Pollution

LA gas leak: worst in US history spewed as much pollution as 600,000 cars

Emissions from Aliso Canyon leak, which took 112 days to plug, totalled 97,100 tonnes of methane - equal to annual output of a medium-sized EU country

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The gas blow-out at a relief well near the Porter Ranch area of Los Angeles prompted the evacuation of 5,700 local families. Photograph: Dean Musgrove/AP

A natural gas leak in the mountains above Los Angeles was one of the worst accidental discharges of greenhouse gases in US history. A new study shows the months-long disaster resulted in 97,100 metric tonnes of methane being dumped into the atmosphere.



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The analysis shows that the leak from the Aliso Canyon storage facility spewed out 60 tonnes of natural gas an hour at its peak, creating enough methane each day to fill a balloon the size of the Rose Bowl, the 92,500-capacity stadium in Pasadena. A total of 5bn cubic ft of natural gas was released.

The methane emissions from the leak, caused by a ruptured pipe, effectively doubled the methane emissions of the entire Los Angeles metropolitan area, creating enough pollution to match the annual output of nearly 600,000 cars.

The gas blow-out occurred near the Porter Ranch on 23 October last year, prompting the evacuation of more than 5,700 local families. The leak took 112 days to plug, highlighting concerns over the climate impact of failures in ageing gas infrastructure.

Methane is a particularly potent greenhouse gas, with a warming impact more than 25 times greater than carbon dioxide over a 100-year period. The emissions from the Aliso Canyon leak were equivalent to the annual methane output of a medium-sized European Union country, according to the study, published in Science.

Governor Jerry Brown of California took until January to declare a state of emergency over the leak, angering residents, who complained about the eggy smell, nosebleeds and headaches, and climate activists, who claim methane emissions should be taken far more seriously.

Researchers from the National Oceanic and Atmospheric Administration (Noaa) and the University of California measured the emissions from the leak using data gathered from 13 research flights that provided real-time measurements of methane and ethane, two components of natural gas.

Stephen Conley, co-lead scientist and pilot of the research flights, had to recheck his equipment to confirm the extraordinarily high readings of methane.

“It became obvious that there wasn’t anything wrong with the instruments,” he said. “This was just a huge event.”

Tom Ryerson, a Noaa scientist who was co-lead on the study, said: “Our finding means that the Aliso Canyon leak was the largest accidental release of methane in the history of the US.”

An accident in Texas in 2004 released more natural gas, but an explosion meant most of it did not reach the atmosphere.

The study states that the accident will “substantially impact the state of California greenhouse gas emission targets for the year” and the effects of the released methane will linger for many years.

The Aliso Canyon facility, one of the largest underground reservoirs of natural gas in the US, is owned by the Southern California Gas Company, which is a division of Sempra Energy.

The company, which announced the leak was sealed on 18 February, said it was committed to regaining the “trust and confidence” of the affected local community.

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