

## W. M. Keck Observatory | Hydraulic Fluid Investigation Timeline

| April 19, 2018     | Technicians discover hydraulic fluid seeping on the pier wall; immediate action taken to contain the seepage using absorbent material.  |
|--------------------|---|
| May 29, 2018       | Internal task force is formed to pursue top-priority investigation.   |
| June 4, 2018       | Cinder sampling suggests presence of hydraulic fluid; immediate notification<br>sent to Hawai'i State Department of Health (HDOH), Office of Maunakea<br>Management (OMKM) and Department of Land and Natural Resources<br>(DLNR).      |
| June 5, 2018       | Keck Observatory issues a public news release and launches<br><u>www.keckobservatory.org/responsibility</u> to maintain full transparency.  |
| June 7, 2018       | Masa Fujioka and Associates (MFA), a third-party environmental consultant, is formally retained to conduct a site reconnaissance assessing the extent of the release.   |
| June 2018          | MFA initiates preparation of initial Environmental Hazard Evaluation (EHE) and Environmental Hazard Management Plan (EHMP).   |
| August 1, 2018     | Representatives of DLNR and OMKM visit summit facilities for thorough in-<br>person inspection.   |
| September 5, 2018  | Representatives of the HDOH, Hazard Evaluation and Emergency Response<br>Office (HEER) and OMKM visit the Summit to assess the situation and provide<br>additional guidance and recommendations for preparation of the EHE and<br>EHMP. |
| September 28, 2018 | Sakoda Construction installs a sealant in the one-inch wide gap between the pier supporting the Keck I telescope and the building's floor, fully containing the release.  |
| November 9, 2018   | An EHE and EHMP are filed with HDOH.  |
| December 19, 2018  | HDOH requests clarification on magnitude of contamination and greater detail on monitoring and inspections.   |
| March 18, 2019     | An updated EHE and EHMP is submitted to HDOH  |
| March 25, 2019     | The HDOH notifies W. M. Keck Observatory that no further action is required via an NFA with IC letter, closing the case.  |
|                    |   |