Options for Health Study of Impacts of Well Rupture at Aliso Canyon – Meeting to Gather Community Input on Draft Scope

December 14, 2017
Community Meeting in Porter Ranch

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Agenda

1. Introduction and Background
2. Process and Roles
3. Presentation of Study Options
4. Break-out Groups -- Discussion
5. Break-out Groups -- Report Back
6. Q&A
7. Next Steps and Timeline
Introduction & Background: Who We Are and Why We Are Here

• South Coast Air Quality Management District (SCAQMD)
  • Regional Government Agency
  • Orange and non-desert portions of LA, Riverside and SB Counties

• Legal settlement → $1,000,000 toward a health study of the impacts of the well rupture at Aliso Canyon and resulting emissions

• Technical experts (Working Group) met to draft a study scope that prioritized the most useful studies within this budget, as well as additional resources that can be put toward this effort

➢ TODAY: We are seeking community input to help guide the final scope of the health study
Background: what has already been done, and what are the data gaps?

What has been done:
• Many samples of pollutants collected in the community
• Calculations of health impacts based on air toxics measured*
• Indoor environmental sampling (wipes, air samples)
• CASPER study

Data Gaps:
• Community has experienced health problems that the existing environmental sampling does not explain → need to look more closely at these health symptoms
• Not much known about toxicity of mercaptan odorants

# Roles

<table>
<thead>
<tr>
<th>Name</th>
<th>Who this Includes</th>
<th>Role(s)</th>
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</thead>
<tbody>
<tr>
<td><strong>Working Group (WG)</strong></td>
<td>Representatives from agencies and 2 faculty from universities</td>
<td>• Develop <strong>draft</strong> scope</td>
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</table>
| **Health Study Technical Advisory Group (HSTAG)** | All members of the WG, plus 2 community members identified by the PRNC              | • Provide technical scientific advice and feedback on study scope, progress, and findings.  
                                         |                                                                                   | • Integrate community input into final study scope.                          |
|                               |                                                                                   | • Provide updates to community and researchers.                           |
| **The Community**             | Members of the public                                                             | • Provide input on the study scope                                       |
|                               |                                                                                   | • Participate in the study                                                |
|                               |                                                                                   | • Provide feedback to HSTAG on study progress and findings                |
| **Proposal Review Panel**     | Scientists with relevant expertise                                                | • Review and score proposals received through the RFP process            |
| **The Researchers**           | Scientists conducting the studies                                                 | • Design and conduct the studies                                         |
|                               |                                                                                   | • Report progress and findings                                            |
Details on the Roles of the Health Study Technical Advisory Group (HSTAG)

**BEFORE THE STUDY BEGINS**

- Integrate community feedback into the final study scope
  - Ensure that the proposed studies are scientifically valid and would provide meaningful scientific data
- Prioritize study components and elements to be part of final scope
  - These will go into a Request for Proposal (RFP) or sole-source contracts, as applicable

**AFTER THE STUDY BEGINS**

- Conduct technical review of study progress and interim findings
- Provide technical guidance to researchers, if needed
- Address community questions or concerns about the study
- Provide updates to the community, and technical feedback to the researchers

**NOTE:** Because the HSTAG is finalizing the study scope, the HSTAG members will not be able to apply for this funding to conduct the study.
**Process + Timeline**

**Nov-Dec 2017**
- Working Group drafts scope
- PRNC identifies 2 community members for HSTAG

**Dec 2017 – Apr 2018**
- Community provides input on draft scope
- HSTAG integrates community input and finalizes scope
- SCAQMD staff writes scope into RFP or sole-source contracts
- SCAQMD issues RFP and/or sole-source contracts

**Jun – Sep 2018**
- Proposal Review Panel reviews and scores proposals
- SCAQMD Board authorizes funding for studies
- Researchers begin studies

**After studies begin**
- HSTAG meets quarterly to discuss study progress, provide input to investigators as needed
- HSTAG provides updates to community
Highest Priority Health Study Components Identified by the Working Group for $1 million budget

