

From: Canfield, Chris

Sent: Thursday, July 10, 2008 9:10 AM

To: Spray, Karen; Andrews, David; Baldwin, Debbie

Cc: Gintautas, Peter

Subject: RE: URS Workplan review & Comment

Following are my thoughts on the Form 27 & associated work plan submitted by the four operators who were issued Prather-related NOAVs;

1. There are several key omissions in the Form 27 which are subsequently reflected in the subject work plan resulting in what is in my opinion a series of deficiencies. Specifically, the Form 27 states that the only impacted medium is ground water. The Form 27 must be revised to describe all impacted media; soils (contaminated surface soils are known to be present at two locations), vegetation (disturbed vegetation is present at two locations), ground water (the subject spring), & surface water (the pond & an approximately 1,000' reach of an unnamed tributary to McKay Gulch).
2. The Form 27 & work plan should be revised to address each of the above-mentioned media.
3. Specifically regarding ground water & surface water, all of the recent data acquired by each of the companies must be consolidated into a common database with the necessary adjustments made to achieve synchronization of the names for each of the sampling locations.
4. A plan for monitoring both ground water & surface water must be proposed.
5. The section of the work plan concerning drilling methods & monitoring well completions should be revised to include well development protocols.
6. The plan should propose an investigation of all areas with either know contamination of surface soils or distressed vegetation. Note; a rodent was found dead at one of the areas with distressed vegetation.
7. I agree with Dave Andrews that the area of investigation should be larger. Also, the plan does not propose any decision rules that might redirect its focus.
8. The CDWR database (and the permit for the Prather Spring) is riddled with counterfactual information. The spring is just that, a spring with a minor improvement in the form of a spring box. Ned asked a friend of a friend (who I presume to be a ditch rider) to help him with registering the spring. Unfortunately, they used the wrong form. Ned's helper compounded that error by adding some erroneous info.

Otherwise, I agree with everything else suggested by each of you.

Chris

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From: Spray, Karen
Sent: Wednesday, July 09, 2008 4:09 PM
To: Andrews, David; Baldwin, Debbie; Canfield, Chris
Cc: Gintautas, Peter
Subject: RE: URS Workplan review & Comment

Dave,

I felt the same way about the decon issues – if they don't decon the entire auger flight then I have asked for an equipment wash for each move.

And I agree w/ the footprint issues on the investigation – but believe most of that can be addressed in additional Phases once we get some idea of what kind of bedrock/colluvium/alluvium we are looking at.

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From: Andrews, David
Sent: Wednesday, July 09, 2008 9:52 AM
To: Spray, Karen; Baldwin, Debbie; Canfield, Chris
Cc: Gintautas, Peter
Subject: RE: URS Workplan review & Comment

My thoughts:

Overall, I think URS will need a larger area of investigation, possibly with multi-level wells. With large topographic changes in the area, we could be dealing with significant vertical flow components. Let's keep it in mind for Phase 2.

The CDWR database entry for the Prather spring indicates:

- Total Depth 120'
- Static Level 54'
- Pump Install Date – two entries 12/11/2001 and 9/1/1004

Based on CDWR's data, URS's contention that it is really a well and not a spring may be accurate. However, the CDWR database only had two scanned images in the permit phase (no scanned documents with as-built conditions), so I couldn't verify this information quickly.

The decontamination language for the augers is inconsistent. First, URS indicates that only the lead auger would be decontaminated between locations. Later, they indicate that decontaminated augers will be used for each location. Personally, I am uncomfortable with decontaminating the lead auger only, particularly when they are moving from downgradient locations to upgradient locations. It wouldn't take that much more decon water to clean all of the augers with a pressure washer between locations.

Should we have URS provide the location coordinates in NAD 83 as opposed to UTM?

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From: Spray, Karen
Sent: Tuesday, July 08, 2008 5:38 PM
To: Baldwin, Debbie; Canfield, Chris
Cc: Gintautas, Peter; Andrews, David
Subject: URS Workplan review & Comment
Importance: High

In general, they can probably go ahead and start the field work as I don't find any fatal flaws in it. I have inserted Peter's language on laboratory and soil sampling issues. It's a pretty loose document – see the URSWorkplanComments7-8-08 for non-text specific concerns such as where is the monitoring plan and please include existing sample points in the monitoring plan.

I mentioned to Debbie that I thought a soil gas survey could possibly be a useful screening tool as the gw is alleged to be shallow and VOCs are our COCs. If not downgradient by the Prather spring, then PDC could use one around the goo-pits that Marathon found when rummaging around on the pad. It might at least point us in a general direction and potentially confirm that this pad is a source.

Just some thoughts. They are going to probably have trouble using a hollow-stem auger up there and their well completions could be very shallow if they do find water on the hillslopes. Based on what Chris was describing about weather-related detections, it is always possible that we are seeing true slugs of contaminants working their way along a bedrock interface. If a well is dry, it should be left open and checked periodically to see if a slug moves into it. Also, it may not be just in the colluvium/alluvium and deeper exploration may be necessary in fractured bedrock to find it. I haven't seen the layout, but would tracer tests be viable here too?

Karen

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