



STATE PRIORITY LIST SITE SUMMARY

Arkansas Department of Energy & Environment, Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118

Facility Name: Arkansas General Industries

Facility Location: Bald Knob, Arkansas

EPA RCRA ID No: ARD035434596

EPA CERCLA ID No: NA

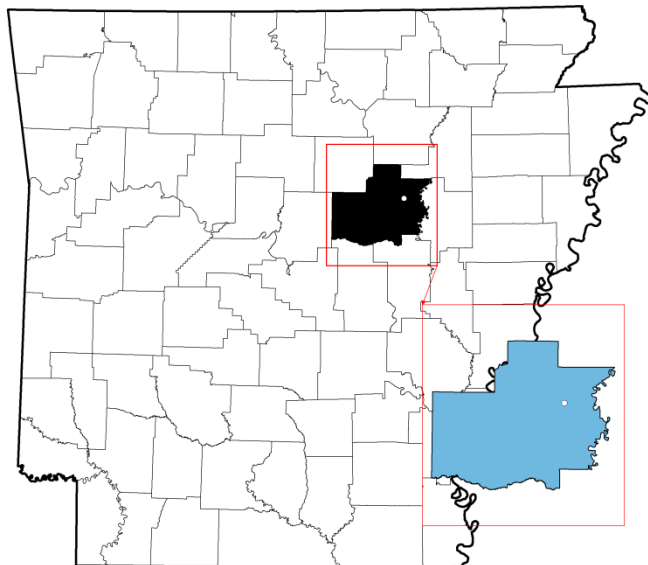
AFIN: 73-00022

County: White

Arkansas Senate District: 23

Arkansas House District: 45

US Congressional District: 2



CURRENT STATUS

Arkansas General Industries (AGI) began manufacturing sub-fractional alternating current and direct current electric motors used primarily in the appliance and automotive industries at the Bald Knob site in the late 1950's. The facility has used 1,1,1-Trichloroethane (TCA), Trichloroethene (TCE), and xylenes as solvents in their processes. Xylene was the solvent used at the site in 2003.

For a time the property was leased for storage by a gas pipeline expansion company. The property is currently vacant. ADEQ, with assistance of Region 6 EPA and their contractor, conducted a bioremediation pilot study to evaluate the effectiveness of reductive dechlorination of TCE and daughter products through the injection of electron donor substrate into the contaminated groundwater zone near the source. This work began in 2014 with the establishment of eight (8) injection well points and a survey of the existing and new wells. This work was completed in February 2014.

ADEQ began the Comprehensive Site Assessment (CSA) activities in September 2014. The sampling data and proposed new monitoring well locations were submitted to the ADEQ in January 2015. ADEQ continues to work on access issues for the new wells. Baseline groundwater sampling and water level measurements of the six (6) injection wells not sampled during the December event were completed September 30 and October 1, 2015. Phase I of the bio injection activities was completed November 16-19, 2015. Electron donor and microbes were injected in each of the injection points.

A report of the injection activities was received February 26, 2016. Sampling of the injection wells was conducted on May 17, 2016 and results were received on July 13, 2016. An additional sampling event to monitor the effectiveness of the injections was conducted the week of November 18-22, 2019. Results were received March 9, 2020 and determined another round of groundwater monitoring should occur to evaluate the need to additional actions. Groundwater sampling is proposed for the Spring of 2021. DEQ is currently assisting EPA with gaining property access from the neighbors.

STATE PRIORITY LIST HISTORY

This site was included on the State Priority List (SPL) effective January 25, 2009. The following points are from the 1999 Phase II Facility Investigation Report Executive Summary by PMI:

- 14.4 acres were impacted by dissolved phase TCE.
- The total mass of TCE dissolved in groundwater was approximately 4,146 Kg or 9,121 pounds (estimate calculated from available data).
- An estimated 2,662,751 gallons of groundwater has been impacted by TCE.
- Based on 1999 groundwater measurements, the linear groundwater flow velocity is toward the northeast at an estimated rate of 0.079 ft/day.
- “The absence of measurable organic carbon in the aquifer matrix is allowing the TCE to advance along the groundwater gradient at an estimated rate of 0.076 ft/day, with almost no adsorption or an appreciable decrease in apparent velocity.”
- TCE degradation products were found in one sample of the groundwater suggesting that TCE degradation is limited.
- The TCE plume appears to have migrated off-site, underneath a residence and a restaurant.

