Select Case Studies Related to Odors/Public Nuisance

Governing Board Retreat
May 15-16, 2014

Cleaning the Air That We Breathe…
Complaints Received in 2013

- Gasoline Station: 3%
- Smoke: 5%
- Asbestos: 7%
- Dust: 14%
- Odors: 65%
- Other: 4%
- Overspray: 1%
- Res. Wood Burning: 1%

Total: 9,505
Common Sources of Odors

- Landfills
- Petroleum Operations
- Recycling Facilities
- Composting
- Water Treatment/Storage
- Rendering Plants
Complaint Response Program

• Response commensurate with nature and scope of problem

• Regular business hours, deploy:
  — community based inspectors and/or
  — specialized industry-specific inspectors

• After hours, supervisors receive and assign complaints

• Bring in additional inspectors, engineers, source testing, as needed
Public Nuisance

“. . a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.”

Health & Safety Code 41700 (a) and Rule 402
Confirming a Public Nuisance

- Generally six or more separate households or businesses
- Odors must be:
  - confirmed by inspector with the complainants
  - traced back to the source
- Complainant must sign a form and either complete a declaration or be willing to testify in court if necessary
- Less than one percent of odor-related complaints result in NOV for public nuisance
Public Nuisance Odor NOVs
2009 - 2014 (4 months)

- Landfill (95), 61%
- Wastewater Storage (10), 6%
- Refineries/Oil Field (17), 11%
- Waste Management (11), 7%
- Food Handling/Processing (6), 4%
- Other Misc (18), 11%

Total NOVs Issued: 157
In Field Instrumentation

Portable GC/MS – hydrocarbons

Hydrogen sulfide meter
Sampling for Odor Problems

- Canisters - hydrocarbons
- Tedlar bag – sulfur compounds
- Trailer – continuous hydrocarbons, hydrogen sulfide, particulates
Analysis for Odors

GC/MS - hydrocarbons

Sulfur-specific GC
Case Study – Cal BioMass

- Thermal, in operation since 1997
- Composting operation
- Complaints received from more than 50 different households
- Odors reported: rancid grease, compost, green waste, manure
- Four NOVs for public nuisance due to odors

<table>
<thead>
<tr>
<th>Year</th>
<th># of Complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>14</td>
</tr>
<tr>
<td>2012</td>
<td>623</td>
</tr>
<tr>
<td>2013</td>
<td>320</td>
</tr>
<tr>
<td>Total</td>
<td>957</td>
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</table>
California
Complaints

Over 1.2 miles from facility to nearest complainant residence

California Biomass
Actions to Resolve

- Over 100 inspections, surveillance
- Off-hour complaint response
- Canisters given to residents
- Ambient air monitoring and other sampling in community
- Riverside County, including leadership by Supv. Benoit
- Facility stopped accepting odorous materials, moved piles and closed down Thermal location
Case Study – Allenco Energy, Inc.

- Los Angeles, operating since 1960s
- Oil production wells and water injections wells
- Permits for a crude oil, water, gas separation system and natural gas treating equipment
- Six NOVs issued for public nuisance due to odors
- Facility voluntarily shut down and is making changes and improvements

<table>
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<th>Year</th>
<th># of Complaints</th>
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<tr>
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<td>8</td>
</tr>
<tr>
<td>2011</td>
<td>192</td>
</tr>
<tr>
<td>2012</td>
<td>22</td>
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<tr>
<td>2013</td>
<td>56</td>
</tr>
<tr>
<td>2014</td>
<td>9</td>
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<tr>
<td>Total</td>
<td>293</td>
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</table>
Air Monitoring

- Trailer with continuous methane and hydrocarbon samplers
  - triggered canister samples if high concentrations; brought to lab for analysis
  - 24 hour detailed hydrocarbon analysis
  - hydrogen sulfide, particulate matter
- Additional canisters (24 hour samples) in two locations

### Average Non-Methane Hydrocarbon Concentrations

<table>
<thead>
<tr>
<th></th>
<th>OCT</th>
<th>NOV (1-22)</th>
<th>After Shutdown (Nov23 - Dec5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>parts per million</td>
<td>0.8</td>
<td>0.5</td>
<td>0.3</td>
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</table>

