

Exhibit B.12a

Written Direct Testimony of Peter Mills, Ph.D.

I. Education, Experience, and Qualifications.

I am Peter Mills, full professor of anthropology at the University of Hawai‘i at Hilo (UHH), where I have held a tenure track position since 1997. I received a B.A. degree (anthropology and psychology majors) from the University of Vermont in 1984, an M.A. (1987) from Washington State University in anthropology, and a Ph.D. (1996) in anthropology from the University of California at Berkeley. I have worked as an archaeologist in the Northeastern U.S., Northwest, American Southwest, Alaska, Hawai‘i and Easter Island. My professional experience has included archaeological positions held with the federal government, state government, private consulting firms, and not-for-profit research organizations. From 1988 to 1990, I was the assistant state archaeologist for the Commonwealth of Massachusetts, conducting review and compliance work for the Massachusetts Historical Commission (State Historic Preservation Office). In 1990, I began working in Hawai‘i with the Bishop Museum’s Applied Archaeology Group (ARG), and I worked on additional consulting projects in Hawai‘i from 1991-1993 with Biosystems Analysis, Inc. and Scientific Consulting Service, Inc. while conducting my dissertation research on Kaua‘i. For the last 19 years, my research has focused primarily on the archaeology of the Hawaiian Islands, and I served as president of the Society for Hawaiian Archaeology from 2010-2012. I have taught college courses in Cultural Resource Management almost every year since 1997, and I was a governor’s appointee to the Hawai‘i Historic Places Review Board from 2004-2008. I am also director of the University of Hawai‘i at Hilo’s Heritage Management M.A. program that began in 2015. One of my major research projects is the examination of stone tool exchange patterns in the Hawaiian Islands, and from 2004-2006, I conducted a geological and archaeological study of the Mauna Kea Adze Quarry as part of the overall project. I am a qualified archaeologist who meets the standards of the Secretary of the Interior (36 CFR Part 61), and Hawai‘i’s Administrative Rules covering professional qualifications for principal investigators on archaeological projects in Hawai‘i (HAR 13-281-8).

II. Cultural Impact and Assessment and Adverse Effects of TMT

I am aware of the voluminous documentary work conducted between 2005 and 2010 by Pacific Consulting Services, Incorporated (PCSI) on behalf of the State of Hawai‘i both in the form of Archaeological Inventory Surveys (AIS) and a Cultural Resources Management Plan (CRMP) prepared for the Office of Mauna Kea Management (OMKM), as well as the additional AIS work conducted on the TMT site by Cultural Surveys Hawai‘i, Incorporated. These combined surveys and plans identify a number of sites and “find spots” that are contributing elements to the Mauna Kea Summit Region Historic District (State Inventory of Historic Places # 50-10-23-2689). Most importantly, this district has been determined to be eligible for the State and National Registers of Historic Places, and receives the same protections under state and federal law as properties that are actually listed. The state criteria for eligibility include five categories (A-E), and the federal criteria include four (A-D), and in both cases, the Mauna Kea Summit Region Historic District is eligible under all criteria. This situation is particularly relevant when determining the “Area of Potential Effect” (APE) of any proposed project. Although the specific term (APE) is most clearly defined in federal regulations as

“the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16[b]), it is still present under Chapter 343 HRS and associated guidelines for cultural impact assessment:

“In scoping the cultural portion of an environmental assessment, the geographical extent of the inquiry should, in most instances, be greater than the area over which the proposed action will take place. This is to ensure that cultural practices which may not occur within the boundaries of the project area, but which may nonetheless be affected, are included in the assessment” (*Guidelines for Assessing Cultural Impacts*, adopted by the Environmental Council State of Hawaii, Nov. 19, 1997, p. 11).

“The potential of the proposed action to introduce elements which *may alter the setting* in which cultural practices take place” (Ibid, p. 13).

These guidelines become particularly relevant when considering that TMT will be visible to cultural practitioners over much of the island, thus introducing an expansive APE that would include large portions of Hilo, Kohala and Kona. When the CDUA application states “there is no evidence suggesting that the presence of the existing observatories has prevented *or impacted* (emphasis added) those [observances and rituals/traditional customary] practices” (CDUA page 4-7), it is my opinion that the application underestimates the visual impact of the project (and former telescopes) on cultural practitioners, and subsequent sections of the CDUA (4.2.2- 4.2.6) emphasize physical impacts to tangible resources but do not adequately recognize adverse effects caused by the altered setting referred to in the accepted *Guidelines for Assessing Cultural Impacts* cited above.

Furthermore, the CDUA application omits a number of “find spots” and even sites (SIHP 1619 and 21447) that are identified within the astronomy precinct from the discussion of impacts, and it is interesting to note that the map included with the CDUA application has also been cropped from the version prepared by PCSI to limit presentation to an even smaller implied “Area of Potential Effect.” For a project of this magnitude and visibility around the island, I find this limited presentation and discussion of cultural impacts inadequate. While I recognize that a number of mitigation measures have been taken in project design, and studies of visual impacts have been included in the environmental review process, it is my opinion that the CDUA application inadequately acknowledges the broad range of adverse effects to traditional and customary practices that will be caused by this significant construction project in the summit region.