efforts
  - Past and Present
- Sewer System Trackback Studies
  - Phase 1 and Phase 2
- Pollution Prevention Efforts and Measurable Progress
- Comments & Questions
PCB Reduction Efforts

- PCB Transformer Oil Removal – 1992
  - 8 Transformers were cleaned and retrofilled
  - 548 gal of fluid with 541 ppm PCB’s

- PCB Containing Capacitor Removal - 1997
  - 6 Large Capacitors Removed
  - 60 gal of fluid with > 500 ppm PCB’s

- Other Off-Site Facilities
  - Darby Creek Pump Station Transformer Removal
    - Removal and disposal by Authority, not DELCORA
# PCB Reduction Efforts

<table>
<thead>
<tr>
<th>Project</th>
<th>PCB’s Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformers - 1992</td>
<td>2.5 lbs / 1.12 Kg</td>
</tr>
<tr>
<td>Capacitors - 1997</td>
<td>.25 lbs / 112 g</td>
</tr>
<tr>
<td>Other Projects</td>
<td>2025 lbs / 920 Kg</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2027.5 lbs / 921.2 Kg</strong></td>
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Sewer System Trackback Studies

- **Objective:** To determine the sources of PCB contributions to the WRTP influent - Above blank and “background” levels.

- **Phase 1 – Entire WRTP Sewer-shed**
  1. Sampled all incoming “nodes”: 5 pump stations and 2 IU’s
  2. Utilized 24 HC samples and PISCES “concentrator” samples
  3. Only found 1 node significantly above “background”

- **Phase 2 – EPS-1 Sewer-shed**
  1. Sampled all incoming “nodes”: 4 Interceptors and 1 IU
  2. Utilized 24 HC water samples and select sediment samples
  3. Analytical results are not yet available
Delaware County Regional Water Quality Control Authority

DELCORA
Delaware County, PA

Phase 1 Map

DELCORA Interceptors & Industrial Users

Sun Oil –– (data from SMR's)

REPORTED SOLIDS

3rd Quarter 2006 Average : 4.47 TPD
2nd Quarter 2006 Average : 3.97 TPD
YTD 2006 Average : 3.89 TPD

Kimberly Clark –– (data from SMR's)

REPORTED SOLIDS

3rd Quarter 2006 Average : 21.7 TPD
2nd Quarter 2006 Average : 18.1 TPD
YTD 2006 Average : 17.51 TPD
## Phase 1 - Results

<table>
<thead>
<tr>
<th>Sampling Location</th>
<th>Whole Water (ng/L)</th>
<th>PISCES+</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Conc. In Hexane (ng/L)</td>
<td>Water Volume Sampled (L)</td>
<td>Equivalent Conc. In Water (ng/L)</td>
</tr>
<tr>
<td>Naamans Creek PS</td>
<td>0.00</td>
<td>153.82</td>
<td>5.73</td>
</tr>
<tr>
<td>Marcus Hook PS</td>
<td>0.00</td>
<td>111.66</td>
<td>5.75</td>
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<tr>
<td>Chester PS</td>
<td>0.00</td>
<td>12.00</td>
<td>5.20</td>
</tr>
<tr>
<td>Central Delaware PS</td>
<td>0.00</td>
<td>349.60</td>
<td>5.08</td>
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<tr>
<td>EPS-1</td>
<td>32.74</td>
<td>1,333.72</td>
<td>5.24</td>
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<tr>
<td>WRTP Influent</td>
<td>500.13</td>
<td>56.45</td>
<td>7.85</td>
</tr>
<tr>
<td>Industry #1</td>
<td>U##</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Industry #2</td>
<td>0.00</td>
<td>--</td>
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</table>
Phase 2 Map

Key to Sampling Locations:

- **Collection System**
  - A: American Ref Fuel / Covanta
  - B: Booth St Intcp
  - C: Delaware Intcp
  - D: West End Intcp
  - E: Trainer Boro

- **WRTP**
  - F: WRTP Influent
  - G: EPS-1
Pollution Prevention Efforts

- **Education Programs**
  - Presentations at Public Meeting (EAC, LEPC)
  - Hand-out for salvage yards (in development)
  - Education of DELCORA personnel (in development)

- **Industrial User Awareness**
  - Sent surveys to all Industrial Users on our system requesting information on PCB’s on their site. Started a tracking database.
  - Inspections now include review of site for potential PCB containing equipment and issues.

- **Assess Waste and Abandoned Sites**
  - Visited several sites w/in our sewer system
  - Reviewed available literature
  - Attempted to contact owners if potential issues were discovered
Discussion—Q&A