There is a large pond located less than one half of a mile in the direction of groundwater flow. Several residences appear to be in the path of this plume.

SITE DESCRIPTION

Location: The site is located at 102 Miller Street in the city limits of Bald Knob, Arkansas. There are several residences in close proximity to the facility.

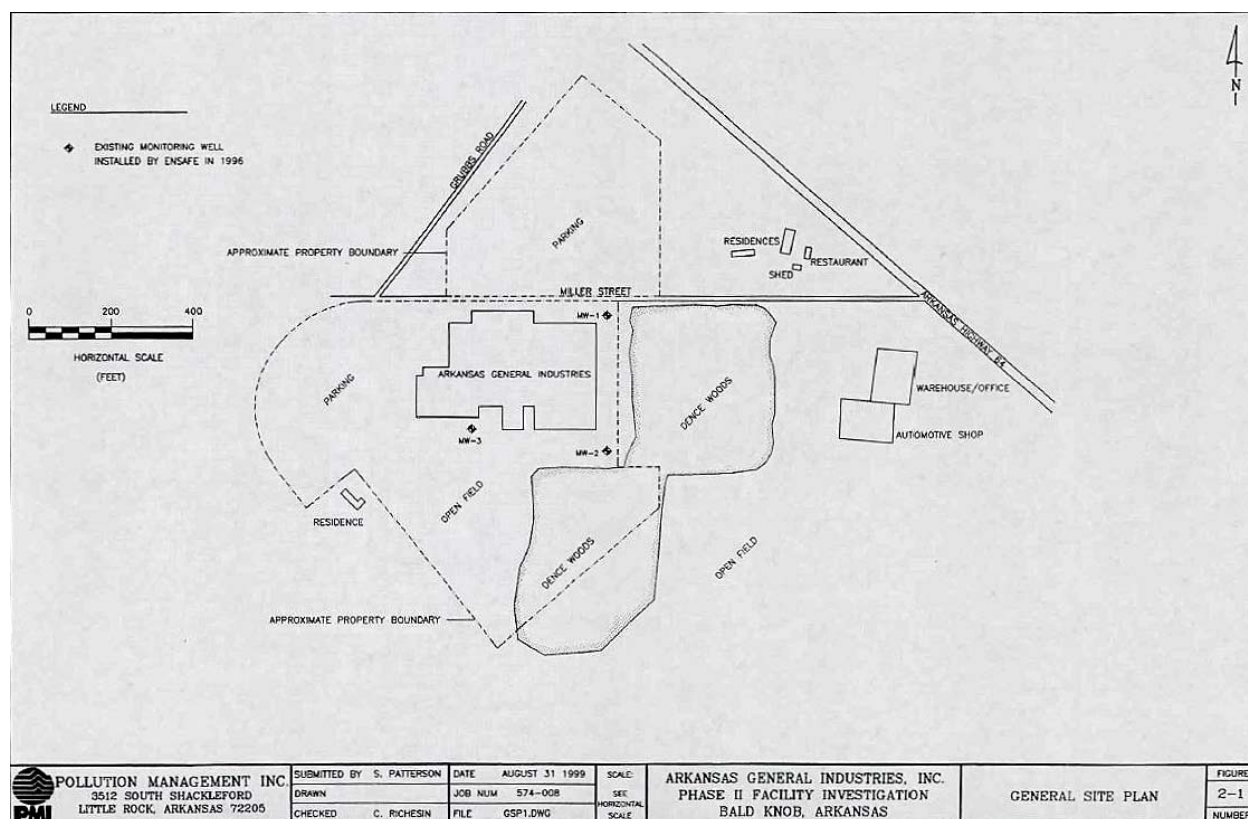
Population: The city of Bald Knob has 2,897 residents according to the Arkansas Municipal League.

Setting: The site is currently owned by Fat Jaxx Corporation. The property includes a 100,000 sq. foot office and warehouse building which is currently vacant. The property is located in a mixed commercial and residential area. Gum Creek is approximately 1000 feet east of the site. There is also a large pond (approximately 74 acres) within a half of a mile of the site.

