Department of Toxic Substances Control

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MEMORANDUM

TO: Aaron Yue
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FROM: Chris Guerre, CHG
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PROFESSIONAL GEOLOGIST
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DATE: June 13, 2018

SUBJECT: **WORK PLAN FOR HISTORICAL WATER SUPPLY WELL RECONNAISSANCE, PACIFIC GAS AND ELECTRIC COMPANY (PG&E), TOPOCK COMPRESSOR STATION SITE NEEDLES, CALIFORNIA (EPA ID NO. CAT080011729)**

PCA 22120 SITE CODE 540015 WP 48

DOCUMENT REVIEWED

The following document was reviewed by the GSU per the request of Department of Toxic Substance Control (DTSC) Project Manager, Mr. Aaron Yue: *Work Plan for Historical Water Supply Well Reconnaissance, Topock Compressor Station, Needles, California* (Recon Work Plan). The Recon Work Plan, dated March 30, 2018, was prepared by CH2M HILL Engineers, Inc. (CH2M) for PG&E.

BACKGROUND

Under the California State Well Standards, PG&E must properly decommission installed wells when they are no longer in use. DTSC had directed PG&E to gather information for wells built since the construction of the Topock Compressor Station, circa 1950s, after learning that one well (TCS-4) was converted into a waste injection well in the 1960s. The initial request was contained in a letter dated May 22, 2014 and was followed by a September 27, 2016 letter requesting additional information and emphasizing that PG&E should decommission abandoned wells in compliance with state regulatory standards. The Recon Work Plan was submitted to DTSC for

comments in response to our September 27, 2016 letter. The existence and condition of most of the historic wells is unknown. PG&E prepared the Recon Work Plan in an attempt to locate the wells. The Recon Work Plan proposes to locate five historic wells utilizing the following sequential steps: 1) Conduct pre-surveys; 2) Conduct surface geophysical surveys; 3) Evaluate geophysical results; 4) Confirm geophysical anomalies with intrusive methods (e.g., potholing) if determined appropriate; 5) If located, assess well condition; and 6) Report out the results of the evaluation, including the development of plans for any subsequent evaluation of well conditions and decommissioning. This work will be conducted by PG&E under existing standards by law. PG&E's Recon Work Plan is not a request for DTSC's discretionary approval. The GSU is providing comments to the Recon Work Plan to ensure the best possible success for this effort. The results from PG&E's implementation of the Recon Work Plan may provide DTSC with further understanding of the environmental condition at the site, including the potential historical use of other wells for waste injection similar to TCS-4.

RECOMMENDATIONS

The GSU reviewed the Recon Work Plan and does not object to its implementation. The GSU does recommend that PG&E revise the Recon Work Plan to incorporate the following comments.

A. Include page numbers on all pages. Only the first page is numbered.

B. Renumber or add a section heading since Section 2 is not present.

C. Page 3, Section 1 Background: Revise the sentence as follows since some well construction information is available in the form of boring log, total depth, well yield, and survey data: *Therefore, all potential historical well locations are included for additional reconnaissance even with the limited ~~in the absence of~~ well ~~construction~~ information available.*

D. Page 3, Section 3 Submittal of References: The section should indicate that many of the references listed in PG&E's July 14, 2014 response letter were not transmitted to DTSC or the Department of the Interior. DTSC requests that these references be provided to the agencies electronically.

E. Page 4, Section 6 Proposed Survey Areas, Well #1 - Area 1A: Figure 2 shows Well #1 located within both the Transwestern facility as well as on PG&E property south of the Transwestern facility. Using image overlays, the GSU independently found Well #1 to be located at the northeast corner of the work trailer as pictured on the middle illustration on Figure 2. The middle illustration appears to fit the main access road overlay image best. The GSU did not receive Drawing 580855 as pictured on Figure 2 (only the eastern portion of the drawing was received). DTSC requests that Drawing 580855 be provided electronically.

F. Page 5, Section 6 Proposed Survey Areas, Well #2 - Area 2A: The GSU recommends that handheld magnetic locators also be utilized for locating this

well in the immediate area surrounding the circles pictured in Figure 3 as the area is not greatly disturbed and the handheld Schonstedt units used previously at the well TCS-4 area performed quite well in the field. The Recon Work Plan should specify that handheld magnetic locators will be onsite and available for assessing all wells.

G. Page 5, Section 6 Proposed Survey Areas, Well #3 - Area 3D: This section eliminates the existing well near the former resort from further consideration largely due to its smaller well diameter. For completeness, the Recon Work Plan should be revised to specify the diameter of the existing well in this area and the known and anticipated diameters of all the 1950 era wells. Should it turn out that smaller diameter historic wells be discovered in the future at other survey areas, this existing well may need to be reevaluated.

H. Page 6, Section 6 Proposed Survey Areas, Well #5 - Area 5A: The Recon Work Plan should specify that if Well 5 has not been located, then the eliminated eastern portion of Area 5A should be closely examined during earth work during remedy construction and IM3 decommissioning. A similar issue exists for the less likely well location Area 5D.

I. Page 6, Section 6 Proposed Survey Areas, PGE-02: In this section, please document the infrastructure associated with this well as it may assist in its discovery. Specifically, the 4-inch and 6-inch water lines leading to PGE-02 (and PGE-01) should be mentioned (see Drawing 482629) so that geophysical assessment can plan for the evaluation of the water lines which should lead to the well head. Similarly, the electrical cable and conduit discovered in the freeway cut during the soil investigation of Area of Concern 14 should be mentioned as it may also lead to the well head. Finally, please clarify in the Recon Plan if the well survey coordinates documented on drawings can be used to precisely locate well PGE-02. The Recon Work Plan should incorporate the items discussed above.

J. Page 8, Section 7.2. Non-Intrusive Geophysical Survey, Paragraph 5: The section language should be modified as suggested to notify agencies on the need for surveys: "*This approach will utilize the early geophysical data collected from the most likely areas or portions of areas to inform the need for surveys of the larger area or deprioritized areas. Agencies will be notified prior to surveys and prior to eliminating survey areas or significantly reducing survey areas."*

K. Page 9, Section 7.5 Well Condition Assessment, Topock-1: The paragraph for well Topock 1 should be revised to address the great potential that this well site has been modified significantly by recent grading in the area. A geophysical survey will be needed if the well has been covered during grading.

DTSC requests that PG&E consider the comments noted in this memorandum and revise the Recon Work Plan accordingly.

The GSU notes that the comments and recommendations presented in this memorandum are site specific and should not be applied to other projects without consultation with the project geologist. If you have any questions or comments, please contact Chris Guerre at (714) 484-5422 or christopher.guerre@dtsc.ca.gov.

Peer reviewed by: Jose Marcos, PG

cc: Alfredo Zanoria, CEG, CHG