

AFCEE Galena Triad Meeting No. 2

ATTENDEES: See Attached
FROM: CH2M HILL
DATE: July 5, 2011

The Galena Triad meeting/teleconference was attended by members of the Air Force, ADEC, ADOT, CH2M HILL, Booz Allen Hamilton, and SLR. Please see the attached **Galena Triad Team Contact List** for attendees.

The meeting followed the standard agenda setup for the Galena Triad calls. Win suggested adding a safety moment to the agenda. Today's safety moment was to watch for pedestrians, bicyclists, and motorcyclists while driving.

Agenda:

1. Status update for field work activities
2. Review of action items and conclusions from previous Triad meeting. Approval of minutes
3. Discussion of new site data and evaluating progress toward Work Plan objectives
4. Identifying additional work needed and/or concurrence that Work Plan objectives have been met
5. Open discussion of other items
6. Schedule update for upcoming activities

Status Update of Field Work Activities

Ronny Fields/CH2M HILL provided a quick summary of field efforts to date:

- Finished up ST005 apron sampling
- Currently working on SS014, SS017, and SS021. The IRA excavation related samples will be completed today. Will sample five locations to take geotechnical samples for Atterberg limits and grain size analyses in SS014 and SS017.
- Hollow-stem auger drilling is averaging about 1 well per day. Wells installed to date include: CG001-MW007, CG001-MW008, ST005-MW075, ST005-076, ST005-077, ST010-MW010, ST010-MW011, and ST010-MW012.
- Currently installing ST005-MW-078 (125 foot depth). CG001-MW015, CG001-MW016, and CG001-MW017 are next in line for installation. Started well development.
- ADEC has given conditional approval of the SS016 FSP and locations. The field executable will be uploaded today and the field team will work with BLM to meet the requirements of the permit.

Ten wells out of the 20 wells currently approved have been completed. The AF plans to submit additional justification for the remaining wells from the original 31 wells proposed by the end of the week. Request a 1-week turnaround on review/concurrence from ADEC.

Donna suggested moving to the stepouts for FT001 and ST010 next, which would lead to proposing permanent wells in these two areas. However, the permits for the FT001 and ST010 stepouts have not yet been approved by ADOT, as they require shutdown of the runway and night time drilling.

Review of Action Items, Approval of Minutes

The notes from Triad 1 have been approved and posted to SharePoint.

Action items:

- MGH survey elevations: as previously discussed, the two initial borings showed contamination at the greatest depth drilled, which was unexpected based on the hydrograph information from the nearby well. An approximate 8 foot discrepancy was discovered between the previously used GIS map with elevation in meters and newer GIS base maps received in March from the State with elevation in feet. The elevations on the new GIS maps have been checked and closely match the ground surface elevations surveyed last year at the monitoring wells. The corrective action is that we will have our surveyor survey the proposed MGH sampling locations this week and then will make the final corrections to the sampling intervals in the FSP before sampling the remaining locations. ADEC concurred with this plan.
- High concentrations of fuel potentially masking lower VOC concentrations: if needed, the lab can be requested to rerun samples at lower dilutions. However, if the samples are from a high-concentration source area, it may not detect benzene, but it's there. Measuring benzene downgradient in groundwater will determine what is needed for remediation. No further action required; will discuss in the report.

New Site Data and Evaluating Progress toward Work Plan Objectives

Four sites were discussed today: UST1769, OWS1833, Storage Yard 1850, and ST009.

For all sites, there was first a review of 2010 sampling results and then a discussion of 2011 soil sampling results.

UST1769

This site is located in the northwestern portion of Triangle area. It was a heating oil UST for the supply warehouse. During 1970 boiler room upgrade, there was a note mentioning removal of a 12,000-gallon tank. Two borings in 2010: no detections in northern sampling location, low-level TCE detection in southern sample at the 16-foot depth interval.

Geophysical sampling during 2010 investigation revealed a 15-foot long subsurface anomaly. Stepout locations were performed north and south of the anomaly. Results indicated TCE at lower-level exceedances within the groundwater saturated zone; could be related to adjacent ST006. No exceedances of fuel screening levels. Nothing to suggest there was a release of fuel-related constituents from this UST.

Fred reminded the team to be sure the closeout report has enough information to close the tank under ADEC regulations 18 AAC 75 and 78.

- No additional sampling is required at this site.

S1850

This site is a storage yard in center of Triangle area. Based on the 2010 data, a stepout location was approved in the southwestern corner of the fenced area to obtain vertical delineation. The 2011 stepout data show exceedances of TCE in the 9-foot and 12-foot intervals, and vertical delineation of the suspected TCE surface spill within the fenceline is complete. However a question as to horizontal delineation outside the fenceline remains. A stepout location outside the fenced area was suggested in February; the decision was to remain inside the fence. Well 06MW017 is right outside the fence, and may provide information on TCE extent.