<table>
<thead>
<tr>
<th>Study or Study Component</th>
<th>Approx. Cost Estimate or Agency Contributing Resources</th>
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<tbody>
<tr>
<td>Clinical assessment survey of highly affected individuals</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Data integration and exposure modeling</td>
<td>$500,000</td>
</tr>
<tr>
<td>Community engagement</td>
<td>SCAQMD to conduct</td>
</tr>
<tr>
<td>Records-based epidemiologic study using public data</td>
<td>LA County Public Health to conduct</td>
</tr>
<tr>
<td>Toxicity screening assays</td>
<td>U.S. EPA, if able to accommodate</td>
</tr>
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Other potentially useful activities identified by the Working Group

<table>
<thead>
<tr>
<th>Study or Study Component</th>
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<tbody>
<tr>
<td>Records-based epidemiological study using data from large private medical provider (e.g. Kaiser or similar)</td>
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<tr>
<td>Establishing a health registry</td>
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Study Components That Can Be Done in Addition to the $1 million Health Study
Community Engagement

General description

• SCAQMD coordinated with other agencies and community leaders to organize tonight’s public meeting to gather feedback from the community on the health study scope

• SCAQMD will create the Health Study Technical Advisory Group (HSTAG)

• SCAQMD will organize community meetings to keep the public informed, and to seek additional input as needed

Notes

• SCAQMD will conduct this work outside of the $1 million health study budget
Community Engagement (continued):

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
</table>
| • Ensures that community input informs the study priorities and scope  
  • Increases public participation and transparency  
  • Keeps the public informed of progress and results | • None noted, other than time commitments for everyone |
Records-based epidemiologic study using public data

**General description**
- Use data to evaluate trends and patterns in hospital admissions and emergency room visits in the Porter Ranch area compared to other areas
- Data provided by the California Office of Statewide Health Planning and Development (OSHPD)

**What information this could provide**
- Whether certain serious health conditions were increased in certain areas in specific months or years

**Notes**
- LA County Public Health, with technical assistance from the California Department of Public Health, will conduct this work outside of the $1 million health study budget
Records-based epidemiologic study using public data (continued):

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Looks at data from a large population</td>
<td>• Can only evaluate conditions that would normally cause people to go to the hospital or emergency room</td>
</tr>
<tr>
<td>• Can look at many different types of health problems</td>
<td>• May not be able to account for other factors that affect health risks</td>
</tr>
<tr>
<td>• Uses a complete database of hospital admissions and emergency room visits, at public and private hospitals</td>
<td>• Cannot say whether the exposures caused the health symptoms in a specific person</td>
</tr>
<tr>
<td>• Compares across different communities and time periods</td>
<td></td>
</tr>
<tr>
<td>• Accounts for some other basic factors that affect health risk (e.g. age, gender)</td>
<td></td>
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# Toxicity screening assays: Description

<table>
<thead>
<tr>
<th>General description</th>
<th>What information this could provide</th>
<th>Notes</th>
</tr>
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</table>
| • Conduct toxicity screening assays on the odorants used at the Aliso Canyon facility  
  • U.S. EPA ToxCast program | • Screening-level information on the potential toxicity of these compounds | • Methods for testing these compounds are still under development; timing uncertain  
• If U.S. EPA is able to accommodate this request, these tests would be conducted outside of the $1 million health study budget |
Toxicity screening assays: Strengths & Limitations

**Strengths**
- Provides some general information about the potential toxicity of the odorants
- Indicates whether certain chemicals are more concerning compared to others (i.e. helps prioritize which compounds to test in traditional toxicology studies)

**Limitations**
- Testing methods still under development
- Results may be hard to interpret (these assays are relatively new, and the science is still developing)
- Not a replacement for traditional toxicology testing
Overview of Study Options for spending the $1 million health study budget
OPTION 1: Clinical assessment survey of highly affected individuals

