

November 16, 2017

Mr. Riley Neumann
Wisconsin Department of Natural Resources
2300 North Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212-3128

**Re: *Supplemental Information to
Site Investigation Report Amendment
BRRTS #: 02-41-576336 & 02-41-579429
FID #: 241828620
Sunrise Shopping Center
2410-2424 10th Avenue & 1009 Marquette Avenue
South Milwaukee, Wisconsin 53172***

Mr. Neumann:

A *Site Investigation Report Amendment* (SIR Amendment) dated September 18, 2017, was submitted to Wisconsin Department of Natural Resources (WDNR) for the Sunrise Shopping Center facility located at the above-referenced address. Upon initial review of the SIR Amendment, WDNR called DAI Environmental, Inc. (DAI) by telephone on November 10, 2017, to request additional information pending WDNR's final review. The verbal request was then followed up with an email dated November 10, 2017. DAI has prepared this letter to provide the supplemental information requested by WDNR.

Naphthalene Soil Contamination – Former Heating Oil UST Area

WDNR requested more information regarding the likely source of Naphthalene contamination identified at soil boring GP-13, which is located to the west and behind the 2414B tenant space.

After completing delineation of the Naphthalene contamination identified at GP-13, DAI's opinion is that the source of this contamination is associated with a former heating oil underground storage tank (UST) that was previously located in this area. A UST was registered at the 2416 (now 2414B) tenant space with the State of Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP). While no records exist indicating that the tank was removed, no signs that the UST remains were noted during the Phase I Environmental Site Assessment (ESA), nor during subsequent subsurface investigation activities. The approximate location of the UST for the 2416 tenant space is shown on Figure B.1.b.2 (provided here as an attachment).

A UST permit application filed with the City of South Milwaukee indicates three (3) additional heating oil USTs were likely installed around June 1970 behind the 2418, 2420, and 2422 tenant spaces. (However, these USTs were never registered with DATCP, nor were there any indications of these USTs noted during the Phase I and subsequent Site Investigations). Figure B.1.b.2 shows the approximate locations of the USTs based upon the proposed installation location provided in the permit application. Although the fuel oil UST previously located behind the 2416 tenant space is the most likely source of the observed Naphthalene contamination, the other USTs may have contributed to the Naphthalene contamination. In either event, it is DAI's opinion that the most probable source of Naphthalene contamination at the 2414B tenant space is associated with the former USTs, and that the Naphthalene contamination has been fully delineated and the requirements of NR 716 have been met.

Chlorinated VOC Soil Contamination – Former Sunbrite Cleaners Area

WDNR requested DAI's opinion on the location of the Perc release areas within and around the former Sunbrite Cleaners tenant space, and how the Perc contamination may be migrating.

The locations of highest Perc concentrations, i.e., the release points or source areas, include the area within the former Sunbrite Cleaners tenant space where the dry cleaning machines were reported to have been located, and along the rear (west) wall of the Sunbrite tenant space. Although almost all the soils beneath and behind the Sunbrite Cleaners tenant space are contaminated, the data indicate two (2) areas with higher Perc contamination, i.e., the former location of the dry cleaning machines in the front of the tenant space, and in the rear and behind the tenant space. The rear and behind the Sunbrite tenant space is likely where the waste dry cleaning solvent was stored and spilled. The subsurface plumbing lines running through the tenant space may have provided a conduit for contaminant migration from the former dry cleaning machine source area, and contributed to the Perc iso-concentration profile exhibited.

The former dry cleaning machine source area is centered around GP-405 inside the 2410 tenant space, and the storage/spill source area outside is generally located between GP-311 and GP-518 along the rear wall of the tenant space. Although there are numerous public utilities located to the west of the shopping center, these utility conduits do not appear to be contributing to contaminant migration. The public utility mains run northwest-southeast along the western property boundary, and the utility lateral that supplies the former Sunbrite tenant space comes into the building at a location south of GP-311 and GP-518. Review of the soil contaminant plumes depicted in Figures B.2.a.1.b, B.2.a.1.b.2, and B.2.a.1.c (included in the SIR Amendment) indicate that the public utilities do not appear to be significant conduits for contaminant migration.

A more likely cause for the lateral distribution of contamination within the shallow soil in the rear of the 2410 and 2412 tenant spaces is the presence of non-native backfill soil within the area. A review of the March 1998 Case Closure file shows that a soil excavation to approximately 9-ft depth was previously performed to address petroleum impacted soil behind the 2410 and 2412 tenant spaces and is very close to the location of GP-311 and GP-518. The presence of loose non-native backfill behind the tenant space likely contributed to the lateral spread of Perc contamination.

1,1,1-Trichloroethane Soil Contamination – 2414B (Former 2416) Tenant Space

WDNR requested DAI's opinion on the probable source of the 1,1,1-TCA contamination observed at the Site. Specifically, WDNR questioned whether the 1,1,1-TCA contamination observed in the soils behind the 2414B tenant space was associated with the former Wolf's Dry Cleaners & Launderers operations, or if not, what is the likely source of the contamination?