After Shutdown (Nov23 - Dec5)
Actions Taken by Allenco

- Voluntarily ceased operations in Nov 2013 until all necessary repairs and operational changes are completed
- Removed and capped wastewater sump vent pipe
- Pumped out contents of several storage tanks
- Removed remaining residue and inspected tanks for leaks
- Repaired/replaced corroded tanks
- Removed trench and sump from service
Work in Progress at Allenco

- Hard pipe all tank discharges to a separate tank with air pollution controls
- Redesign and upgrade the air pollution control system
- Additional odor mitigation during well maintenance
Case Study – Sunshine Canyon Landfill

- Sylmar, located near homes and an elementary school
- Landfill started accepting waste in 1958, major home building in 1968 and 1979
- County and City landfills combined, landfill gas collection system inadequate
- Complaints from over 150 different locations
- 95 NOVs issued for public nuisance due to odor

<table>
<thead>
<tr>
<th>Year</th>
<th># of Complaints</th>
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<tr>
<td>2008</td>
<td>13</td>
</tr>
<tr>
<td>2009</td>
<td>295</td>
</tr>
<tr>
<td>2010</td>
<td>627</td>
</tr>
<tr>
<td>2011</td>
<td>1,534</td>
</tr>
<tr>
<td>2012</td>
<td>1,518</td>
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<tr>
<td>2013</td>
<td>1,156</td>
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<td>2014</td>
<td>350</td>
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<td>Total</td>
<td>5,493</td>
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SCAQMD Actions

• Increased inspections at landfill (~200 in 2013)
  ─ Off-hour complaint response and surveillance
  ─ Surface monitoring and sample collection
• Permits for new landfill gas to energy plant
• Permits for flare and other changes at landfill
• Interagency Cooperation
  ─ Los Angeles County Public Works
  ─ Los Angeles City and County Planning
  ─ Local Enforcement Agency (LEA)
  ─ Recommendations for each agency to implement
• Abatement Order
Abatement Order – Landfill Actions

- April 22, 2010 – December 31, 2013
- Adjust trash delivery times in mornings
- Studies: meteorological; neutralizer; delivery alternatives; working face; odor control consultation
- Work plans: odor and damage prevention for gas collection system
- Hire Corrective Action Manager and Environmental Monitor
- Air monitoring at school and landfill for one year
- Improvements to collection system
Improvements Made

- $20 million dollars spent in the last 2.5 years
- Operated a temporary flare until two new flares on line
- Replaced gas header and isolation valves around complete gas system to improve overall suction and balancing control
- Installed 200 new and replacement gas extraction wells and associated connection pipes to improve subsurface collection of landfill gas
- Construction of new landfill gas to energy plant
Additional Work in Progress

- Part of settlement of NOVs, landfill paid SCAQMD to hire two consultants to improve gas collection system, operation, and other measures
- Started early May
Case Study - Huy Fong Foods

- Irwindale hot sauce manufacturer, moved from Rosemead in 2012
- 70 complaints to SCAQMD from 21 households in last six months
- Multiple inspections, complaint response, engineering team visits
- Working with facility and City of Irwindale
- Facility evaluating potential options for control equipment
- SCAQMD staff will do additional air monitoring and testing during next grinding season
Analyzing the Problem

Two DustTraks (DRX)
Four PM fractions

- Staff took measurements to identify where odors coming from
- Know that grinding was an odor source
- Highest PM found in mixing room
Evaluating Potential Solutions

- Six people inside the mixing room wore respirators with different filter material.

- Ranked odors on scale of 0-5 for each filter type.

- Activated carbon would be the best control option.
Summary - SCAQMD Programs to Address Odors

- Complaint response, inspections, team approach as needed
- Clean Communities Plan
- Current rules
  - Rule 402 – Nuisance (H&S Code §41700)
  - Rule 410 - Odors from Transfer Stations and Material Recovery Facilities
Additional Efforts

- Additional rules
  - Amend Rule 1148.1 - Oil & Gas Production, 2014
  - Proposed Rule 415 – Odors from Rendering Plants, 2014
- Continue to evaluate tools for odor monitoring
- Mapping software