State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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July 13, 2023

Mr. John Ausburn
Cypress Acquisitions LLC
8144 Walnut Hill Lane Suite 1200
Dallas, TX 72531
Electronic mail only to john.ausburn@cypressequities.com

Subject: Vapor Investigation Comments
The Lydell Apartment Buildings – Landfill
5805, 5815, 5905 N. Lydell Ave. & 225 W. Bayside Dr., Glendale, Wisconsin
BRRTS# 02-41-592293; FID# 341209660

Dear Mr. Ausburn,

The Department of Natural Resources (DNR) appreciates the work Cypress Acquisitions LLC has conducted to date to address the presence of trichloroethene (TCE) in sub-slab vapor and indoor air at concentrations that exceed regulatory standards in Building 3 at The Lydell Apartment Buildings – Landfill. The DNR thanks you for your collaborative work thus far on this project.

On June 2, 2023, the DNR received the report *Sub-Slab and Indoor Air Quality Testing Results Bayshore Town Center - Building 3* (Building 3 Report). The Building 3 Report was submitted on behalf of Cypress Acquisitions LLC (Cypress) by GZA Geo Environmental, Inc. (GZA). The Building 3 Report was submitted without a fee for DNR review and response, however the DNR is providing the comments below to help guide Cypress and GZA through the regulatory process.

In addition to Building 3, three additional residential buildings are being constructed, or have been constructed, on the property. A report with a fee for DNR review related to these three buildings has not been submitted, however general comments regarding the vapor investigations at these buildings are provided below due to concerns regarding the presence of TCE at the site.

Special Vapor Intrusion Concern with Trichloroethylene (TCE):
Contamination that includes TCE is of special concern from a human health perspective due to its potential for acute (short-term) health risks at relatively low concentrations in air. Because TCE is a contaminant of concern at the site and has been identified in indoor air at concentrations exceeding the vapor action level (VAL) in Building 3, the actions requested below should be prioritized and completed as soon as possible.

Building 3 - 5805 N. Lydell Ave.
The Building 3 Report contains the results of sub-slab vapor and indoor sampling that was conducted at Building 3 in April and May 2023. The results indicate that TCE, 1,2-dichloroethene, cis-1,2-dichloroethene and chloroform were identified in sub-slab vapor at concentrations that exceed applicable vapor risk screening levels (VRSLs). TCE and chloroform were identified in the indoor air at concentrations that exceed the applicable VALs. A passive vapor mitigation system (VMS) was included in the building construction and the Building 3 Report states that the VMS was activated with fans on May 19, 2023, due to the results of the sub-slab and indoor air sampling described above. The DNR was notified that Building 3 was partially occupied on June 12, 2023.

Following conversations with the DNR, the Wisconsin Department of Health Services (DHS), and the North Shore Health Department, Cypress provided notification of the initial sampling results to residents on Wednesday June, 14, 2023. GZA has continued to conduct sampling to determine the degree and extent of contamination in the indoor air of Building 3. The results of the indoor air sampling conducted after activation of the VMS indicate that TCE continues to be present in the indoor air of Building 3 at concentrations exceeding the VAL. GZA has been evaluating the data and has taken actions, including implementing modifications to the VMS and deploying additional air purifying units in select locations within Building 3. Additional indoor air and sub-slab sampling has been ongoing to determine the impact that activation of the VMS has had on indoor air quality.

- Wis. Admin. Code § NR 714.07 requires Cypress to conduct necessary notification activities for all indoor air sampling results within individual tenant-occupied apartments that exceed the TCE VAL of 2.1 $\mu g/m^3$, considering the threats to public health, safety or welfare. This notification must include the following:
    a. A description of the contamination;
    b. The response actions that are planned or underway;
    c. Phone numbers and addresses of persons to contact regarding the information. Contacts should include a representative for Cypress and should also include myself as the DNR Project Manager, Nathan Kloczko (608-867-4448, nathan.kloczko@dhs.wisconsin.gov) as the contact with DHS, and Rebecca Rowland as the contact for the North Shore Health Department (414-916-7158, browland@nshealthdept.org).

- Wis. Admin. Code § NR 716.14 requires the RP to report all sampling results to the occupants of the property. Due to the amount of data and the number of occupants, a summary of the data is recommended with contact information for tenants to obtain more details. Wis. Admin. Code § NR 714.07 includes additional details on different methods of notifying that may be used. The DNR and DHS are also able to assist with an informational meeting with your tenants following tenant notification, if desired.

- Each of these Wis. Admin. Codes (NR 714.07 & NR 716.14) must be reviewed and implemented as you prepare and present your notifications for and to the occupants of the property. The DNR strongly recommends DHS's fact sheet *TCE in Indoor Air*, available for download here https://www.dhs.wisconsin.gov/publications/p02480.pdf be included with your notifications along with the DNR's guidance document *What is Vapor Intrusion?*, available for download here https://dnr.wi.gov/DocLink/RR/RR892.pdf.

- Wis. Admin. Code § NR 708.05 requires the responsible party to immediately take actions to halt or minimize harmful effects of environmental pollution to the air. Additional actions, such as modifications to the VMS and deployment of additional air purifying units, must be implemented to reduce the concentrations of contaminants in indoor air below applicable VALs. Additional indoor air sampling to demonstrate the effectiveness of the implemented immediate actions is required. The DNR understands indoor air sampling is ongoing.

