

MEETING MINUTES

US EPA Region 4
BVSPC Project 48623.0213
Koppers Superfund Site

September 16, 2008

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Scoping Meeting Minutes (Rev 1)

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A meeting was held at the Sam Nunn Federal Center in Atlanta, GA on August 28, 2008. The purpose of the meeting was for GRU to provide feedback on, and express their concerns regarding, the perceived direction that the FS for the Koppers Site is taking. The meeting was attended by Scott Miller, EPA Work Assignment Manager (WAM); Bill O'Steen, EPA; Ed Bates, EPA; Ralph Ludwig, EPA; Kelsey Helton, FDEP; Zoe Kulakowski, FDEP; Adrian Gonzalez, Black & Veatch Project Engineer; Amy Callaway, Black & Veatch Project Geologist/Scientist; Rick Hutton, GRU; Ron Herget, GRU; David Richardson, GRU; John Mousa, Alachua County EPD; Robin Hallbourg (by phone), Alachua County EPD; John Herbert, Jones Edmunds for GRU; Stan Feenstra, GRU's DNAPL team; and Richard Jackson, GRU's DNAPL team.

Thursday August 28, 2008

Purpose of Meeting

The meeting started with Rick Hutton, GRU, stating that GRU has been pleased with the progress thus far with the FS. There are several fundamental issues that GRU has with regard to the Koppers site and they would like to gain a better understanding of what the Agency's opinion is on these issues. These fundamental issues include: site conceptual model, DNAPL mobility, and contamination in Floridan aquifer.

Review of Site Conceptual Model and Extent of Contamination

Stan Feenstra, consultant for GRU, presented the site conceptual model that GRU believes is more accurate than the Beazer model. GRU believes that potential mobile DNAPL is present in all of the strata, including the Floridan. EPA has not come to a strong conclusion regarding how to interpret the current evidence for the presence of DNAPL in the Floridan aquifer.

One of the primary points GRU wanted to make was their opinion that the lateral extent of DNAPL is not defined. EPA and Beazer concur with this opinion. Beazer intends to submit a work plan for field work to further define the lateral extent of contamination along the Eastern boundary off-site.

GRU is concerned that hydraulic containment in the Floridan aquifer is only a contingent remedy in the current remedies. This topic was discussed in detail during meeting four of the Joint FS Committee and is going to be addressed. Kelsey Helton (Florida DEP) relayed some of the Joint FS Committee's discussion on the topic. Specifically, she explained how the Joint FS Committee was still grappling with the Floridan component of the overall remedy screening and evaluation process

GRU believes that the "oatmeal" consistency of the Ocala observed during drilling of the Floridan wells is a relict of Sonic drilling. GRU believes that this "oatmeal" consistency is not an accurate depiction of the formation's natural condition.

GRU believes that fissures and bioturbation tubes are current pathways for the creosote contaminants. Based on the frequency with which those features are observed in the upper units, they infer that similar features also are present in the Lower Clay, and thus they infer the presence of contaminant migration pathways into the Floridan aquifer. GRU believes that concentrations detected in the Floridan are indicative of substantial DNAPL source(s) close by. GRU does not believe that the Upper and Middle Clay are barriers to creosote or ground water flow and they expect that the lower clay is also not a confining unit. ACEPD (Robin Hallbourg) stated that in her experience the Lower Hawthorn clay layer above the Floridan Aquifer is not a uniform clay layer, but contains carbonates and other materials.

Nature and Extent of Contamination/DNAPL Mobility

Stan Feenstra and Richard Jackson, consultants for GRU, presented evidence that the DNAPL is potentially mobile in the Surficial, Upper Hawthorn, Lower Hawthorn, and maybe the Floridan. GRU believes that the DNAPL is mobile at the Koppers site, but evidence shows that it moves very slowly.

