Message

From: MacNicholl, Peter@DTSC [Peter.MacNicholl@dtsc.ca.gov]
Sent: 2/22/2016 11:38:43 PM
To: Fennessy, Christopher [christopher.fennessy@Rocket.com]
CC: MacDonald, Alex@Waterboards [Alex.MacDonald@waterboards.ca.gov]; Keller, Lynn [Keller.Lynn@epa.gov]; Beckman, William@DTSC [William.Beckman@dtsc.ca.gov]
Subject: RE: DTSC Comments - Draft Remedial Investigation Supplement for Area 40 - Island Operable Unit OU-7

Chris,

We can go over the figures in person at the next face to face meeting. A face to face will allow me to efficiently convey my concerns with the figures as currently presented. A formal DTSC letter identifying my initial comments will still go out but will include a disclosure of the revised efforts and an anticipated meeting with AR in hopes of final resolution. Thank you.

P.S. - I have not toured the Site but would like to see the area first hand in the near future to gain a better understanding on spatial distances and identified geologic features.

Sincerely,

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From: Fennessy, Christopher [mailto:christopher.fennessy@Rocket.com]
Sent: Monday, February 22, 2016 3:22 PM
To: MacNicholl, Peter@DTSC
Cc: MacDonald, Alex@Waterboards; Keller, Lynn (Keller.Lynn@epa.gov); Beckman, William@DTSC
Subject: RE: DTSC Comments - Draft Remedial Investigation Supplement for Area 40 - Island Operable Unit OU-7

Hi Peter – I can assure you that the figures are created by the people most knowledgeable about Aerojet groundwater flow directions and plume depictions, Central Valley Environmental. I was offering a little background information on how we use the groundwater plumes; however, I will contact them to provide a more accurate response.

Chris

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From: MacNicholl, Peter@DTSC [mailto:Peter.MacNicholl@dtsc.ca.gov]
Sent: Monday, February 22, 2016 2:54 PM
To: Fennessy, Christopher
Cc: MacDonald, Alex@Waterboards; Keller, Lynn (Keller.Lynn@epa.gov); Beckman, William@DTSC
Subject: [EXTERNAL] RE: DTSC Comments - Draft Remedial Investigation Supplement for Area 40 - Island Operable Unit OU-7

Hi Chris,

I've read you RTCs and skimmed over the revised figures again.

Generally speaking the figures are an improvement but can still be adjusted. Unfortunately, the responses appear to justify or defend the previous illustrations using statements as "...not far off..." and "...the internal contours can be drawn in variety of ways without much impact", and "...regardless of where the TCE plume is located..."

DTSC believes the isopleths should be drawn using "best practices" and professional judgement, with a focus on quality work. Justifications using the preferred remedial alternative(s) or other non-applicable rationale for mediocre work product should be not considered.

As you well know these areas will be developed with different future land uses and some of which will contain sensitive receptors. Therefore, accurate plume delineation and portrayal is paramount to ensuring these receptors are not exposed to unnecessary levels of contamination.

I don't want to commit extra resources to going through counter responses on a point by point basis and charging this time to AR, but I can if you like. Therefore I ask that future submittals and interpretations reflect a higher level of quality to ultimately help ensure the protection of human health and the environment.

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From: Fennessy, Christopher [mailto:christopher.fennessy@Rocket.com]
Sent: Monday, February 22, 2016 11:13 AM
To: MacNicholl, Peter@DTSC
Cc: MacDonald, Alex@Waterboards; Keller, Lynn (Keller.Lynn@epa.gov); Beckman, William@DTSC
Subject: RE: DTSC Comments - Draft Remedial Investigation Supplement for Area 40 - Island Operable Unit OU-7

Hi Peter – Thanks for bringing up the concerns. We have been working on presentation style for several years and are always open to new ideas. I have drafted responses to your comments below. Please review below and attached to determine adequacy of responses. Thanks, Chris

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From: MacNicholl, Peter@DTSC [mailto:Peter.MacNicholl@dtsc.ca.gov]
Sent: Thursday, February 18, 2016 1:20 PM
To: Fennessy, Christopher
Cc: MacDonald, Alex@Waterboards; Keller, Lynn (Keller.Lynn@epa.gov); Beckman, William@DTSC
Subject: [EXTERNAL] DTSC Comments - Draft Remedial Investigation Supplement for Area 40 - Island Operable Unit OU-7

Hi Chris,

As I was reviewing the above mentioned report I noted the following items. Since USEPA is still developing their comments I felt this was an opportune time to augment Steve's comments on the RI. I will continue to dig through the RI and note any other discrepancies and do plan on combining these with the one's listed below in a formal letter. Thank you.

