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19 September 2017

ECORP Consulting, Inc.
215 North Fifth Street
Redlands, CA 92374

Attn: Robert J. Cunningham, Staff Archaeologist

re: Paleontological resources for the proposed Leo Solar Project, ECORP Project #
2017-202, near the community of Kettleman City, Kings County, project area

Dear Robert:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Leo Solar Project, ECORP Project # 2017-202, near the community of Kettleman City, Kings County, project area as outlined on the portion of the Avenal Gap USGS topographic quadrangle map that you sent to me via e-mail on 5 September 2017. We have no vertebrate fossil localities that lie directly within the boundaries of the proposed project area, but we do have localities somewhat nearby from sedimentary deposits similar to those that may occur at depth in the proposed project area.

Surface deposits in the entire proposed project area consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the South Dome of the Kettleman Hills immediately to the west. We have no fossil vertebrate localities nearby from these types of deposits and they are unlikely to contain significant vertebrate fossils, at least in the uppermost layers, but they may be underlain at relatively shallow depth by older Quaternary deposits that do contain significant fossil vertebrate remains. Our closest vertebrate fossil localities from similar Quaternary Alluvium deposits are LACM 7844 and 7845, situated west-northwest of the proposed project area between Antelope Valley and Polonio Pass, that produced fossil specimens of common snakes, Colubridae, iguana lizards, Iguanidae, birds, Aves, jackrabbit, *Lepus*, cottontail, *Sylvilagus*, squirrels, Sciuridae, pocket gopher, *Thomomys*, pocket mouse,

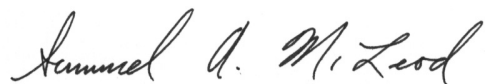
Perognathus, kangaroo rat, *Dipodomys*, and deer, *Odocoileus*. Our next closest vertebrate fossil locality from these deposits is LACM 1156, east-northeast of the proposed project area just north of Delano, that produced a fossil specimen of horse, *Equus*, from a depth of 45 feet below the surface in a well core.

Immediate to the west of the proposed project area there are exposures of the marine late Miocene Etchegoin Formation on South Dome, and this rock unit may also underlie the younger Quaternary deposits in the proposed project area. Our closest vertebrate fossil locality in the Etchegoin Formation is LACM 3814, situated just west of north of the proposed project area on Pintojo Ridge of the Middle Dome in the southeastern portion of the Kettleman Hills. A fossil hexanchid shark, *Notorhynchus primigenius*, is represented in our collections from locality LACM 3814 and this is also the locality for a U.S. National Museum of Natural History specimen of the fossil sea lion *Pliopedia pacifica* (see C.A. Repenning and Richard H. Tedford, 1977. Otarioid Seals of the Neogene. USGS Professional Paper 992: 49 citing locality 350 of W.P. Woodring, R. Stewart and R.W. Richards, 1940. Geology of the Kettleman Hills Oil Field. USGS Professional Paper 195:1-170.). We have other vertebrate fossil localities from the Etchegoin Formation, including LACM (CIT) 319, around Jacalitos Creek in the Kreyenhagen Hills northwest of the proposed project area, and LACM (CIT) 593, along Monocline Ridge in the Ciervo Hills northwest of the proposed project area, that are farther away in Fresno County. These localities have produced specimens of a fossil horse, *Pliohippus*, as is also reported by Repenning and Tedford 1977 cited above.

Shallow excavations in the younger Quaternary alluvial fan deposits exposed throughout the proposed project area are unlikely to produce significant vertebrate fossils. Deeper excavations that extend down into older Quaternary deposits or deposits of the Etchegoin Formation, however, may well encounter significant fossil vertebrate remains. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,



Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice