Site Investigation Report Review

SIRR Report for Unassigned Uncontrolled Sites

SIRR ID P97-0006

Site Name HAWKEYE BUILDING SUPPLIES

Screening Activity Extended Site Screening

City Location Sioux City

Site Type Property Audit

County Woodbury

SITE INFORMATION

Property Owner Hawkeye Building Supply

Mailing Address Bill Engelen
Hawkeye Building Suply Company
204 Iowa Street
Sioux City, Iowa 51101

Location/Legal Description Hawkeye Building supply
620-624 Floyd Street
Sioux City, Iowa

Size Of Property Nine acres

Report Prepared By GaiaTech

Date Report Submitted 09/22/1999

Report Submitted By Steffen Engineering & Testing, Inc.

Current Usage Lumber Yard

REPORT INFORMATION SUMMARY

I. Summarize the data submitted (no., type, depth of soil borings, surface samples, ground water samples, other sampling conducted, analyses performed, contamination identified, etc.)

Environmental Site Assessment Phase I & II - Siouxland Engineering Associates (October 1993)

The assessment activities were limited to the collection of groundwater samples from temporary monitoring wells installed in three 40' borings. The samples were analyzed for the BTEX compounds and TPH as gasoline. No contaminants were found above minimum detection limits (2 ppb for BTEX compounds, 10 ppb for TPH). The three borings were supposed to be located immediately downgradient from the former location of an oil storage area and paint shop used by the railroad.

The soils encountered were the same in each boring: 3 to 4 feet of dark clay fill with the remained being light brown silty clay. None of the soils exhibited any unusual colors or odors.

Phase II Focused Soil and Groundwater Investigation - GaiaTech (June 1999)

The assessment activities included 13 shallow soil borings (generally 10' deep) and the installation of temporary monitoring wells in five deep borings (generally40' deep).

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Except for one location (MW-1) the surface was generally covered with 6 to 8" of asphalt (or concrete in two locations). Beneath the pavement a black sand and gravel fill generally extend to a depth of between 3 and 5 feet. The fill included cinders and usually glass and bricks. Other fill components included metal , concrete and rubble. The fill was underlain by silt or clayey silt. In the four of the five deep borings, the layers of silt, clayey silt and silty clay extended to a depth of 40 feet. Sand was encountered below 40 feet in MW-1 and below 34 feet in MW-5.

Soil samples were collected in the fill material at the five deep boring locations and at eight of the thirteen shallow boring locations. The samples were analyzed for total metals, semi-volatile compounds (SVOCs), TEH, VOCs, pesticides, and PCBs. No significant contamination was found with VOCs, pesticides, PCBs or TEH. Significant contamination was found with several PAHs and lead.

SOIL CONTAMINATION WITH LEAD
Ten of the 13 soil samples had lead levels above the normal background range (>100 mg/kg). Five of these samples had lead above the Chapter 137 Statewide Soil Standard (400 mg/kg). These highest values (up to 1,560 mg/kg) were found around the former railroad supply and oil storage building and the former railroad paint shop.

SOIL CONTAMINATED WITH PAHs
Most of the soil samples had total PAH concentrations between 2 and 10 mg/kg. Except for one location, most of the individual compounds were below their respective Statewide Soil Standards. The highest total PAH concentration was found at the location of MW-1 (384 mg/kg). Five of the compounds were found above the Statewide Soil Standards with four of the compounds at a level an order of magnitude above the standard. The former railroad shop and car repair was located in this area. The soil at this sample location is not covered by pavement.

Groundwater samples were collected the temporary monitoring wells in the five deep borings, Samples were analyzed for dissolve metals, VOCs, SVOCs, pesticides, PCBs and TEH (two of the wells). The only compounds found above minimum detection limits were two of the dissolved metals. This included barium as high as 112 ug/l and chromium at 10 ug/l.

II. Summarize the site history (past usages, known or suspected contamination pathways such as tanks, S.W. burial, septic tank/tile field, lagoon, land application, etc.)

