

ALGER COUNTY BROWNFIELD REDEVELOPMENT AUTHORITY

MINUTES

JULY 19, 2012

The Alger County Brownfield Redevelopment Authority convened in the conference room of the county building at 2:00 p.m. on the above date.

The meeting was called to order by Chairman Doucette with the following members present: Jerry Doucette, Mary Ann Froberg, Phil Hansen, JoAnn Carlson, Hamp Waring, and Pam Johnson. Absent: Esley Mattson, Teri Grout and Al Weymouth.

Guest: Gabriel Zawadzki – MAC Grant Services Program and Dave Van Haaren – AKT Peerless, Environmental & Energy Services.

Gabriel Zawadzki would be discussing with the authority, the next four (4) items on the agenda in the order that they occurred. The first thing would be the review of the DEQ remedial investigation report, which would be a letter from Mark Petrie:



Should you have any questions, please feel free to contact me at 906-346-8509; petriem@michigan.gov; or Remediation Division, Upper Peninsula District Office, Department of Environmental Quality, 420 Fifth Street, Gwinn, Michigan 49841. Thank you.

Sincerely,



Mark A. Petrie, C.P.G.  
Senior Geologist  
Remediation Division  
Upper Peninsula District Office  
906-346-3509  
Facsimile: 906-346-4480

ks

Enc

c: Mr. Clifton Clark, DEQ

Gabriel Zawadzki also wanted to go over the conclusions and recommendations that were included in the May 2012 Remedial Investigation Report for the Chatham Corners Store, prepared for the Michigan Department of Environmental Quality (DEQ), Remediation Division by the Mannik & Smith Group, Inc.

For ground water, the residential and non-residential DW Tier 1 RBSLs have been exceeded for several VOCs at several monitoring well locations. The GSI RBSLs, which are applicable to residential or non-residential exposure scenarios, have also been exceeded for a number of VOCs at several monitoring well locations. In addition, exceedences of the residential and non-residential DW RBSLs and the GSI RBSLs are observed in the 2007 analytical data for the site's old water supply well, indicating that the plume of petroleum impacted ground water is within the capture zone of this well. Water from the new site water supply well installed in 2007 has not been tested for VOCs. The area of VOC impacted ground water appears to be outside the estimated capture zone of the new water supply well installed at the site in 2007.

For the soil analytical data provided in the 1991 IAR (included in Appendix A of this report), exceedences of the Tier 1 residential and non-residential DWP, GCP, DC, SVII, RBSLs and the GSIP RBSLs are noted. Exceedences of the Tier 1 Csat soil screening levels are also noted for one of the IAR soil samples. The leaking fuel dispenser reported in 2005 may have exacerbated the situation with regard to petroleum impacted vadose zone soils at the site.

#### 5.7 Site Classification

According to MDEQ RD Operational Memorandum No. 3, the site is considered a Class 1 site under the Part 213 LUST Site Classification System due to the presence of LNAPL. LNAPL has been observed at onsite monitoring well MW-FIN-S and at offsite monitoring well MW-3. MW-3 is located in the right of way on the north side of Highway M-94. The LNAPL has been identified as gasoline.

The site is currently unoccupied. There are two onsite water supply wells, neither of which is currently in use. The site's old water supply well, which showed indications of petroleum impacts in water quality tests conducted in 2007, has not been decommissioned or removed. The site's new water supply well, which was installed in 2007, has not been tested for water quality, but does not appear to be vulnerable to petroleum contamination based on its location, depth and pumping capacity.

The nearest downgradient offsite private water supply well is the non-potable well on the MSU property (well number 02000001974, on Figure 10 and in Appendix G), which is located approximately 0.4 miles to the northeast on the north side of Bohemian Creek. The location of this non-potable well suggests that it is unlikely to be affected by dissolved phase petroleum contaminants associated with the 1991 release petroleum release, as Bohemian Creek appears to represent a hydraulic barrier to contaminant migration.

The nearest downgradient offsite potable water supply well that could be impacted by the release is located on the east side of Finn Spur Road north of M-94 (water supply well number 02000001825 on Figure 10 and in Appendix G), approximately 0.9 miles northeast of the site. This well is reported to be 145 feet deep. Using a ground water velocity of 1 foot per day (365 feet per year), approximately 13 years would be required for the plume of petroleum impacted groundwater to migrate to the location of this private water supply well. Information provided by the County Health Department indicates that the petroleum impacted ground water associated with the 1991 release at the site has not affected offsite local water supply wells.

#### 6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this investigation and the available data and information, the following conclusions are made:

- The site geology is characterized by a relatively thin accumulation of glacial drift that is underlain by flat-lying sedimentary bedrock. The glacial drift is on the order of 10-20 feet thick and is composed primarily of granular soils. The underlying bedrock consists of sandy dolomite with occasional sandstone interbeds.

