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**Subject: Topock Interim Measures No. 3 Extraction System 20 Percent Downtime in
September 2009 Report
Pacific Gas and Electric Company, Topock Compressor Station
Interim Measure No. 3 Groundwater Treatment System**

Dear Mr. Yue and Ms. Baker:

This PG&E Topock Interim Measures No. 3 (IM3) Extraction System 20 Percent Downtime Report is provided pursuant to the July 27, 2007 letter regarding Updates and Modifications to PG&E's Topock Interim Measures Performance Monitoring Program. The 2007 letter required a report when the IM3 system was offline for an extended period of time (defined as more than 20% of any month).

As identified in the July 27, 2007 letter, "The notification letter report should fully describe the time and duration of the shutdown periods, the reasons for shutdown, and provide the performance monitoring data (flow rate and hydraulic data/gradients measured, etc) for the reporting period."

On October 9, 2009, PG&E sent a courtesy notification e-mail to DTSC to relay that for the month of September 2009, while the average gradient from the three well pairs in the IM3 Performance Monitoring Program exceeded the performance standard of 0.001 feet per foot (at 0.0016 feet per foot), the hydraulic gradient for one well pair (MW-45-095a/MW-27-085) was below 0.001 feet per foot at 0.0008 feet per foot.

In review of the 20% Downtime Report, PG&E became aware that, due to equipment failure, data for one well pair (MW-31-135 & MW-33-150) is available for only September 2 - 10, 2009. In consideration of this information, PG&E recalculated the September 2009 average gradient in approved well pairs without northern pair to be 0.00133 feet per feet.

Extraction System Operations

Pumping data for the IM3 groundwater treatment system for September 2009 are presented in Attachment 1 - September 2009 IM3 Daily Flow Rates. Included in the Daily Flow Rates are the IM3 extraction system (extraction wells PE-01, TW-3D, TW-2S and TW-2D) flow rates.

The IM3 extraction system was shut down for 195 hours and 26 minutes during September 2009 (27.2 percent), for both planned and unplanned events. Attachment 2 presents the IM3 Extraction System Operations Log (Downtime Summary) for September 2009. The cause of the majority of extraction system downtime was unplanned repair work required to diagnose, cleanup, and restart IM3 due to a mechanical failure the resulted in synthetic oil fouling of the treatment water on September 9, 2009. Additionally, extraction well PE-1 was shut down for approximately 2 days over September 26-28, 2009 due to throughput limitations of the microfilter, which was caused by long-term buildup of membrane scaling.

PG&E notified DTSC of the synthetic oil fouling on September 9, 2009. DTSC and Colorado River Basin Regional Water Board concurrence to restart injection was received September 16, 2009, and the plant was returned to treatment service on that date.

Hydraulic Gradients

Hydraulic gradients were measured during September 2009 for well pairs selected for performance monitoring with two pumping centers (TW-3D and PE-1). The following well pairs were approved by DTSC on October 12, 2007 to define the gradient induced while pumping from the two locations:

- MW-31-135 and MW-33-150 (northern gradient pair)
- MW-45-95 and MW-34-100 (central gradient pair)
- MW-45-95 and MW-27-85 (southern gradient pair)

Table 1 presents the average monthly hydraulic gradients that were measured between the well pairs in September 2009.

TABLE 1

Landward Gradients in Approved Well Pairs
IM3 Extraction System 20% Downtime in September 2009

| Approved Well Pairs | Landward Gradient Measured Results (feet/feet) | Landward Gradient Performance Standard (feet/feet) |
|------------------------------------|--|--|
| ^a MW-31-135 & MW-33-150 | 0.00196 | 0.001 |
| MW-45-095a & MW-34-100 | 0.00186 | 0.001 |
| MW-45-095a & MW-27-085 | 0.00080 | 0.001 |
| ^b Average gradient | 0.0013 | |

^a Due to equipment failure, data for well pair MW-31-135 & MW-33-150 is available for only September 2 - 10, 2009. The transducer in MW-33-150 was replaced on October 5, 2009.

^b Average gradient in approved well pairs during September 2009 without northern pair (MW-31-135 and MW-33-150).

The average gradient at the site remains above the required 0.001 feet per feet threshold. The below-target landward gradient in well pair MW-45-095a/MW-27-085 is a result of previously reported unplanned downtime at the IM3 facility; the facility was shut down or had a reduced flow during September 2009. The IM3 plant is now running at normal capacity, and it is expected that all three well pairs will be above 0.001 feet per feet hydraulic gradient during October 2009. The measured gradient of 0.0008 still provided a strong landward gradient in that single well pair.

If you need any additional information or if you have any questions regarding this report, please do not hesitate to call me at (760) 326-5582.

