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January 23, 2006

Mr. Norman Shopay
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710

Subject: Request for Reevaluation of Monthly Average Target Pumping Rate for IM-3
Extraction System
PG&E Topock Compressor Station, Needles, California

Dear Mr. Shopay,

This letter is in response to your December 12, 2005 letter regarding the requirement to increase pumping from extraction wells TW-2D and TW-3D. In the December 12 letter, the Department of Toxic Substances Control (DTSC) specified a monthly average pumping rate goal of 125 gallons per minute (gpm). Pacific Gas and Electric Company (PG&E) believes that this average pumping rate goal is infeasible based on the plant downtime required by *Interim Measures No. 3 [IM No. 3] Treatment and Extraction System Operation and Maintenance Plan, Rev. 0, Volume 1* (CH2M HILL 2005). In addition, the 125 gpm pumping rate goal becomes even more infeasible when unplanned (but likely) downtime is factored into the expected plant pumping rates.

To evaluate the potential maximum monthly average capacity of the treatment plant, CH2M HILL reviewed the IM No. 3 Operations and Maintenance Manual, which describes planned downtime for preventive maintenance and cleaning of reverse osmosis and microfilter membranes, amounting to 2 days per month during normal months (8 months per year), 4 days per month during 2 months per year, and 7 days per month during 2 months per year. This equates to 38 days per year, or about 10.4 percent required downtime. If the plant were operated constantly at the maximum capacity of 135 gpm and experienced no unplanned downtime, the average annual flow rate achieved would be 121 gpm.

The following table provides the average monthly flow rates for months with different amounts of planned downtime, as described in the IM No. 3 Operations and Maintenance Manual. The calculations assume a 30-day month.

	Max Monthly Average Flow (gpm)
Months with 2 days planned downtime (8 months per year)	126
Months with 4 days planned downtime (2 months per year)	117
Months with 7 days planned downtime (2 months per year)	104

As shown in the table above, the maximum average monthly flow with no unplanned downtime is 126 gpm in months with minimal planned maintenance. During 4 months of the year, planned downtime will result in flow rates less than 125 gpm.

In addition to the downtime required by the IM No. 3 Operations and Maintenance Manual, unplanned downtime is very likely, especially with a plant designed with a single treatment train and located in a remote area. PG&E is staffing the facility and procuring spares to minimize unplanned downtime; however, it is highly likely that there will be at least some unplanned downtime. If the unplanned downtime were 2 percent of the normal operating time, the maximum pumping rates for the plant would be those shown in the right-hand column of the table below.

	Max Monthly Average Flow (gpm)	Max Monthly Average Flow with 2% Unplanned Downtime (gpm)
Months with 2 days planned downtime (8 months per year)	126	123
Months with 4 days planned downtime (2 months per year)	117	114
Months with 7 days planned downtime (2 months per year)	104	101

PG&E believes that it is reasonable to estimate that there will be 2 percent unplanned downtime; therefore, PG&E requests that DTSC establish the monthly maximum flows from the table above as a new average monthly pumping rate goal. As an alternative, DTSC could establish a target pumping rate of 118 gpm calculated on a semiannual (6-month) basis. Calculating the target pumping rate average on a semiannual, rather than a monthly, basis provides more flexibility to offset months with unplanned downtime with months with better-than-expected performance. The 118 gpm target would allow for planned downtime and 2 percent unplanned downtime over a 6-month period.

In conclusion, PG&E is concerned because the 125 gpm average flow rate target set by DTSC is beyond the design capacity of the IM No. 3 plant under likely operating conditions. The treatment plant was designed with excess capacity to extract and treat more water than is needed to control gradients on average. However, PG&E respectfully submits that the 125 gpm average monthly pumping rate goal that DTSC has established implies a level of reliability that is beyond what this plant can reliably achieve. PG&E therefore requests that DTSC reconsider the 125 gpm average flow rate target in the December 12, 2005 letter and develop a flow rate target that allows for planned and unplanned downtime.

Sincerely,



Cc: Karen Baker
Aaron Yue
Kate Burger