



June 30, 2010

Norbert Klopsch
City of Oakwood
30 Park Avenue
Oakwood, Ohio 45419

Re: Update on Soccer Field Phase I ESA

Dear Norb:

This letter is responding to your request for an update on the recommendations in the Phase I Environmental Site Assessment (ESA) on the NCR Recreational Fields dated October 9, 2006. In particular, the ESA identified three "recognized environmental conditions" in connection with the soccer field property.

1. Arsenic Levels in Soil Samples

The ESA states: "A management plan is recommended to prevent both future migration and exposure of visitors to and workers at the subject property."

Update: On behalf of Oakwood LJB took the first step in developing a management plan by determining the actual level of exposure risk to children of ingesting soil containing arsenic at the highest level found in any sample at the soccer fields. The results were presented to Oakwood in the memo titled "Evaluation of Risk Based Concentrations for Chronic Exposure to Arsenic" dated November 20, 2006. The evaluation demonstrated conclusively that the amount of arsenic found in soil sample with highest concentration posed no danger even to a child ingesting 200 mg of soil per day for 48 days a year for 10 years starting at age one. Because even direct ingestion of soil posed no health risk to the most susceptible population, no further management plan was needed related to arsenic. A similar exposure risk analysis for lead that LJB reviewed in 2003 showed no health danger from lead exposure to children using the soccer fields. The recommended management plan for lead is to maintain good grass cover in the limited affected area to control dust, and if/when there is future construction in that area, the plan is to remove and properly isolate the small amount of soil with elevated lead levels.

2. Trichloroethene (TCE) in Water Samples

The ESA states, "The presence of this volatile organic compound in the groundwater at the subject property is considered a recognized environmental condition, but other than continued monitoring,

no action is recommended because levels present are not sufficient to result in a threat to human health or the environment, or to migrate off the subject property.”

Update: Since publication of the ESA, LJB has received additional TCE data related to the site. Evaluation of the new information does not change any conclusions or recommendations of the ESA. Furthermore, the more recent data reviewed suggest that the TCE is being biologically degraded as shown by the distribution of TCE and its breakdown products *cis* 1,2-dichloroethane and vinyl chloride. This biological degradation is a normal and natural process that reduces the TCE concentration and therefore the risk over time.

3. *cis* 1,2-dichloroethane Water Samples

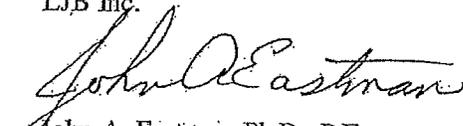
The ESA states: “As with the trichloroethene detections discussed above, continued monitoring is recommended, but because the groundwater is not used as drinking water, the levels present are not considered sufficient to result in a threat to human health or the environment, or to migrate off the subject property.”

Update: Since publication of the ESA, LJB has received additional *cis* 1,2-dichloroethane data related to the site. Evaluation of the new information does not change any conclusions or recommendations of the ESA. Furthermore, the data reviewed for *cis* 1,2-dichloroethane suggest the active breakdown of TCE, which will reduce the exposure risk over time.

In summary, it is my professional opinion that there is no danger to the public; and specifically no danger to children, using the Old River soccer fields from the types and amounts of chemicals that have been found there. However, LJB does recommend continued review and evaluation of all new information and data as they become available.

Sincerely,

LJB Inc.


John A. Eastman, Ph.D., P.E.
Chief Environmental Engineer

RECOGNIZED ENVIRONMENTAL CONDITIONS

Prepared by LJB Inc.
September 14, 2010

The full statement regarding Recognized Environmental Conditions in ASTM E1527-05 (Standard Practice for Environmental Site Assessments) is as follows. Note that the italicized emphasis is in the original.

1.1.1 Recognized Environmental Conditions—In defining a standard of good commercial and customary practice for conducting an *environmental site assessment* of a parcel of *property*, the goal of the processes established by this practice is to identify *recognized environmental conditions*. The term *recognized environmental conditions* means the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a *material threat* of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *recognized environmental conditions*.

A guide to interpretation of “recognized environmental conditions” in ASTM E1527 is as follows:

1. The second sentence is the actual definition: “The term *recognized environmental conditions* means the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a *material threat* of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*.”
2. To determine whether there is a *recognized environmental condition*, the environmental professional must determine the following:
 - a. Whether there is the presence or likely presence of a hazardous substance or petroleum product.
 - b. Whether this hazardous substance or petroleum product is on the property being evaluated.
 - c. Whether the conditions under which the hazardous substance or petroleum product is found indicate one of the following:
 - i. an existing release,
 - ii. a past release, or
 - iii. a material threat of a release
“into structures on the *property* or into the ground, ground water, or surface water of the *property*.”

3. To assist the environmental professional in determining what is to be considered a *recognized environmental condition* the remaining sentences cover add clarifications:
 - a. The third sentence reads: “The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws.” This makes it clear that a *recognized environmental condition* includes identified conditions whether or not they comply with the law.
 - b. The last two sentences make it clear that *de minimis* conditions are those that generally do not present a threat to human health or the environment. Therefore, *de minimis* conditions are not *recognized environmental conditions*

Correction of common misunderstandings of “recognized environmental conditions”

1. **Nowhere** in the definition of *recognized environmental condition* is a statement that there is a threat (or risk) to human health or the environment. If a condition is determined to be a *recognized environmental condition*, it must still be determined what is the significance or importance of the condition. Sometimes there is a threat to human health or the environment, but many times there is not any significant threat.
2. The identification of a *recognized environmental condition* does not, by itself, mean it is a threat (or risk) to human health or the environment, or to the use or intended use of a property.
3. The purpose of identifying *recognized environmental conditions* is to provide the reader with a clearly stated list of what the environmental professional determined to fit the criteria for a *recognized environmental condition* so that the reader can then determine how they want to respond to those conditions, including whether to conduct further evaluations or testing, and in particular how they might affect a property transaction.