



United States Department of the Interior

GEOLOGICAL SURVEY
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DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY
REFER TO:

September 14, 1987

Robert Rothman
NRC-Phillips Building Complex
7920 Norfolk Avenue
Bethesda, MD 20814

Dear Bob:

In the process of preparing the PG&E LTSP strong-motion data base for analysis, I have discovered several inconsistencies and ambiguities that need to be resolved before a final analysis can be completed. Some of the questions involve their draft progress report of June 24, 1987 entitled *Empirical Ground Motions Investigations for PG&E Diablo Canyon Power Plant Long Term Seismic Program*, which will simply be referred to as the *Report* in the discussion that follows.

Question 1:

On page II-1, the *Report* indicates that the LTSP data are comprised of 157 sets of peak acceleration readings from 55 earthquakes. However, Tables II-2 and II-3 of the *Report*, as well as the computer file EQSA1.PRN provided to me earlier, list 47 earthquakes and 154 recordings. What is the correct number?

Question 2:

Table II-3 of the *Report* lists peak acceleration data from USGS station number 108 for the 1970 Lytle Creek earthquake. Prior to 1975, this station was located on the crest of a dam and, therefore, is not a rock site for this particular earthquake. Why was this station included in your data base?

Question 3:

There are inconsistencies in the peak acceleration values reported in Table II-3 of the *Report* and those listed in the headers of the response spectra files provided to me

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earlier. These inconsistencies occur for the following four earthquakes:

<u>Earthquake</u>	<u>Date</u>	<u>Station #</u>
Oroville	750801	1051
Coalinga AS03	830509	61
		65
Coalinga AS12	830721	67
Morgan Hill	840424	1408

What are the correct peak accelerations for these recordings?

Question 4:

Table II-3 of the *Report* lists peak acceleration data from three recording stations that are not listed in Table II-1. These stations are:

<u>Earthquake</u>	<u>Date</u>	<u>Station #</u>
Horse Canyon	800225	706
Livermore B	800126	18
Mammoth Lakes D	800527	46

Please provide instrument housing and site geology information for these three stations.

Question 5:

Table II-3 of the *Report* and File EQSA1.PRN provided to me earlier list multiple recordings from station number 65 for four earthquakes. The earthquakes for which this occurs are:

<u>Earthquake</u>	<u>Date</u>
Coalinga AS10	830709
Coalinga AS13	830721
Coalinga AS14	830725
Coalinga AS16	830909

Please identify the specific stations labeled number 65 for each of these earthquakes so they can be associated with a specific entry in Table II-1.

Question 6:

In Table II-3 of the *Report*, the earthquake referred to as Mammoth Lakes B (800525) lists a recording from station



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number 54214. Which station is this? Is it the left abutment site or the central recorder site? The central recorder site is listed for other earthquakes, but in reviewing the CSMIP station data, I find that there are multiple channels associated with the central recorder. Some are on the abutment and some are downstream. Which of these channels are being represented by this station?

Since I must await a response to these questions and several questions posed previously before I can complete my analysis of the PG&E LTSP data base, I would appreciate a response as soon as possible.

Sincerely yours,



Kenneth W. Campbell

