

DOCKETED

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CALIFORNIA ENERGY COMMISSION
REPORT OF CONVERSATION Page 1 of 5



Siting and Environmental Protection Division

FILE: (12-AFC-03)

PROJECT TITLE: Redondo Beach Energy Project

<input type="checkbox"/> Telephone	310-377-1716	<input checked="" type="checkbox"/> Meeting Location: E-mail exchange
NAME:	Abdel-Karim Abulaban	DATE: 8/4/2015
WITH:	Jerry Salamy, Principal Project Manager, CH2MHill	
SUBJECT:	Water Supply Assessment need	

Background: The Application for Certification (AFC) for the proposed Redondo Beach Energy Project (RBEP) states ground surface elevations in several places and provides elevation contours on proposed grading plans. Staff needs those elevations for assessing potential flooding due to inland rainstorms as well as sea activities such as sea level rise, wave run-up and tsunamis. Staff noticed that elevations in the AFC and accompanying appendixes are stated relative to the mean sea level (MSL) while the USGS maps for the same area show similar elevations, but relative to the North American Vertical Datum of 1988, known as NAVD88. NAVD88 is about 2.6 feet lower than the latest MSL elevation published by the National Oceanic and Atmospheric Agency (NOAA, 2013). Since NAVD88 is lower than MSL, true above sea level site elevations would be lower than what is indicated in the AFC and the accompanying appendixes, making parts of the site more susceptible to flooding due to various hydrologic and hydraulic phenomena.

Staff contacted Jerry Salamy of CH2MHill, the consultant for the applicant for RBEP via email and telephone to clarify the apparent conflict. Salamy, after consulting the surveyor in charge of the proposed project, informed staff via email that the elevations found in the AFC sections and on grading plans are relative to NAVD88. Therefore, staff will base the elevations on the NAVD88 for the purpose of completing its assessment. A copy of the email exchange between staff and Jerry Salamy is attached to this Report of Conversation (ROC).

cc:	Signed:
	Name: Abdel-Karim Abulaban



ATTACHMENT: Email Chain

From: Jerry.Salamy@CH2M.com [mailto:Jerry.Salamy@CH2M.com]
Sent: Tuesday, August 04, 2015 11:22 AM
To: Abulaban, Abdel-Karim@Energy; Weaver, Casey@Energy
Cc: Marshall, Paul@Energy; Winstead, Keith@Energy; Conway, Mike@Energy
Subject: RE: RBEP: Site elevations relative to NAVD88

Hi Karim,

I did a search of the AFC for mean sea level and noted the references were either to USGS topographic maps or to groundwater sampling reports we reviewed. If the AFC references a site elevation for RBEP, this site elevation was derived from the grading plans (AFC Appendix 5.15A) which are based on NAVD88 elevations. If you have a specific reference, I can clarify.

Thanks,

Jerry Salamy
Principal Project Manager
CH2M HILL
2485 Natomas Park Drive, Suite 600
Sacramento, CA 95833
Office Phone: 916.286.0207
Cell Phone: 916.769.8919

From: Abulaban, Abdel-Karim@Energy [mailto:Abdel-Karim.Abulaban@energy.ca.gov]
Sent: Tuesday, August 04, 2015 11:07 AM
To: Salamy, Jerry/SAC; Weaver, Casey@Energy
Cc: Marshall, Paul@Energy; Winstead, Keith@Energy; Conway, Mike@Energy
Subject: RE: RBEP: Site elevations relative to NAVD88

Jerry,

Thanks for the follow up. However, what we are struggling with is the following:

Are the reported elevations in different places in the AFC relative to the NAVD88 or to the MSL? It keeps referring to elevations in the AFC as above MSL. We were thinking that maybe the elevations were taken relative to NAVD88 to begin with but were later converted to MSL. Please confirm if the elevations mentioned in the AFC as MSL elevations are relative to the MSL, or if the AFC should have said NAVD88 instead.