Hydrology: This site is relatively flat. Site drainage leaves the facility south east in a drainage ditch which joins Gum Creek.

Aerial Photo:



Site Diagram:**WASTE AND VOLUMES**

This site is a State Priority List (SPL) site. The 1999 Phase II Facility Investigation Report Executive Summary by PMI indicated the total mass of TCE dissolved in groundwater was approximately 4,146 Kg or 9,121 pounds (estimate calculated from available data). A probable source area has been identified approximately 100 to 150 feet west of the southeast corner of the facility. TCE concentrations in the soil range from 8800 mg/kg at 0-5 feet to 7400 mg/kg at 14 feet to 17 mg/kg at 17 feet below ground surface (bgs).

HEALTH CONSIDERATIONS

TCE and daughter products have been detected in the groundwater. The groundwater flow velocity was estimated by PMI to be 0.076 feet per day to the northeast. The highest concentration of TCE in groundwater during the 2010 sampling was 78,000 µg/l at MW-08B about 40 feet bgs. This well is near the road and adjacent to the parking lot of the Big Bayou Market. The federal maximum contaminant limit for TCE is 5 µg/l. No risk evaluation has been performed regarding this site.

DEQ RESPONSE ACTIONS

In June and July of 1996 EnSAFE performed an environmental assessment which discovered TCE in the groundwater within the property boundary. In August of 1996 AGI entered into

CAO LIS 96-093 to satisfy a requirement for environmental due diligence required by a loan commitment obtained under a bankruptcy reorganization plan. Pollution Management, Inc. (PMI) preformed a Phase I Facility Investigation under this order. Further delineation of contamination was reported in the Phase II Facility Investigation Report dated December 21, 1999. The Phase II investigation assessed the subsurface conditions related to TCE and daughter products on the facility boundaries and adjoining properties. Some of these properties are residential. AGI then defaulted on their loan commitments. The assets and name of AGI were sold; however the current owners of AGI had opted to lease the Bald Knob property. The AGI business moved, and the property has been sold.

A limited groundwater assessment was conducted by EPA in February 2010. Results indicated that the groundwater plume extends at least to Highway 64. A scope of work for a bioremediation pilot study was submitted by the EPA contractor December 2011. Work Plans for the Bioremediation Pilot Study were submitted in May 2012. An underground injection control (UIC) well application was submitted in October 2012 and approved in August 2013. ADEQ personnel conducted a site visit with representatives from EPA and PMI on December 11-12, 2012 as part of Phase I. A revised work plan for the Bioremediation Pilot Study was approved January 21, 2014.

ADEQ, with assistance of Region 6 EPA and their contractor, conducted a bioremediation pilot study to evaluate the effectiveness of reductive dechlorination of TCE and daughter products through the injection of electron donor substrate into the contaminated groundwater zone near the source. This work began in 2014 with the establishment of eight (8) injection wells. Concurrently, ADEQ began CSA activities in September 2014. Soil vapor testing was completed on November 24-26, 2014. FTN conducted the baseline groundwater sampling and water level measurements for the current monitoring wells and select injection wells December 16-18, 2014. The sampling data and proposed new monitoring well locations were submitted to the ADEQ in January 2015. FTN conducted baseline groundwater sampling and water level measurements of the six (6) injection wells not sampled during the December event September 30 and October 1, 2015. Phase I of the bio injection activities was completed November 16-19, 2015. Electron donor and microbes were injected in each of the injection points.

A report of the injection activities was received February 26, 2016. Sampling of the injection wells was conducted on May 17, 2016, and results were received July 13, 2016. A post injection site-wide groundwater sampling event will be conducted in November 2016.

DEQ ANTICIPATED FUTURE ACTIVITIES

ADEQ will continue with the CSA activities. Additional groundwater monitoring wells will be installed and sampled to determine the nature and extent of the contamination. The ADEQ and USEPA Region 6 will continue the bioremediation pilot study activities. Follow up sampling of the injection wells was conducted on May 17, 2016, and a field report will follow. A post injection site-wide groundwater sampling event was conducted in November 2019. Results were finalized in March 2020 and indicate the need to replace several monitoring wells and suggest

that additional monitoring is warranted. A groundwater sampling event is being proposed for the Spring 2021.

SITE CONTACTS

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