<table>
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<th>General description</th>
<th>What information this could provide</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Conduct a clinical assessment survey of about 100 people</td>
<td>• Data on which health symptoms, diagnoses, and/or illnesses are being experienced by some of the most affected people in the community</td>
</tr>
<tr>
<td>• Describe the types of health symptoms or health problems they have experienced and/or continue to experience</td>
<td>• Information on possible patterns in the health effects and environmental exposures in this group</td>
</tr>
<tr>
<td>• Focus on people who have experienced serious health symptoms</td>
<td></td>
</tr>
<tr>
<td>• May include some environmental sampling at participants’ homes</td>
<td></td>
</tr>
</tbody>
</table>
OPTION 1: Clinical assessment survey of highly affected individuals (continued):

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limitations</th>
</tr>
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<tbody>
<tr>
<td>• Collects detailed health symptom information using scientifically rigorous methods</td>
<td>• Can only assess a limited number of people</td>
</tr>
<tr>
<td>• Focuses on health symptoms that people have experienced or are experiencing</td>
<td>• May be hard to say if the community has been more affected compared to others</td>
</tr>
<tr>
<td>• Focuses on a select group of highly affected people</td>
<td>• May be more difficult for people to remember details about past health problems</td>
</tr>
<tr>
<td>• Captures information on a range of health effects</td>
<td>• Cannot say whether the exposures caused the health symptoms in a specific person</td>
</tr>
<tr>
<td>• Provides data on specific health conditions in the community</td>
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</table>
OPTION 2: Data integration and exposure modeling

**General description**

• Evaluate existing data from health complaints, the CASPER study, outdoor air samples and other environmental samples (indoor air and wipes, soil) that were collected by public agencies in 2015-2017
• Conduct exposure modeling of outdoor and indoor exposures
• If data are available, can also account for other air pollutant exposures (e.g. diesel trucks used in the well-kill operations)

**What information this could provide**

• Creates “exposure maps” of the pollutant levels that the community was exposed to
• Identifies potential patterns in the exposures and health symptoms

**Notes**

• If this option is selected, there will be some funds available to spend on additional efforts
OPTION 2: Data integration and exposure modeling (continued):

<table>
<thead>
<tr>
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<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Makes use of existing data to estimate what the community was exposed to</td>
<td>• Health risk calculations can only evaluate risks for pollutants with established risk assessment health values</td>
</tr>
<tr>
<td>• Can be used to calculate health risks across the main affected areas (using exposure map)</td>
<td>• Does not include mercaptan odorants</td>
</tr>
<tr>
<td>• Note: Health Impact Estimates were already done based on monitoring data</td>
<td></td>
</tr>
</tbody>
</table>
1. What geographic area do you define as the “affected community”?

2. Rank these proposed studies/study components from highest to lowest priority:
   • OPTION 1: Clinical assessment survey of highly affected individuals
   • OPTION 2: Data integration and exposure modeling
   • Other study ideas?

3. What are the most important health problems the community has experienced that you would want to look at in a clinical assessment or records-based epidemiologic study?

4. Are there specific groups of people that a clinical assessment should look at?
   • A “group” could be children under age 5, school-age children, elderly, people with asthma, pregnant women, etc.

5. Are there any concerns about or suggestions for the 3 studies/study components that the agencies are proposing to do outside the $1 million budget (community engagement, records-based epidemiologic study using public data, toxicity screening assays)?
Break-out Groups -- Report Back
Questions & Answers (Q&A)
Next Steps and Timeline

• Jan 2018:
  • SCAQMD staff will compile input from community, share with HSTAG
• Jan-Apr 2018:
  • HSTAG convenes to discuss and integrate community input into final study scope.
  • SCAQMD staff integrates scope into RFP, seeks Board approval to release RFP.
• Jun-Sep 2018:
  • Researchers submit proposals to SCAQMD
  • Proposal Review Panel reviews and scores proposals
  • SCAQMD staff seeks Board approval to authorize funding for studies
  • SCAQMD staff finalize contracts
  • Researchers begin studies
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