## Detterman, Mark, Env. Health

From: Paul Parmentier [pparmentier@thesourcegroup.net]

Sent: Tuesday, March 20, 2012 2:54 PM
To: Detterman, Mark, Env. Health
Cc: 'Greg McIver'; 'Murray, Dave'

**Subject:** RE: Former Paco Pump, RO00320- groundwater monitoring schedule

Expires: Sunday, September 16, 2012 12:00 AM

Mark, thanks for the detailed review. I like it when regulators take the time to really get science into it. We noted your request and will include the additional wells, and we will revisit the whole program for the next round of sampling.

Paul Parmentier, CHG 562 / 597.1055 ext. 106

Principal Hydrogeologist

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**From:** Detterman, Mark, Env. Health [mailto:Mark.Detterman@acgov.org]

Sent: Tuesday, March 20, 2012 2:41 PM

To: 'Paul Parmentier'

Cc: 'Greg McIver'; 'Murray, Dave'

Subject: RE: Former Paco Pump, RO00320- groundwater monitoring schedule

## Paul,

I'd be in agreement with the wells you've listed. After a bit more review I've added a number of wells for quarterly monitoring, principally to get a better handle on the extractable range hydrocarbon issue beneath the site, but some of these will also flesh out the purgeable / gasoline range. This will change with sufficient analytical and yearly cycle contaminant fluctuation understanding. The wells are E-11 and MW-6 (TPHg, d, & mo, BTEX, and fuel oxy's), and MW-1, MW-5, MW-7, and E-2 for TPHd & mo only. MW-2 can also join this TPHd & mo only group (no BTEX / fuel oxy's). All extractable analysis w/SGC.

We'll need to revisit this for the next quarter, but my initial thinking is all wells at the site should be monitored semiannually, at least for a bit. Some wells could probably join an annual analyte list with a reasonably extensive analytical history.

All wells, even those not sampled, are requested to be tagged for DTW so that site gw flow direction and gradient are understood.

Hopefully this helps somewhat,

Mark Detterman

Senior Hazardous Materials Specialist, PG, CEG

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http://www.acgov.org/aceh/lop/ust.htm

From: Paul Parmentier [mailto:pparmentier@thesourcegroup.net]

**Sent:** Tuesday, March 20, 2012 9:38 AM

To: Detterman, Mark, Env. Health Cc: 'Greg McIver'; 'Murray, Dave'

Subject: RE: Former Paco Pump, RO00320- groundwater monitoring schedule

Dear Mark, thanks for your detailed review and allowing us to propose a more focused sampling this quarter. Monitoring wells E-9 and E-10 are located in the core of the TPH-g, benzene, and TPH-d plume. Monitoring wells E-3 and E-6 are located down gradient of the core TPH-g and benzene plume. E-6 also has higher TPH-d. Monitoring wells E-7 and E-8 are located down gradient/cross gradient of the core plumes and would provide data to define the lateral extent of the plume.

We would recommend sampling the following wells this quarter for TPH-g, TPH-d/TPH-mo (with silica gel cleanup), BTEX, and fuel oxygenates.

F-3

E-6

E-7

E-8

E-9

E-10 and

MW-2.

If this is OK with you, we will schedule (pending property access) sampling for next week around March 29 or 30.

Paul Parmentier, CHG 562 / 597.1055 ext. 106

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From: Detterman, Mark, Env. Health [mailto:Mark.Detterman@acgov.org]

Sent: Monday, March 19, 2012 2:44 PM

**To:** 'Paul Parmentier' **Cc:** 'Murray, Dave'

Subject: RE: Former Paco Pump, RO00320- groundwater monitoring schedule

Paul.

It's tough getting to all the sites quickly, so here's a tardy response.

In general I agree that all wells don't need to be sampled quarterly or all the time, especially those in close proximity to one another; however, I do think additional quarterly data from selected wells may yield some insights. We need to establish the annual cycle at the site, then back off where we can. There also appears to be a good deal going on at the site. For example wells E-2, E-3, E-5, and E-6 appear to be monitoring a heavy hydrocarbon plume and monitoring some of those quarterly for a bit makes sense (E-6 as downgrad, E-3 as perhaps proximal), until we understand that cycle. E-3 also appears to be monitoring the downgrad or lateral extent of the gas plume so that makes sense. E-7 and E-8 perhaps as downgradient extent (currently) for the gas plume; we'll need at least several within the worst of the core zone closer to the release (worst case not best case wells). MW-2 could back off to annual on TPHg / BTEX, but collect TPHd and mo quarterly for a bit; that's quite a drop and is it real?; MW-4 looks like annual would work in June (as highest detect for the year over a few years); etc. For wells MW-1 and MW-5, the wells appears to be monitoring a heavier hydrocarbon for several quarters, but TPHg could be backed out to perhaps annual. Some of the key items for the county (not in any particular order) would be monitoring extent of the plumes, including worst case core concentrations, establishing the annual contaminant cycle, and etc. So take a look and get back to me with your thoughts.

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From: Paul Parmentier [mailto:pparmentier@thesourcegroup.net]

**Sent:** Monday, March 19, 2012 8:45 AM **To:** Detterman, Mark, Env. Health

Cc: 'Murray, Dave'

Subject: FW: Former Paco Pump, RO00320- groundwater monitoring schedule

Mark- can we assume that we don't have to sample groundwater this Q1 2012, reverting to the previous semi-annual sampling schedule? see below.

Paul Parmentier, CHG 562 / 597.1055 ext. 106

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From: Paul Parmentier [mailto:pparmentier@thesourcegroup.net]

**Sent:** Monday, March 05, 2012 2:46 PM **To:** 'Detterman, Mark, Env. Health'

Cc: 'Murray, Dave'; 'Kaplan, Scott'; 'Neil Irish'; 'ktidwell'

Subject: Former Paco Pump, RO00320- groundwater monitoring schedule

Re: Former Paco Pump, RO00320

Dear Mr. Detterman

On behalf of PCC, we submitted a Remedial Investigation (RI) workplan for the site in mid-January 2012. We also recently submitted the Q4 2011 monitoring report. As I understand your heavy workload, I can assume that you are still reviewing those documents. The December 2011 analyses of all the wells at the site did not indicate groundwater conditions different from previous findings, and therefore it appears reasonable that groundwater at the site be sampled semi-annually, as was previously done.

We are seeking your concurrence that semi-annual sampling is appropriate at this site. With you approval, we propose to conduct the monitoring and sampling events during the second and fourth quarters of the year. Under this new schedule, there will be no first or third quarter M&S reports submitted to your office.

Paul Parmentier, CHG 562 / 597.1055 ext. 106

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