- Wis. Admin. Code § NR 716.01 states that the purpose of the site investigation is to determine the nature, degree, and extent of contamination and to define the sources of contamination. Additional investigation is required to determine the degree and extent of contamination in the indoor air of Building 3. The DNR recommends continued use of a portable gas chromatograph/electron capture detector (GC/ECD) unit to expedite the identification of contaminant vapor entry points, expedite the investigation of the degree and

extent of contamination in indoor air, and demonstrate the effectiveness of immediate actions as requested above.

- Wis. Admin. Code ch. NR 708.11(1)(b) states that the department may require the use of a vapor mitigation system, or other engineering control, when vapor concentrations beneath a slab, foundation, or building exceed a VRSL. Vapor mitigation is necessary at Building 3 due to the presence of chlorinated volatile organic compounds (CVOCs) in sub-slab vapors at concentrations exceeding the applicable VRSLs. VMS commissioning activities such as indoor air sampling and pressure field extension testing are necessary to demonstrate that the VMS is effectively mitigating the vapor intrusion pathway. The DNR understands GZA is currently monitoring the performance of Building 3's VMS and is making modifications based on their continued evaluation of the system.

- Due to the presence of CVOCs in sub-slab vapors at concentrations exceeding the applicable VRSLs, remedial action(s) to reduce the mass and concentration of volatile compounds to the extent practicable must be completed prior to case closure per Wis. Admin. Code § NR 726.05(8)(b)1.

Lydell Avenue Sewer Investigation

On June 26, 2023, sampling of vapor was conducted in the manhole outside the unit to which GZA understands the Building 3 sanitary line connects. Results indicated TCE was detected at levels of 730 ug/m3. GZA conducted additional sampling in the same manhole as well as in the manholes to the north and south on June 29, 2023. Results ranged from 6 to 15 ug/m3. Additional sampling in this manhole as well as manholes upgradient and downgradient is recommended to determine the potential source, degree, and extent of vapor impacts in the sewer lines.

Building 2 – 5815 N. Lydell Ave.

Construction of the residential Building 2 is complete and Cypress has stated that the building is partially occupied. According to GZA, a passive vapor mitigation system was incorporated into the construction of Building 2. As a precautionary measure, the DNR was notified the VMS was activated with fans on June 28, 2023. One round of sub-slab vapor and indoor air sampling was conducted at Building 2 in June 2023. No VRSL or VAL exceedances were identified during this round of sampling.

- Perform additional vapor sampling to confirm contaminant concentrations are below VRSLs and VALs. The DNR generally recommends a minimum of three rounds of vapor sampling in residential settings. The results of the vapor sampling should be evaluated to determine whether additional sampling, additional mitigation of the vapor intrusion pathway, and remedial action are warranted.

Building 1 – 5905 N. Lydell Ave.

Construction of the residential Building 1 is in progress and Cypress has stated that the building is not currently occupied. According to GZA, a passive vapor mitigation system will be incorporated into the construction of Building 1.

- Due to the concentrations of CVOCs identified in soil, groundwater, and soil vapor and heterogenous nature of contamination at the site, vapor sampling is warranted at Building 1. DNR recommends performing vapor sampling in the building to determine the concentrations of contaminants in sub-slab vapors and indoor air. The results of the vapor sampling should be evaluated to determine whether additional sampling, additional mitigation of the vapor intrusion pathway, and remedial action are

warranted. The DNR recommends that the vapor sampling requested above is completed prior to building occupancy to prevent potential contaminant exposure to future occupants.

Building 4 – 225 W. Bayside Dr.

Construction of the residential Building 4 is complete and the building is currently occupied. On March 21, 2023, the DNR received the report *January 2023 Sub-Slab and Indoor Air Quality Testing Results Bayshore Town Center - Building 4* (Building 4 Report). The Building 4 Report states that a passive mitigation system was incorporated into the construction of Building 4. The Building 4 Report also contains the results of one round of sub-slab vapor and indoor air sampling that was conducted at Building 4 in January 2023. No VRSL or VAL exceedances were identified during this round of sampling.

- Perform additional vapor sampling to confirm contaminant concentrations are below VRSLs and VALs. The DNR generally recommends a minimum of three rounds of vapor sampling in residential settings. The results of the vapor sampling should be evaluated to determine whether additional sampling, additional mitigation of the vapor intrusion pathway, and remedial action are warranted.

This letter is not intended to provide a comprehensive list of all actions necessary to comply with Wisconsin Statutes ch. 292 and Wis. Admin. Code chs. NR 700-799 and additional response actions may be necessary to comply with the requirements of Wisconsin Statutes ch. 292 and Wis. Admin. Code chs. NR 700-799.

The DNR appreciates the efforts you are taking to address the contamination at this site. If you have any questions about this letter, please contact me at (414) 639-4156 or david.hanson@wisconsin.gov.

Sincerely,

David Hanson
Redevelopment Specialist
Remediation & Redevelopment Program

cc: John Osborne, GZA (john.osborne@gza.com)
Heidi Woelfel, GZA (heidi.woelfel@gza.com)
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