Need to analyze historical and current data to see whether we have enough to define this as a surface-only release or part of a combined release at ST006.

- Will go back and review historical data within and outside of the fence line. Will revisit and suggest a path forward at the next Triad meeting.

OWS1833

This site is located in northwest corner of the POL tank farm (Site ST005). Four stepout locations were sampled. The soil data shows low level TCE exceedances in all four locations in the 10- to 14-foot depth intervals, but none in the 20-foot depth interval. Petroleum hydrocarbons were below screening levels in all four locations. Have defined vertical extent.

- Additional data collection will happen near this site as part of the ST005 FSP. Once the ST005 FSP is approved and the samples are collected, will review the new data around this site prior to determining the path forward for OWS1833.

ST009

Site ST009 is the fuel stands in south-central portion of Triangle area. Extensive investigation during 2010 season with stepout samples collected to the north, south, and west. In 2010 the team agreed to stop stepping out to the south and west when only low-level benzene in the smear zone was detected. Three stepout locations were proposed north and northeast of the Site around the pipelines and valve pit where high benzene and GRO were detected at 5 feet deep.

2011 results: furthest north and east stepouts had no VOC exceedances of screening levels. In the western sample, BTEX was found deeper in the smear zone at 28 feet deep. The data suggest a potential release near the pipeline valve pit in the area of ST009_GP003.

Fred stated that the scope for this investigation as well as the other POL investigations in the triangle was discussed at several meetings, and that ADEC's understanding is that USAF agreed to include down gradient groundwater sampling or placement of at least one or more down gradient groundwater wells at each discrete source area. The down gradient sample locations were to be determined during the Triad meeting after receiving the results indicating that nature and extent of NAPL contamination had been delineated. Fred stated further that the objective for this FSP and each of the other ones includes evaluating the degree to which soil

contamination is contributing to the groundwater plumes. ADEC made it clear during at least two pre-season TPT meetings that they expect down gradient groundwater sampling at each soil source area to be included in the work to delineate each soil source area. USAF is not expected to determine the extent of groundwater contamination under the source area specific FSPs, but they are expected to determine the nature and magnitude of the contribution of each source area to the groundwater plumes.

Win stated that their intention is to propose these sampling or well locations as part of the Phase 2 wells in the hydrogeologic study. The focus of the data presentation today is on the soil data to delineate the extent of source area contamination. It will be several weeks before we receive the groundwater results that are collected during the FSP investigations. These data will be reviewed and presented in a Triad meeting later in August.

Fred re-stated that ADEC expects sampling to determine the source area's contribution to the plumes to be proposed and collected as part of the source area delineation FSP work, and that the source area characterization is incomplete without this information. This needs to be presented in some plan (ADEC doesn't care which plan).

Win stated that the DQO for grab groundwater sampling in the site-specific FSPs [DQO No. 4] is to determine if groundwater contamination beneath a site is from an upgradient source or from the site being investigated, so we are collecting and comparing upgradient and source area grab groundwater samples. When a site is found to be contributing to groundwater contamination (as is the case at ST009), the further evaluation is part of the FOL-wide groundwater program [refer to Table 10-2, DQO 4, Decision Rule 4A in the UFP-QAPP].

The AF acknowledged that the information to propose additional grab groundwater samples or propose well locations at ST009 was not provided for this TRIAD call. Because there are so many wells already in the Triangle area, the AF prefers to do the site-specific FSP source delineation work before siting additional monitoring wells. As part of the GW OU FSP for nature and extent of GW contamination, the AF will present the process for proposing additional grab GW samples and well installations at the Triangle sites where GW contamination is most likely commingled. For isolated GW sites, the AF stated that once nature and extent of soil and smear zone contamination had been determined according to the FSP, the AF would present information to discuss during a subsequent TRIAD call in order to identify grab GW samples and/or well locations/screen intervals to determine nature and extent of GW contamination.

Regarding stepouts to the north of ST009, Fred said if the Air Force thinks they have enough information to design a remedial action at the northern edge, ADEC is ok with stopping the stepouts. Sam concurred for ADOT. AF agreed to not propose any additional stepout at this point.

➤ No further stepouts needed to delineate soil contamination at ST009.

Additional Work Needed and/or Concurrence that Work Plan Objectives Have Been Met

Discussed under new site data above.

Open Discussion for Other Items

Fred: Need a comment resolution meeting for the SS006 FSP. Will have comments to the AF later today. Fred available next week; Sam will be in Nome.

Schedule Update for Upcoming Activities

The next Triad meeting is scheduled for Tuesday, July 19, 10:00 a.m. to noon Alaska time.

Attachment: Galena TO 294 Triad Team Contact List