It was explained that creosote DNAPL has some natural degree of resistance to flow because of the natural non-aqueous nature of this material and its resistance to mixing with groundwater. Over time, however, the DNAPL will slowly create flow pathways and change the "entry pressure" (P_e) from some level that resists migration, to zero. Additional DNAPL will preferentially tend to follow these paths in the subsurface that it historically created because the entry pressure (P_e) along that path is zero. Creosote DNAPL might not enter a well that is near an existing "zero P_e " pathway because the DNAPL would have to overcome the high (non-zero) P_e of the new path to the well screen.

Stan Feenstra presented some evidence that the potential source zones are larger than what Beazer predicts, based on field notes, boring logs, well sampling records, and ground water chemistry.

GRU believes that the contamination found in FW6 and FW21B are not caused by leakage as the Beazer Expert Panel has concluded. Several graphs were shown for each location depicting concentrations versus time. EPA noted that a letter was sent to Beazer stating that the initial concentrations detected at FW6 may have been related to drawdown, however, the continuing presence of contamination is no longer believed to be related to well installation procedures.

ACEPD (John Mousa) stated that additional Lower Hawthorn investigation and data needs to be acquired in the Process Area since there are not Lower Hawthorn wells in this area. Upper Hawthorn wells in this area contain DNAPL and there is high level of contamination in downstream Lower Hawthorn wells from the Process Area. He indicated that ACEPD feels that there may be source material in the Lower Hawthorn in the process area and this needs to be confirmed before the remedial alternatives are selected.

Floridan Aquifer Monitoring Results

Stan Feenstra, consultant for GRU, presented a few slides depicting the concentrations found within the Floridan monitoring wells since the induction of sampling. If the leakage theory that the Beazer panel has presented were to be true, the concentrations found in the multi-port Floridan wells would be expected to decrease with depth. This is not observed in data from monitoring well FW12B.

Remedial Alternatives

John Herbert, Jones Edmunds, presented fundamental issues that GRU has with the remedial alternatives that the Joint FS Committee has drafted. Some of the issues include:

- Source Zones are not fully defined
- The “concern” against further drilling through the Middle Clay
- Remedies in the Hawthorn will be uncertain, unpredictable, and likely of limited success

The source zones are still under going investigation and Ed Bates mentioned that additional investigation would be necessary prior to implementing any remedial designs.

The Joint FS Committee stated that drilling through the Middle Clay with in a source zone would not be advisable, but punching through the Middle Clay upgradient or downgradient of source zones are still part of the remedial alternatives.

All parties are in agreement that a remedial alternative for the Hawthorn Group is difficult to design. GRU believes that it would be best to focus on the Floridan first and foremost. GRU is concerned that hydraulic containment in the Floridan aquifer is only a contingent remedy in the current remedies. This topic was discussed in detail during meeting four of the Joint FS Committee and is going to be addressed.

ACEPD (John Mousa) stated that ACEPD believes it is very important that additional investigation in the Floridan be conducted in the vicinity of FW-12B since there has been no good explanation provided for the increase in contamination with depth observed in this Floridan well. ACEPD indicated that a better understanding of the cause of this deeper contamination needs to be obtained before the selection of remedial alternatives that affect the Floridan.

GRU would also like phenol concentrations to be monitored as part of the remedial action because phenolic compounds represent an aesthetic (taste/odor) contaminant in drinking water.

Performance Monitoring and Metrics

John Herbert, Jones Edmunds, presented concerns with the performance monitoring and metrics. Points of compliance and “trigger” concentrations were all discussed at the August 2008 Joint FS Committee meeting and will be addressed in the remedial alternatives.

GRU would prefer an interior point of compliance rather than a point of compliance located along the property boundary in order to prevent off-site migration.

GRU proposed an additional seven cluster locations for Floridan wells. Two of the cluster locations are North of FW12B to help determine why the contamination is detected within the lower zone. Two locations are along the northern property boundary. The remaining three locations are all offsite, two to the North of the site boundary and one to the East of the site boundary.