Phase II Focused Soil and Groundwater Investigation - GaiaTech

The site is located in a light industrial/commercial/residential area of Sioux City. The site was developed in the late 1880s for primarily residential purposes. Later the site was developed for industrial and railroad operations. Sioux City Iron, a wholesaler of iron and metal supplies operated at the site from the 1950s until the 1990s. Hawkeye began operations at the site in 1996.

III. Summarize the other relevant information (include what may have been learned or known from sources other than the report itself, such as DNR files)

REVIEW SUMMARY

Contaminant Type Other

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I. Summarize your findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values known criteria such as water quality standards, MCLs, established cleanup levels, background or any other relevant or useful benchmarks used to determine the site's priority.

No groundwater contamination was found during either the 1993 or 1999 Phase II investigation.

Elevated lead levels were found in most of the shallow soil sample locations of the 1999m Phase II investigation. This include a ground of five sample locations with lead above the Chapter 137 Statewide Soil Standard (400 mg/kg). These higher values ranged from 508 mg/kg to 1,560 mg/kg. EPA has conducted removal actions for soil lead contamination at several locations in the state. For the commercial/industrial locations, the cleanup level has usually been set at 1,000 mg/kg.

PAH contaminated soils were found at one location (MW-1) at levels of concern. Five PAH compounds were found above the Chapter 137 Statewide Soil Standards. These included benzo(a)anthracene (27 mg/kg), benzo(b)fluoranthene (30 mg/kg) and benzo(a)pyrene (3.6 mg/kg) which were all approximately 10 time above their respective statewide standards.

II. Summarize the potential or actual impacts of the contamination. What is known about the neighboring area, i.e., are there residences, businesses, public use areas, etc.? Are there wells in the area that could be potentially impacted? Are there identified contaminant pathways such as water or sewer lines, drain tiles, or fissures? Identify any other use/location issues that deserve consideration in any priority assignment.

The site has been use for commercial purposes for over 50 years and is likely to remain so in the future. However, directly west of the site is a residential neighborhood. Nearly all the site appears to covered with asphalt or concrete pavement. This currently limits reduces likelihood of exposure of the contaminated fill soils to the nearby residents, workers or customers at the site. The one exception is the PAH contaminated fill soils at the location of MW-1with no reported pavement cover.

III. Summarize any other information, knowledge, or reasoning used in determining your recommendation regarding the priority assigned to this site.

The site has lead and PAH contaminated surface fill soils that are generally covered by 6-8' of asphalt pavement.

The highest level of lead is approximately four times the Chapter 137 statewide soil standard and appears to include an area 200 feet wide by 400 feet long with lead above the standard (400 mg/kg). Since this area is currently paved with asphalt, the main exposure threat appears to be from future construction activities which could change the exposure conditions. Because the lead contamination may cover approximately two acres, some form of institution control may be appropriate to address this future exposure concern.

Significant PAH contamination was only found at one location (MW-1). Because there is no pavement covering the soil at this location, there may be current exposure risk to workers and customers of the lumber yard, and possibly nearby residents.

Because of the current and potential exposure risks to lead and PAH contaminated soil, the site appears to warrant a priority 2 designation. An ESS site visit should be conducted to confirm this priority designation and help determine the appropriate program authority for taking further action at the site.

DJC August 10, 2000 Hawkeye Building Supply, now Hawkeye Distribution Inc., has completed all the requirements needed for, and has recorded an Environmental Protection Easement with the DNR legal staff and the Woodbury County Recorders Office. The easement requires Hawkeye Distribution to maintain a cap over the lead contaminated soil and to give the DNR a 60 day notice prior to disturbing the cap. At this time the site requires no further action besides maintaining the cap, therefore, this completes the ESS and any further site assessment.

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PRIORITY LEVEL

Priority Level 2

PROGRAM AUTHORITY REFERRAL

Program Authority Referral Other

Other Referral Institutional Control

ISS/Form Completed By John Vedder
ESS Completed B Dan Cook

Date ISS Completed 11/02/1999
Date ESS Completed 08/10/2000
Date Completed 08/10/2000

Form Reviewed John Vedder JV
Susan Dixon S.D.

Date Reviewed 8/16/2000
8/18/2000