Groundwater Pollution Committee Meeting
Hanes Hosiery Recreation Center
March 17, 2016
Presentation Outline

- Welcome/Opening Comments
- Regulatory Oversight (NCDEQ DWM)
- Contributors to pollutant plume
- Pollutants of Concern in the Groundwater
- In-door Air Testing Update (Phase II)
- Next Steps
- Questions
Regulatory Oversight

- DEQ is regulatory authority over the site
- Use Vapor Intrusion Guidance document to govern remediation actions and levels
- Looks at the City is an interested third-party
Regulatory Oversight

- Document serves as guidance in all vapor intrusion situations in NC
- Adopted from USEPA protocols
- Set’s sampling protocols and screening levels for pollutants of concern
- City and Kaba Ilco are using this methodology for data collection
Contributors to Pollutant Plume

• Kaba Ilco has executed an Administrative Agreement with DWM to implement a remediation plan

• Currently pumping and treating groundwater and soil vapor extraction

• Installing monitoring wells and is also conducting in-door air and sub-slab monitoring
PCE plume
(Groundwater)
• Kaba Ilco was issued approval to conduct soil vapor testing in the City right-of-way (highlighted section)

The results of the soil vapor testing will allow them to target properties for in-door air and sub-slab testing.

Map obtained from DWM
Contributors to Pollutant Plume

- Operated as a asphalt field testing facility
- No agreement in place— in process with DEQ
- NCDOT prioritizes their own sites — with input from DEQ
- Expected timeframe for evaluation FY 2016-2017, but public concern could accelerate progress
- Primary pollutant is TCE, not PCE

NCDOT Plant #54
TCE plume

(Groundwater)
Pollutants of Concern

Main pollutants found in the groundwater:

- Tetrachloroethene (PCE) - Kaba Ilco
- Trichloroethene (TCE) - NCDOT

What types of chemicals are these?
These chemicals are volatile organic compounds. They are colorless liquids that have a sweet odor and evaporate very quickly. (Note: They are found in common household items)

What are these chemicals used for?
Chemical solvents are used in dry cleaning, cleaning of metal machinery and to manufacture some consumer products and other chemicals. They are effective cleaning solvents and remove stains and dirt from all common types of fabrics. NOTE: NCDOT used TCE to test asphalt products.
Pollutants of Concern

How can these chemicals effect me in my home?

Figure 1. Migration of Soil Vapors to Indoor Air

Source: USEPA
### Participating Property Owners and/or Tenants

**Phase II TCE Indoor Air Sampling Event**

<table>
<thead>
<tr>
<th>Address 1</th>
<th>Address 2</th>
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</thead>
<tbody>
<tr>
<td>2512 Stokes Avenue</td>
<td>415 East 27&lt;sup&gt;th&lt;/sup&gt; Street</td>
</tr>
<tr>
<td>2513 Stokes Avenue</td>
<td>422 East 27&lt;sup&gt;th&lt;/sup&gt; Street</td>
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<tr>
<td>2514 Stokes Avenue</td>
<td>516 East 27&lt;sup&gt;th&lt;/sup&gt; Street</td>
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<tr>
<td>2500 Stokes Avenue</td>
<td>518 East 27&lt;sup&gt;th&lt;/sup&gt; Street</td>
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<tr>
<td>2501 Stokes Avenue</td>
<td>520 East 27&lt;sup&gt;th&lt;/sup&gt; Street</td>
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<tr>
<td>2815 North Glenn Avenue</td>
<td>600 East 27&lt;sup&gt;th&lt;/sup&gt; Street</td>
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<td>516 East 28&lt;sup&gt;th&lt;/sup&gt; Street</td>
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<td>515 East 25&lt;sup&gt;th&lt;/sup&gt; Street</td>
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Sampling Techniques
Sampling Techniques
Community Involvement

- 19 houses designated, 3 voluntarily participated
- Total sampling population 22 homes
- 17 of 22 homes decided to participate
- 77% participation rate
- 29 indoor air samples collected
- 8 sub-slab samples collected
<table>
<thead>
<tr>
<th>Activity</th>
<th>Completion Time (in working days)</th>
<th>Date Completed/or to be completed</th>
</tr>
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<tbody>
<tr>
<td>Received an revised, approved right-of-entry (ROE) agreement template from City Attorney’s Office</td>
<td>6 days</td>
<td>February 4, 2016</td>
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<tr>
<td>Executed revised ROEs with property owners and/or tenants</td>
<td>8 days</td>
<td>February 17, 2016</td>
</tr>
<tr>
<td>Indoor air sampling of homes</td>
<td>7 days</td>
<td>March 3, 2016</td>
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<tr>
<td>Sub-slab air sampling of homes</td>
<td>2 days</td>
<td>March 3, 2016</td>
</tr>
<tr>
<td>Air samples analyzed with qualified results reviewed by Mid-Atlantic Associates</td>
<td>14 days</td>
<td>March 23, 2016</td>
</tr>
<tr>
<td>If indoor air results show a need for immediate action, city staff will contact effected citizens. A recommendation for immediate action will be provided by Mid-Atlantic.</td>
<td>1 day</td>
<td>March 25, 2016</td>
</tr>
<tr>
<td>A finalized report (including health risk assessments) will be completed by Mid-Atlantic.</td>
<td>10 days</td>
<td>April 8, 2016</td>
</tr>
<tr>
<td>Mid-Atlantic and city staff will meet with participating citizens to disclose air results, interpret the report, and answer questions.</td>
<td>1 day</td>
<td>April 12, 2016</td>
</tr>
<tr>
<td>City submits final air quality report to NC DMW and requests official response</td>
<td>9 days</td>
<td>April 19, 2016</td>
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<td>Community meeting to disclose sampling results, health assessments, and NCDMW response</td>
<td>1 day</td>
<td>April 21, 2016</td>
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Action Items From Committee Meeting

- Determine if NCDOT provided public notice regarding plant activities.
- Determine how pollution sites are ranked across the state.
- Leadership to advocate stakeholder groups.
- Establish public meeting based on receipt of air quality report.
Acknowledgments

- USEPA (Vapor Intrusion Diagram)
- Mid Atlantic Engineering and Environmental Solutions
- Griffith Enterprises Inc. (Images courtesy of Alan Griffith)
- United States Environmental Protection Agency (PERC information).
- Piedmont Geologic (Kaba Ilco Remedial Action Plan)
- North Carolina Division of Waste Management (Inactive Hazardous Site Branch)

Note: this presentation will be posted to:

http://www.cityofws.org/Departments/Stormwater-Erosion-Control