FACT SHEET: Marina del Rey Well Remediation

State and local officials – including the Department of Conservation's Division of Oil, Gas, and Geothermal Resources (DOGGR), the Governor's Office of Emergency Services (OES), and the Los Angeles County Fire Department – are overseeing efforts to repair a 1930s-era oil well in Marina del Rey that briefly sprayed natural gas, water, and mud into the atmosphere during a routine well-plugging operation on January 11, 2019. DOGGR will continue to share information with regulating agencies and the public as the repair effort proceeds.

After receiving notification of the incident, DOGGR immediately responded to the scene and engaged with the operator and contractor on their efforts to bring the well under control. After ongoing discussions with the operator and contractor of the well, DOGGR on January 18 issued an emergency order to 1) bring the well under control and 2) permanently plug the well, including cementing off the anomalous gas zone(s), to protect public health and the environment in this densely populated area. The order also requires a battery of tests to determine why the incident occurred and whether there is further damage underground that could pose a problem in the future. OES and the Los Angeles County Fire Department established a unified command center

Current status: The well is under control and there is no public safety emergency at this time. Blowout prevention equipment is in place pending a more permanent seal, and no gas is being emitted.

BACKGROUND

- A land developer, MDR Hotels LLC, leased property from Los Angeles County on the Marina del Rey waterfront to build two hotels. Well Dow R.G.C. 10, API 037-13798, is on the property, and is within 30 feet of a public sidewalk, 50 feet of a road, and 100 feet of residences. MDR is technically the well "operator" under state law and thus received the emergency order.

- The well was drilled to a depth of 3,903 feet in 1931 into the Playa del Rey oil field. It was permanently sealed (plugged and abandoned) according to the requirements of the time in 1956 and again in 1959.

- Last June DOGGR issued a permit to the developer to re-plug the well to current standards. Even after a well has been properly sealed to current standards, DOGGR recommends that no construction occur over a well or in such a way as to impede access to a well. The final decision regarding construction over or near a well is made by local land use authorities.

- On January 11, the re-abandonment contractor, InterAct, encountered a "gas kick" while pulling tubing (pipes) out of the well. That is, there was a buildup of pressure within the well casing. Natural gas, water, and mud blew out of the well to a height of about 100 feet for several minutes. Initial reports estimated the height at about 60 feet; After further investigation DOGGR revised that figure to 100 feet. The contractor's report to Cal OES estimates the release at about 100,000 cubic feet of natural gas with no hydrogen sulfide (H2S).

- The contractor utilized the well's required blowout prevention (BOP) equipment at the wellhead to temporarily seal the well and stop the flow of fluid, including gas.

- Shortly thereafter, DOGGR, the Los Angeles County Fire Department, the U.S. Coast Guard, the California Department of Fish & Wildlife responded to the scene. At DOGGR's request OES established a unified command to manage the incident. The Los Angeles County Fire Department is serving as the incident commander.

- DOGGR has ordered the operator to monitor for signs of potential gas migration to the surface outside the well and to capture any gas samples for geochemical analysis. Construction of the hotel was temporarily stopped to ensure worker safety.

- DOGGR field engineers remain onsite to monitor the well control operations until routine abandonment operations resume.

- The blowout prompted DOGGR and other regulators to question the structural integrity of the well, resulting in the emergency order. There are eight immediate requirements, including:

    ♦ Immediately establishing continuous (24/7) well control operations until the gas zone(s) are isolated.

    ♦ Establishing of a safety perimeter to limit public access to the area around the well.

    ♦ Continuous monitoring and recording of well pressure, with daily reports to DOGGR.

    ♦ Twice-a-day inspections of the well site, construction site, harbor, and surrounding area for signs of gas or fluids coming to the surface. This includes using optical gas imaging and other monitoring equipment, with daily reports to DOGGR.

    ♦ Submission of a plan to DOGGR for the above work within 12 hours of receiving the order.

    ♦ Within 24 hours, submission of a plan for DOGGR approval including the operator's proposed actions to stabilize the well; run diagnostics to determine gas migration pathways inside the well and out; evaluate the casing and cement integrity; identify gas-bearing zones; and any other activities necessary to end potential gas migration and to properly plug and abandon the well.

- The Order also includes some non-emergency requirements, notably the completion – facilitated by an independent third party – of a root cause analysis detailing the factors leading to the loss of well control and release of gas and fluids.

- The evidence indicates the leaked gas originated from a naturally existing geologic formation and not a man-made gas storage reservoir. The well is not drilled into a gas storage field, and the samples of released gas show a chemical signature that is not characteristic of stored gas. The well history also points to the released gas originating from a depth that is consistent with historic natural gas presence and inconsistent with stored gas.

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