Environmental Investigation of Baseball Fields

In March 2007, ARCADIS on behalf of Ford Motor Company (Ford) began a comprehensive environmental site assessment (ESA) of the Twin Cities Assembly Plant (TCAP). The purpose of the ESA was to identify and characterize environmental impacts at the TCAP in anticipation of the future redevelopment of the site. As part of the ESA, environmental conditions were assessed across the exterior portion of the TCAP, including the six-acre area located immediately east of the current production facility (Baseball Field Area). Since 1954, this area has been used by the St. Paul community as baseball fields. This popular area includes three baseball fields, a concession building with restrooms, batting cages, and a practice pitching area.

During the initial environmental work, unconfirmed reports indicated the possibility that the Baseball Field Area may have been used for historical battery disposal activities, before this area was dedicated to recreational use. In July and August of 2007, low levels of arsenic, copper and iron were detected in some of the soil samples taken in the Baseball Field Area. After review of this information, Ford voluntarily closed the baseball fields and initiated a focused environmental investigation of this area.

The additional investigation of the Baseball Field Area was recently completed. As discussed in more detail below, it is unlikely the Baseball Field Area was used for battery storage or disposal. Based on soil samples and a hazard assessment, the environmental conditions in the Baseball Field Area do not pose a health risk and the area is safe for recreational use. As a precaution, Ford will remove surface soils in one area where arsenic levels were slightly higher than levels commonly found in the environment. After this work is completed, Ford intends to reopen the baseball fields in time for the 2008 season.

Phase I and Initial Phase II ESA Findings

During the Phase I ESA initiated in March of 2007, unconfirmed reports that the Baseball Field Area may have been used for the storage or disposal of batteries were discovered. These reports were not supported by either any written records or any first-hand accounts. During the Phase I ESA walk-thorough investigation, there was no physical evidence of past battery disposal activities in the Baseball Field Area. During the Initial Phase II ESA, soil samples detected low levels of arsenic, copper, and iron. While the levels were relatively low, they were detected above the Minnesota Pollution Control Agency's (MPCA) acceptable generic levels for recreational use thus warranting additional site specific evaluation. The results of the initial soil investigation activities were reported in *Soil Investigation Report—Baseball Fields—Feature 139*, prepared by ARCADIS and dated September 7, 2007. After review of this report, Ford closed the baseball fields and voluntarily conducted additional investigation activities at the Baseball Field Area, under a work plan that was approved by the MPCA.

Baseball Field Investigation and Risk Assessment

In-depth sampling of the Baseball Field Area began in September 2007. The investigation included thirty-six surface soil samples, fifty-seven below-ground samples, and two "perched" groundwater samples. ("Perched" groundwater is groundwater above the water table that is not flowing or mixing with other groundwater.) The soil was tested for arsenic, copper, and iron (the same substances found during the Initial Phase II Investigation) as well as for lead which is a common component of batteries.

The results obtained by the soil and groundwater samples were encouraging. ARCADIS found that lead levels were acceptable for recreational use. Consistent with the Initial Phase II Investigation, arsenic, copper, and iron were found in concentrations greater than the MPCA's generic acceptable levels for recreational use. The concentrations were, however, comparable to background levels that occur naturally in Minnesota soils. Under the MPCA's guidance, further risk characterization is not required if detected levels are comparable to naturally occurring background levels. However, because it was determined that these naturally-occurring levels were above the MPCA's generic recreational levels in some samples, ARCADIS undertook a Risk Assessment to confirm that the levels of these substances were acceptable for continued recreational use.

Under the Risk Assessment, ARCADIS evaluated health-based criteria to determine whether recreation at the baseball fields is safe under long term (chronic) exposure and short-term (acute) exposure conditions. The levels for arsenic, copper, and iron detected in the soil samples were lower than the levels considered by the MPCA to be hazardous under long-term exposure. However, the levels for arsenic and copper were detected at levels considered to be potentially hazardous under short-term exposure; therefore a Short-Term Hazard Assessment was conducted. Based on that assessment, ARCADIS determined that these short-term criteria are not based on exposures that are expected to occur at the site under current recreational use and surface soil quality at the site is acceptable for recreational use. The report describing these additional soil and groundwater investigation and risk assessment activities has been submitted to the MPCA.

One sample at the site revealed arsenic levels slightly higher than common levels that occur naturally. As a precautionary measure, Ford will remove the soil in this area.

Conclusion

Ford's evaluation of soil conditions at the Baseball Field Area reveals that it is unlikely that battery wastes were stored or disposed of in this area. Ford is pleased to report that the investigation has demonstrated that this important community resource does not pose a health risk and is safe for recreational use. As a precaution, Ford will remove surface soil in one area where arsenic levels were potentially higher than those occurring naturally, under the supervision of the MPCA. After restoring that area, Ford looks forward to reopening the baseball fields to the public.

Additional details are available in the report by ARCADIS entitled *Additional Soil Investigation and Surface Soil Risk Assessment Report—Baseball Fields—Feature 139*, dated December 18, 2007.