Thank you.
Karim

Abdel-Karim Abulaban, Ph.D., P.E., QSD/P
Associate Civil Engineer
CA Energy Commission

CALIFORNIA ENERGY COMMISSION
REPORT OF CONVERSATION Page 3 of 5



1516 9th St., MS 46
Sacramento, CA 95814

Ph. 916-651-3775; Fax 916-654-3882

From: Jerry.Salamy@CH2M.com [<mailto:Jerry.Salamy@CH2M.com>]

Sent: Tuesday, August 04, 2015 10:10 AM

To: Weaver, Casey@Energy

Cc: Marshall, Paul@Energy; Abulaban, Abdel-Karim@Energy; Winstead, Keith@Energy

Subject: RE: RBEP: Site elevations relative to NAVD88

Casey,

Per your request yesterday regarding the mean sea level basis for the elevations on the grading plans, below is the surveyor's response. Let me know if you have any additional questions

The elevations for the project are not based on a 'mean sea level' derived system. The old National Geodetic Vertical Datum of 1929 (NGVD29) was essentially based on an approximation of mean sea level, but this project is based on the North American Vertical Datum of 1988 (NAVD88), which is not derived from mean sea level.

Jerry Salamy
Principal Project Manager
CH2M HILL
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Cell Phone: 916.769.8919

From: Abulaban, Abdel-Karim@Energy [<mailto:Abdel-Karim.Abulaban@energy.ca.gov>]

Sent: Monday, July 27, 2015 8:19 AM

To: Winstead, Keith@Energy; Salamy, Jerry/SAC

Cc: Conway, Mike@Energy; Marshall, Paul@Energy; Davis, Chris@Energy; Willis, Kerry@Energy

Subject: RE: RBEP: Site elevations relative to NAVD88

Keith,

Jerry called me last week and informed me that the information would be submitted today. However, we did independent research and found from NOAA that the NAVD88 datum is 2.6 feet below the last available mean sea level elevation which is for the 1983-2001 epoch. With this information we can adjust the elevations to the NAVD88 datum, but we also would like the applicant to corroborate the adjusted elevations.

Thanks.
Karim

CALIFORNIA ENERGY COMMISSION
REPORT OF CONVERSATION Page 4 of 5



From: Winstead, Keith@Energy
Sent: Monday, July 27, 2015 7:56 AM
To: Abulaban, Abdel-Karim@Energy; jerry.salamy@CH2M.com
Cc: Conway, Mike@Energy; Marshall, Paul@Energy; Davis, Chris@Energy; Willis, Kerry@Energy
Subject: RE: RBEP: Site elevations relative to NAVD88

Hi All,

Has this information been clarified?

Thanks

Keith Winstead
California Energy Commission
Energy Facilities Siting Division
Project Manager
916-654-5191
Fax 916-654-3882

From: Abulaban, Abdel-Karim@Energy
Sent: Monday, July 20, 2015 10:33 AM
To: jerry.salamy@CH2M.com
Cc: Conway, Mike@Energy; Marshall, Paul@Energy; Winstead, Keith@Energy
Subject: RBEP: Site elevations relative to NAVD88

Good morning Jerry,

We have been trying to assess the site separation from sea level during the design life of the project as a result of project seal level rise. However, we discovered that the elevations given on grading plans conflict with elevations found on USGS maps, where USGS maps consistently give higher elevations than the ones on grading plans and also those elevations mentioned in different places in the AFC. We were wondering if the difference is due to usage of different datums (correct plural of datum is data, but that would be confusing!) since USGS maps are relative to NAVD88 while the AFC states elevations as above mean seal level (MSL). For example, the grading plans show the site elevations to be somewhere between 13 and 17 ft. while USGS maps show it to be between 17 and 20 ft high.

In order to be consistent in the reference use for elevations among the different disciplines, and to avoid any potential confusion, we would like to get site elevations relative to the NAVD88. For now, what we need are the minimum and maximum site elevations so that we can assess separation between site and seal level as a result of anticipated sea level rise during the next 50 years.

Thank you.

Karim

CALIFORNIA ENERGY COMMISSION
REPORT OF CONVERSATION Page 5 of 5



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