Sincerely,

Yvonne Meeks

Enclosures:

Attachment 1 - September 2009 IM3 Daily Flow Rates

Attachment 2 - September 2009 IM3 Extraction System Operations Log

October 19, 2009

cc: Bob Doss, PG&E
Curt Russell, PG&E
Chris Smith, PG&E

**Attachment 1 - September 2009 IM3 Daily Flow
Rates**

September 2009 Operational Data

IM-3 Groundwater Extraction and Treatment System
 PG&E Topock Compressor Station, Needles California

| Month | Day | Year | Extraction Well System ^a | | | | Injection Well System ^a | | | RO Brine ^a | |
|---|-----|------|-------------------------------------|--------------------|--------------------|-------------------|------------------------------------|--------------------|--------------------|-----------------------|---------------|
| | | | TW-2S (gallons) | TW-2D (gallons) | TW-3D (gallons) | PE-1 (gallons) | Total (gallons) | IW-02 (gallons) | IW-03 (gallons) | Total (gallons) | (gallons) |
| September | 1 | 2009 | -- | -- | 153,067 | 39,574 | 192,642 | 13 | 182,494 | 182,507 | 3,118 |
| September | 2 | 2009 | -- | -- | 153,302 | 39,517 | 192,819 | 12 | 182,544 | 182,557 | 6,081 |
| September | 3 | 2009 | -- | -- | 153,681 | 39,124 | 192,804 | 13 | 193,330 | 193,342 | 3,798 |
| September | 4 | 2009 | -- | -- | 153,918 | 38,866 | 192,784 | 6 | 184,347 | 184,353 | 6,107 |
| September | 5 | 2009 | -- | -- | 153,948 | 38,946 | 192,895 | 10 | 179,995 | 180,006 | 3,071 |
| September | 6 | 2009 | -- | -- | 154,282 | 38,177 | 192,459 | 9 | 191,369 | 191,378 | 6,275 |
| September | 7 | 2009 | -- | -- | 154,275 | 38,514 | 192,789 | 6 | 184,199 | 184,206 | 3,148 |
| September | 8 | 2009 | -- | -- | 116,254 | 30,106 | 146,360 | 13 | 140,461 | 140,474 | 4,092 |
| September | 9 | 2009 | -- | -- | 70,142 | 18,599 | 88,741 | 13 | 87,084 | 87,097 | 3,162 |
| September | 10 | 2009 | -- | -- | 15 | 23 | 38 | 8 | 21 | 29 | 3 |
| September | 11 | 2009 | -- | -- | 15 | 27 | 42 | 10 | 20 | 30 | 3 |
| September | 12 | 2009 | -- | -- | 14 | 19 | 33 | 7 | 51 | 58 | 3 |
| September | 13 | 2009 | -- | -- | 17 | 28 | 45 | 184 | 640 | 824 ^b | 2 |
| September | 14 | 2009 | -- | -- | 6,415 | 26 | 6,441 | 24 | 7,604 | 7,628 ^b | 5 |
| September | 15 | 2009 | -- | -- | 12 | 29 | 41 | 18 | 6,552 | 6,570 ^b | 4 |
| September | 16 | 2009 | -- | -- | 52,420 | 14,182 | 66,602 | 61,668 | 690 | 62,357 | 7 |
| September | 17 | 2009 | -- | -- | 152,907 | 40,515 | 193,423 | 190,110 | 335 | 190,445 | 3,178 |
| September | 18 | 2009 | -- | -- | 153,023 | 40,253 | 193,276 | 189,086 | 480 | 189,566 | 3,850 |
| September | 19 | 2009 | -- | -- | 153,141 | 40,052 | 193,194 | 191,396 | 334 | 191,730 | 3,705 |
| September | 20 | 2009 | -- | -- | 153,101 | 40,154 | 193,255 | 186,295 | 85 | 186,380 | 4,116 |
| September | 21 | 2009 | -- | -- | 152,952 | 40,465 | 193,417 | 185,372 | 204 | 185,576 | 6,139 |
| September | 22 | 2009 | -- | -- | 154,252 | 40,373 | 194,625 | 182,675 | 546 | 183,221 | 6,275 |
| September | 23 | 2009 | -- | -- | 103,822 | 27,063 | 130,885 | 131,713 | 773 | 132,486 | 3,279 |
| September | 24 | 2009 | -- | -- | 155,532 | 38,909 | 194,441 | 187,412 | 88 | 187,500 | 3,270 |
| September | 25 | 2009 | -- | -- | 135,341 | 29,766 | 165,106 | 164,036 | 52 | 164,088 | 5,255 |
| September | 26 | 2009 | -- | -- | 145,076 | 17,156 | 162,231 | 161,147 | 20 | 161,167 | 4,421 |
| September | 27 | 2009 | -- | -- | 166,644 | 26 | 166,669 | 148,646 | 14 | 148,661 | 4 |
| September | 28 | 2009 | -- | -- | 122,327 | 18,696 | 141,023 | 145,227 | 66 | 145,293 | 5,253 |
| September | 29 | 2009 | -- | -- | 155,568 | 39,153 | 194,720 | 185,758 | 50 | 185,809 | 4,177 |
| September | 30 | 2009 | -- | -- | 155,492 | 39,270 | 194,762 | 185,110 | 251 | 185,361 | 6,536 |
| Total Monthly Volumes (gal) | | | 0 | 0 | 3,380,954 | 787,608 | 4,168,562 | 2,496,000 | 1,544,698 | 4,040,699 | 98,338 |
| Average Pump/Injection Rates (gpm) | | | 0.0 | 0.0 | 78.3 | 18.2 | 92.0 | 57.8 | 35.8 | 89.2 | 2.3 |

