

ALISO CANYON DISASTER HEALTH RESEARCH STUDY COMMUNITY MEETING #2 SUMMARY

MEETING PURPOSE

The University of California, Los Angeles (UCLA) held the second Aliso Canyon Disaster Health Research Study (Health Study or Study) community meeting to inform and hear feedback from the community on two key Study methodology elements: definition of the affected community (impact zone) and identification of comparison communities (control groups).

MEETING FORMAT AND ATTENDANCE

The meeting was held online on November 14, 2023, 6:00-7:30 pm, via Zoom.

The agenda topics for the meeting included:

- Study Overview and Definition of Affected Community (Impact Zone)
 - Presentation
 - Discussion
- Comparison Communities (Control Groups)
 - Presentation
 - Discussion

Approximately 40 community members attended the meeting. Community members asked questions and gave feedback via oral discussion and in written format using the Zoom Q&A feature.

A recording of the meeting and the PowerPoint presentation are available at:

<https://alisostudy.ucla.edu/events/meeting-2/>.

SUMMARY OF QUESTIONS AND ANSWERS

This document provides a summary of the community feedback offered and questions asked during the meeting, along with UCLA Team responses. Information requested at the meeting is provided in the Attachments to this document.

This summary is organized by the following topics:

- Affected Community (Impact Zone)
- Comparison Communities (Control Groups)
- Other Study Components

DISCLAIMER

The UCLA Team responses to community questions and comments are preliminary and reflective of the Team's current study plans and understanding of the evidence available to

date. New evidence and further discussions could lead to changes in study methodology or responses provided in this summary.

AFFECTED COMMUNITY (IMPACT ZONE)

Community members asked the following questions about the data and methodology used to determine the geographical extent of the affected community.

- **QUESTION:** Does the chemical transport model account for the unusual behavior of gas emitted during the blowout due to its high pressure and the temperature differential?
 - **RESPONSE:** Yes, the model accounts for these factors. The next phase of modelling will also incorporate topographical effects.
- **QUESTION:** Does UCLA have all the air sampling data that were collected by the South Coast Air Quality Management Board (SCAQMB) and the California Air Resources Board (CARB) during the disaster? The commenter offered to provide data they assembled during the disaster.
 - **RESPONSE:** UCLA is in the process of obtaining data from samples that were taken during the event by SCAMD and CARB. UCLA has developed a comprehensive database of all exposures, but is still in the process of obtaining some AQMD data, which was delayed due to the necessity of a public records request. UCLA will follow up with the commenter to obtain their offered data.
- **COMMENT:** Please make the impact zone data available to regulators and SoCal Gas as soon as possible. It could help them address the need for a shut-off valve at each operable well.
 - **RESPONSE:** UCLA aims to make Study information publicly available as soon as possible. Our work needs to go through a peer review process before being published. The slides and a recording of this meeting are now posted on the Study website and publicly available.
- **QUESTION:** Can the Study determine what the air quality in the affected community would be without the Aliso Canyon natural gas facility?
 - **RESPONSE:** Yes, the chemical transport model allows us to characterize air quality without emissions from the natural gas facility.

COMPARISON COMMUNITIES (CONTROL GROUPS)

Community members offered the following suggestions related to the selection of comparison communities:

- Ensure that effects from the Santa Susana Field Lab (Rocketdyne), including prior activities and the cleanup, are considered, by avoiding selecting comparisons (controls) in the area.
- Note that some of the identified comparison communities in Santa Clarita are near an active natural gas storage facility.
- Consider inactive, as well as active, petrochemical wells in the selection of comparison communities. The vast majority of inactive wells were not sealed properly and generate emissions. Please add inactive wells to the comparison communities map presented at the

meeting to inform the community's review and comment on the selected comparison communities.

- Consider emissions from offshore oil wells.
- Take into consideration the effects of freeways (proximity along with wind direction) in air quality measurements.
- Ensure that emissions from the blowout did not drift into the Simi Valley/Thousand Oaks area.

UCLA will take the above recommendations into consideration as it finalizes the selection of comparison communities for the Study, for example by excluding a 2-mile area around the Santa Susana Field Lab facility from the comparison community.

We recognize that some comparison communities are located near oil and gas development or storage facilities. Our plan is to use these communities as demographic matches, but to conduct sensitivity analyses that do not include those areas to help identify the impact of proximity to such facilities.

The requested comparison community map showing inactive wells will be posted to the website on our website's Resources page under Study Methods and Background Information, which is under active construction.

