From:	Parsons, Scott
To:	Raymond Chavira/R9/USEPA/US@EPA
Cc:	Bradley A Barquest (bradley.barquest@utc.com)
Subject:	PVOU
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Ray,

Based on some of the information exchanged during our joint technical meeting on March 8, 2012, it seems that concurrent with the investigation of the Benchmark source area, Northrop Grumman will be collecting data to evaluate bioremediation and perhaps other insitu remedial technologies. We support the evaluation and potential implementation of insitu technologies as long as such evaluation and potential implementation does not delay and/or replace a groundwater extraction system(s) that contains the lateral and vertical migration of the known Benchmark source area and plume south of Puente Creek within both the IZ and the SZ (including the SZ area extending from the Benchmark source to beneath Puente Creek).

The data collected from boreholes BH-01 and BH-02 as well as the 2002/2004 deep investigation data presented by Northrop last week show that the known Benchmark source area/plume is migrating vertically into the IZ south of Puente Creek (and likely at the former Benchmark facility). Furthermore, we estimate that approximately 2/3 of the mass in the entire PVOU SZ Eastern Plume currently resides south of Puente Creek but is migrating toward the north of side of Puente Creek. Until the vertical and horizontal contaminant transport pathways south of Puente Creek are adequately identified and contained, future efforts to assess compliance with PVOU SZ Performance Criteria will be ineffective. Adequate containment cannot be achieved at this point without the use of a robust pump and treat system at the downgradient edge of the SZ south of Puente Creek plume.

Per UTC's consent decree, UTC is required by USEPA to assume the responsibility for and incur the costs for the containment of contamination originating at the known Benchmark source south of Puente Creek once the contamination reaches the north side of Puente Creek. Accordingly, the south of Puente Creek PVOU SZ containment system should include but not be limited to a gallery of extraction wells located on the south bank of Puente Creek (i.e., North Cadbrook Drive and other accessible locations) to minimize the remedial responsibilities and costs that will be transferred from Northrop Grumman to UTC.

Scott Parsons | Principal Engineer
Direct: 949.809.5222 | Main: 949.809.5000 | Fax: 949.809.5010
Scott.Parsons@tetratech.com

Tetra Tech GEO
17885 Von Karmann Avenue | Suite 500 | Irvine, CA 92614-6213

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