NOTES:

-- : Not in operation during reporting period.

gal: gallons

gpm: gallons per minute

RO: Reverse Osmosis

^a Flow Readings tabulated from the date historian at the IM-3 Facility.

^b No water pumped to injection wells on Sept. 10-15. Water was drained and flushed out from injection line and measured back flow through IW-03 flow meter.

**Attachment 2 – September 2009 Extraction
System Operation Log**

Extraction System Operations Log for September 2009 PG&E Topock Interim Measures Performance Monitoring Program

During September 2009, extraction wells TW-3D and PE-1 operated at a target pump rate of 135 gallons per minute (gpm) excluding periods of planned and unplanned downtime. Extraction wells TW-2S and TW-2D were not operated during September 2009. The operational run time for the IM No.3 groundwater extraction system (combined or individual pumping) was 72.8 percent during the September 2009 reporting period.

The IM No. 3 facility treated approximately 4,158,561 gallons of extracted groundwater during September 2009. The IM No. 3 facility also treated approximately 5,445 gallons of water generated from the groundwater monitoring program and 9,300 gallons of injection well backwashing/re-development water. Two containers of solids from the IM No. 3 facility were transported offsite during September 2009.

Periods of planned and unplanned extraction system down time (that together resulted in approximately 27.2 percent of downtime during September 2009) are summarized below. The times shown are in Pacific Standard Time (PST) to be consistent with other data collected (e.g., water level data) at the site.

- **September 6, 2009 (unplanned):** The extraction well system was offline from 8:29 a.m. to 8:30 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 1 minute.
- **September 8, 2009 (planned):** The extraction well system was offline from 11:20 a.m. to 11:28 a.m., 11:32 a.m. to 11:33 a.m., 11:41 a.m. to 11:42 a.m. , 11:47 a.m. to 11:48 a.m., 12:04 p.m. to 12:05 p.m. and 12:10 p.m. to 12:11 p.m. for testing of the pipeline leak detection alarm system. Extraction system downtime was 13 minutes.
- **September 8, 2009 (planned):** The extraction well system was offline from 1:21 p.m. to 1:44 p.m., 1:54 p.m. to 2:17 p.m. and 2:27 p.m. to 6:59 p.m. for the microfilter bank switch. Extraction system downtime was 5 hours and 18 minutes.
- **September 9 -14, 2009 (unplanned):** The extraction well system was offline from 11:00 a.m. on September 9 to 2:19 p.m. on September 14 due to an equipment failure resulting in synthetic oil fouling of the treatment stream in operation tank T301A from the tank mixer gearbox. Extraction system downtime was 5 days, 3 hours and 19 minutes.
- **September 14 -16, 2009 (planned):** The extraction well system was offline from 3:10 p.m. to 3:26 p.m. on September 14 and from 3:32 p.m. on September 14 to 3:42 p.m. on September 16 to collect samples and to maintain proper levels in tanks. Extraction system downtime was 2 days, and 26 minutes.
- **September 23, 2009 (planned):** The extraction well system was offline from 7:58 a.m. to 3:49 p.m. for the microfilter bank switch and injection line maintenance. Extraction system downtime was 6 hours and 51 minutes.
- **September 25, 2009 (unplanned):** The extraction well system was offline from 12:12 p.m. to 2:37 p.m. due to failure of polymer feed. Extraction well downtime was 2 hours and 25 minutes.

- **September 26, 2009 (unplanned):** The extraction well system was offline from 2:00 p.m. to 2:02 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction well downtime was 2 minutes.
- **September 27, 2009 (unplanned):** The extraction well system was offline from 10:11 a.m. to 10:32 p.m. due to low pressure in the TW-3D extraction well pipeline. Extraction well downtime was 21 minutes.
- **September 27-28, 2009 (unplanned):** The extraction well system was offline from 12:54 p.m. to 2:25 p.m. on September 27, from 5:23 a.m. to 5:27 a.m. on September 28, and 5:28 a.m. to 6:38 a.m. on September 28 due to high water level in the raw water tank, T-100. Extraction well downtime was 3 hours and 45 minutes.
- **September 28, 2009 (planned):** The extraction well system was offline from 7:43 a.m. to 12:32 p.m. to install new modules in the microfilter. Extraction well downtime was 4 hours and 49 minutes.