- The uppermost aquifer occurs in the bedrock under unconfined conditions. The ground water flow direction is primarily to the east-northeast, although apparent seasonal effects that may cause localized variations have been observed.
- The average hydraulic conductivity of the bedrock aquifer determined by onsite aquifer testing is 26 feet per day. The ground water flow velocity is approximately 1 foot per day.
- Dissolved phase VOCs in ground water occur at both onsite and offsite monitoring well locations. The lateral extent of ground water impacted by dissolved phase VOCs at concentrations above current Part 213 Tier 1 RBSLs extends into the right of way of Highway M-94 and onto the MSU property located on the north side of M-94. The lateral extent of impacted ground water appears to be somewhat influenced by seasonal effects.
- Petroleum impacted ground water with dissolved phase VOC concentrations exceeding Tier 1 RBSLs extends beyond the farthest downgradient monitoring location.
- LNAPL occurs at one onsite monitoring location and one offsite monitoring location. Laboratory analysis indicates that the LNAPL consists of gasoline. The lateral extent of LNAPL is limited. The LNAPL appears to be mobile, but not migrating.
- Onsite vadose zone soils located in the source area with concentrations of petroleum-related constituents above Csat levels that were documented in the 1991 IAR may be a continuing source of LNAPL.
- The old water supply well at the site has been impacted by petroleum-related constituents, indicating that the area of impacted ground water was within the capture zone of this well in 2007 when the water from this well was analyzed.
- The new water supply well at the site has not been tested for water quality. This well is located outside of the known area of impacted ground water. The area of impacted ground water appears to be outside the capture zone of this well.
- Offsite water supply wells in the site vicinity obtain water from deeper zones in the bedrock and have not been affected by the 1991 release. The closest offsite downgradient potable water supply well is located almost a mile from the site and is 145 feet deep. Given the distance from the site and depth of this water supply well, it is unlikely that the area of impacted ground water is within the capture zone of this well.

Based on the investigation results, the available data and information and the above noted conclusions, the following is recommended:

- At least one additional round of monitoring well sampling and analysis should be conducted to confirm the apparent seasonal effects on the lateral extent of impacted ground water. Static ground water levels should be measured and recorded from each of the available monitoring wells, and each available monitoring well should be sampled if possible, based on available funding. The need for further ground water monitoring should be evaluated based on the laboratory analytical results and piezometric elevation data.
- Installation of additional downgradient offsite monitoring wells (to determine the downgradient limit of impacted ground water above Tier 1 RBSLs) and an additional monitoring well in the source area with a screen that intersects the water table should be considered prior to conducting any additional monitoring well sampling.
- The new water supply well at the site should be tested for VOCs and any other appropriate water quality parameters as determined by the local Health Department. A minimum of two rounds of testing are recommended.
- MDEQ and/or the site owner (Alger County) should consider the need to provide written notification of offsite migration of contamination to the owners of any affected offsite properties, based on the applicable provisions of Part 213 and Part 201.
- The need to further investigate vadose zone soils in the source area with regard to previously documented Csat exceedences should be considered along with the need to refine the lateral extent of LNAPL.
- Additional consideration should be given to evaluating source area vadose zone soils with regard to proposed modifications to regulations concerning vapor intrusion, including proposed lower vapor intrusion cleanup criteria.

Gabriel Zawadzki discussed with the Authority information that was brought up during the conference call in June with the DEQ, MAC, Dave Van Haaren, Pam Johnson, Michelle Doucette (taking notes for Jerry Doucette). The conference call was for the purpose of going over the DEQ's site investigation report (including soil and groundwater sampling activities) completed by the Mi. Department of Environmental Quality (DEQ). The report includes recommendations for further investigation and delineation of onsite and offsite contamination that should be conducted prior to reuse of the site. This work would need to be done whether or not future use of the site included fuel dispensing.

Request for proposals (sealed bids) were then sent out to five (5) environmental firms: AKT Peerless Environmental and Energy Services, Envirologic Technologies, Inc., Soil and Materials Engineers, Inc., U.P. Engineers & Architects, Inc. and Coleman Engineering Company. The Authority received three (3) sealed bids which were sent to Gabriel Zawadzki to have a consultant proposal comparison matrix compiled. Each member received a copy of this report to review and discuss at the next Brownfield Authority meeting.

OLD BUSINESS: Discussion on how the county could take care of old tires. Gabriel Zawadzki said that the State does have programs available and he would check into it.

REPORTS: NONE

CORRESPONDENCE: NONE

PUBLIC COMMENT: There was no public comment from the floor – comment session was closed.

Motion by Mary Ann Froberg and seconded by Phil Hansen to adjourn.  
Motion carried. Meeting was adjourned at 4:15 p.m.

**FUTURE ITEMS:**

1. Policies and Procedures
2. Program available thru the state on old tires