1.) Figure 5-8, TCE Iso-Concentration Contours, Layer A - Area 40; The iso-contours (5,000?, 500, and 50 ppb) presented around wells 31051 and 30483 are not adequately defined by groundwater data and should not be shown as solid lines but rather dashed and inferred lines. Based on the potentiometric flow lines shown in Figure 5-5, Well 30483 does not appear directly down-gradient of 31051, rather cross-gradient as the flow lines shows water heading to the northwest, not directly west where 30483 is located. I understand your thoughts on presentation. The potentiometric lines shown on Figure 5-5 in the vicinity of well 31051 are deflected toward the northwest only based upon water level from one well, 31055. All other wells south of 31051 are dry. Farther west (near Prairie City Road), where the water bearing zone is more prevalent, the flow direction is southwest. If you draw the flow path from well 31051, using the Figure 5-5 potentiometric lines, the chemical would migrate northwest until it reaches the dirt road (about 300 feet), then would turn west, then southwest toward well 31052. Based upon that interpretation, well 30483 is not far off from down gradient. In fact, based upon the more regional trend of groundwater, the flow direction is likely more southwest toward 30483 than the Figure 5-5 potentiometric lines depict (if you put less confidence in the water level measurement from well 31055). Additionally, we have data for wells 30468 (550 feet north-northwest), 1724 (1000 feet northwest), and 30152 (about 1200 feet directly downgradient). These wells indicate that the 500ug/L contour is limited in extent and that the TCE is quickly attenuating. I think the important thing to note is that we have very good definition of the extent of the TCE plume at the 5ug/L contour from this source. It does not reach Prairie City Road. In accordance with prior agreements on the BOU, all land, where the groundwater beneath contains 5ug/L of TCE (plus a 100 foot buffer), will have a LUC placed on it that requires construction of future habitable structures to include a vapor mitigation system. The dilute TCE contours (500ug/L and 50ug/L) will not have an impact on source remedy, so these internal contours can be drawn in a variety of ways without much

impact. We will add the flow line based upon Figure 5-5 potentiometric lines and dash the interior contours. See attached and confirm acceptance of revised depiction.

Additionally, there are no groundwater monitoring wells located between wells 30465, 30468, 31051, and 30483 to define the plumes as currently presented. These iso-contours for this area should be dashed due to insufficient data. Arguments could be made that the plumes are not bi-furcated as shown but commingled, as there is no water quality data between the above mentioned wells to refute this likelihood. See above. You are correct that without a well between 31051 and 30468, the plume (based upon Figure 5-5 potentiometric flow lines) could be drawn more toward the northwest and these plumes may very well co-mingle. When you see the FS, you will see that we draw the line that depicts the area that requires vapor mitigation to encompass both the north and south TCE plumes. The contours inside the area that requires vapor mitigation can be depicted differently. As mentioned above, we will include the flow line and dash the contours.

The 500 ppb isopleth for the 36B and 37B source areas is not delineated on the down-gradient portion as there is no data to conclusively show where this plume boundary ends. Well 3844 is directly down gradient and contains 290ug/L TCE. Are you suggesting that since there is not a well between 3844 and 901, that there is a data gap? Regardless of where the TCE plume is located, this dilute portion of the plume is within the capture zone of the GET AB system. Would you prefer to have the southern portion of the 500ug/L contour dashed or open ended like the 50ug/L and 5ug/L contour lines? See attached.

DTSC recommends that AR revisit these figures and redraw them to accurately portray both the known and unknown plume extents. Please confirm that the attached is acceptable.

2.) Figure 5-10, PCE Iso-Concentration Contours, Layer A – Area 40; Similar to comment #1, the PCE detections found at Well 3819 are not adequately defined due to the lack of monitoring points. Accordingly, the 50 ppb and 5 ppb down-gradient isopleths should be dashed or inferred due to the sparse groundwater quality data combined with the fact that no information is presented for flow directions because water level data was not measured at Wells 901, 1722, 1723, 3819, and 3844. Regardless of flow direction in this area, all wells to northwest (30459 and 1722), west (3844), southwest (901), and south (30061) are non-detect (<0.5ug/L) for PCE. Both the 5ug/L and 50ug/L contour lines are adequately defined. They could be drawn slightly differently, but they are adequately defined. If you have suggestions on a better depiction, please edit Figure 5-10 and forward for consideration.

3.) Figure 5-12, Perchlorate – Iso-Concentration Contours, Layer A – Area 40; The 6,000 and 600 ppb isopleths encompassing wells 31051 and 30483 are not adequately defined or delineated by water quality data and, therefore, should not be presented as solid lines. Moreover the 60 ppb isopleth is not corroborated by groundwater analytical data, especially to the north/northwest and down-gradient edges as shown. Similar to comment #1 the plumes are likely commingled and not bi-furcated as shown due to the flowpaths, relatively close proximity to one another, and fact that no data supports the plume extents as currently presented. There are numerous other discrepancies with the plume extents as currently presented; therefore, DTSC recommends redrawing the isopleths with dashed or inferred lines where data is insufficient or unavailable to accurately portray the current conditions. See response to comment 1. Using the Figure 5-5 potentiometric lines, downgradient is toward the west, where perchlorate is well defined by wells 31052 and 31053. The plume could be depicted to migrate a bit more northwest before it turns west. I have modified Figure 5-12 to show an alternate depiction. Please review and confirm this presentation is acceptable.

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