OTHER STUDY COMPONENTS

Community members asked questions about other aspects of the Study as follows.

EXPOSURE ASSESSMENT

- **QUESTION:** Will background levels for the exposure assessment be based on regional or local conditions? Regional background levels from SCAQMD monitoring locations, such as Burbank (which has an airport and industry), are different than in than the affected area.
 - **RESPONSE:** The chemical transport model will provide localized estimates of background conditions for every half kilometer across the region.
- **QUESTION:** Will the Study assess exposure to metals in addition to gas? People got sick during the disaster even when the odor from mercaptans was not present.
 - **RESPONSE:** Yes. UCLA's prior indoor air monitoring and analyses indicate the potential for heavy metals exposure. We are trying to obtain as much information as possible about the components of the gas and well kill materials. Following the meeting, we received extensive documentation from Los Angeles County Department of Public Health (LACDPH) and will review these documents to extract all available information on metals.
- **QUESTION:** Did emissions from the blowout affect soil or groundwater?
 - **RESPONSE:** Although significant effects are not anticipated from deposition of particulate emissions into soil or groundwater (the community is served by municipal water sources), the collection of information about the constituents of the gas and well kill materials, in combination with indoor air monitoring, will inform our assessment about deposition of particulate matter.

HEALTH ASSESSMENT

- **QUESTION:** Is UCLA aware of the data that Dr. Nordella collected after the blowout? That data could be useful since it was collected closer the blowout event.
 - **RESPONSE:** Yes, UCLA was in contact with Dr. Nordella during the blowout and has followed his presentations and writings. We would like to coordinate with Dr. Nordella about the data he collected. We reached out to him during initial communications efforts and he declined to participate. UCLA will reach out to Dr. Nordella again related to his medical testing and data collection.
- **COMMENT:** Hospital admissions to Providence Holy Cross and Northridge Hospital, the two largest hospitals in the area, before and after the blowout might provide useful data for the Study. Private medical practices that existed both before and after the blowout may also be able to provide information about the types of illnesses they saw.
 - **RESPONSE:** UCLA is assessing hospital data and appreciates the information about which hospitals most community members use. We are also assessing the best sources for doctor visit and other outpatient visit data, given the challenges associated with that data including, limitations on what can be provided and significant budget considerations.
- **QUESTION:** Is the sample size of 600 people too small to fully represent the affected population?
 - **RESPONSE:** Six hundred people will participate in one element of the Study – the clinical and biomarker assessment. This sample size will allow us to identify potential differences between people living in the affected area and comparison community. Other Study components will rely on more extensive data, such as the birth outcomes and cancer analyses. These analyses will be based on data for the entire population in the affected community.
- **QUESTION:** What biomarkers will be monitored, and will these have any value eight years after exposure? Can UCLA make available a list of all biomarker and blood testing?
 - **RESPONSE:** Biomarkers of health outcomes related to natural gas facility emissions will be monitored. These will include complete blood counts, platelet counts, comprehensive metabolic panels, and immune and inflammatory markers. UCLA will use metabolomics to assess these samples, which enables the identification of thousands of molecules that may continue to affect the blood for years after exposure. These analyses will also allow for examination of the possible impacts of current operations on the biomarkers we collect, which we understand is a ongoing concern to the community. In addition, the Study includes analyses, such as the neonatal bloodspot analysis, that will be based on data from before, during, and after the disaster.

A list of blood and biomarker testing included in the Study will be posted on the website on our website's Resources page under Study Methods and Background Information, which is under active construction.
- **QUESTION:** What data is included in the Cancer Registry? How will the Study select data from the Registry, for example for certain time periods or locations, and use it to assess impacts of the blowout?

- **RESPONSE:** The Cancer Registry provides a record of every cancer diagnosis and death in the State of California. Data is currently available up to 2021 and goes back for about 20 years. UCLA has requested data from the Registry, including geocoding, which will allow us to locate cases within the affected and control areas. The Study will assess trends in cancer data over multiple years and whether these trends differ in the affected community compared to the control communities.
- **COMMENT:** To determine the impact of the blowout, the analysis should compare the percent change in the occurrence of illnesses within the affected community to that of the comparison community.
 - **RESPONSE:** Consistent with the suggested approach, the Study analyses will use a “difference-in-difference” methodology. This methodology will identify the portion of the change in affected community’s adverse health impact levels that is attributable to the blowout and operation of the natural gas facility. The Study report will also present the actual trend lines that were observed in the comparison community and the affected community as well as the anticipated trend lines that would be expected without the blowout and operation of the natural gas facility.