DAI does not believe that the 1,1,1-Trichloroethane (1,1,1-TCA) contamination is directly associated with the former dry cleaning operations, primarily because 1,1,1-TCA is not a common dry cleaning solvent, and is therefore not expected to have been used or released at the former Wolf's Dry Cleaners & Launderers (Wolf's) space. 1,1,1-TCA is also not a breakdown product of Tetrachloroethene (Perc), which is a commonly used dry cleaning solvent. Perc was observed at the Site in the soils behind the Sunbrite Cleaners space (2410), but not behind Wolf's tenant space where the 1,1,1-TCA is observed. The one (1) location where 1,1,1-TCA was observed at a concentration exceeding the Residual Contaminant Level (RCL) was at a depth of 8-ft to 10-ft bgs, which does not imply a surface release. The waste dry cleaning solvents would have been stored at surface level. Also, the 1,1,1-TCA detections also do not coincide with the location of the Perc contamination. For these reasons DAI does not believe that the 1,1,1-TCA is directly associated with the release of the dry cleaning solvent Perc at the former Wolf's location.

The highest concentration of the 1,1,1-TCA was identified at GP-511 at a depth of 8 to 10-ft bgs. None of the other soil borings installed closest to GP-511 indicated any presence of 1,1,1-TCA, and the only other two (2) soil sample locations with minor J-value detections of 1,1,1-TCA are 60-ft and 90-ft from GP-511. The single 1,1,1-TCA exceedance is isolated to one (1) location, at one (1) depth. Most importantly, the concentrations of 1,1,1-TCA are very low relative to the RCL, and do not appear to be migrating or causing any health concern. Also, the sampling data demonstrate full vertical and horizontal delineation and do not suggest the presence of any specific release point(s), or area(s) where higher concentrations would be expected. The area of observed 1,1,1-TCA contamination is covered by an existing engineered barrier which will remain in place. Based upon the sampling results, DAI believes that the requirements of NR 716 have been met for delineation of 1,1,1-TCA, and that further sampling is not needed.

Chlorinated VOC Groundwater Contamination – Former Sunbrite Cleaners Area

WDNR expressed a concern that the Perc concentrations in monitoring well MW-5 have increased over time, and asked whether future monitoring will be conducted, and if the concentrations increase, what actions will be undertaken?

Because there are no longer any dry cleaning operations at the shopping center, there is no continuing (or potential continuing) sources of Perc contamination. Therefore the mass of Perc contamination in the subsurface will not increase, and the subsurface Perc concentrations at any location should decrease due to biodegradation and attenuation. However, as requested by WDNR, the Perc concentrations in MW-5 will be monitored going forward, and if the concentrations continue to increase in a manner that suggests a previously undetected source of Perc, then additional remedial actions will be conducted. Any remedial activities will be proposed to WDNR for approval prior to initiating action.

DAI requests that future groundwater sampling be performed as part of the monitoring required under NR 724, not Site Investigations conducted under NR 716.

Chlorinated VOC Sump Water Contamination – Ace Hardware

WDNR requested an explanation for why the water from the sump in the Ace Hardware building shows Perc contamination, although the groundwater sample collected from monitoring well MW-201, located just outside of the northwestern corner of the Ace Hardware building, does not show any detectable concentrations of Perc.

A water sample was collected from the sump located in the northwestern corner of the basement of the Ace Hardware building (see Figure B.1.b.2). The analytical results indicated a Perc concentration in the sump water above the Enforcement Standard. Conversely, the groundwater samples collected from monitoring well MW-201, located outside of the northwestern corner of the Ace Hardware building, have not shown any detectable concentrations of any VOCs in any of the three (3) samples collected during Site Investigation activities, including the May 30, 2017, sample that was collected shortly before the June 4, 2017, sump sample. (Also, no contamination was detected in the soil during the installation of MW-201.) The VOC concentrations from the sump water sample are more consistent with the groundwater concentrations observed in monitoring well MW-5.

The difference in VOC concentration between MW-201 and the sump water do not result from sample or analytical error. Rather, the source of water collected from MW-201 and the sump differ. The sump in the Ace Hardware building is a concrete collection pit that receives water via piping from the permeable soils around the building footing. Because the groundwater located south of the Ace Hardware building is impacted with Perc, and has been observed in MW-5 as shallow as 5.92-ft below ground surface (shallower than the basement floor), the impacted groundwater is likely captured by the basement drainage system and transferred to the sump pit. So although the location of the sump pit is close to monitoring well MW-201, the source of contamination in the sump water sample likely originates from the contaminated groundwater near MW-5.

Naphthalene Vapor Contamination – Former Sunbrite Cleaners Area

WDNR requested an explanation for the observed presence of Naphthalene in sub-slab vapor sample SS-101.

The source of the Naphthalene observed in sub-slab vapor sample SS-101 is not certain. No other Site Investigations, including soil sampling, groundwater sampling, soil gas sampling, or indoor air sampling collaborate the presence of Naphthalene in the area of SS-101. DAI believes that the most likely source of the observed Naphthalene is from the previous UST removal and remediation, and that the presence of Naphthalene in the single sub-slab sample is in part due to the unpredictable air movement through the backfill below the building slab.

More importantly, the area around SS-101 will be subject to vapor recovery using an approved building control technology. The concentrations of chlorinated VOCs in the SS-101 sample dictate vapor recovery in the 2412 tenant space.

If you have any questions or require additional information in regards to this submission, please contact me at 847-573-8900 extension 580. Thank you for your time.

Sincerely,
DAI Environmental, Inc.

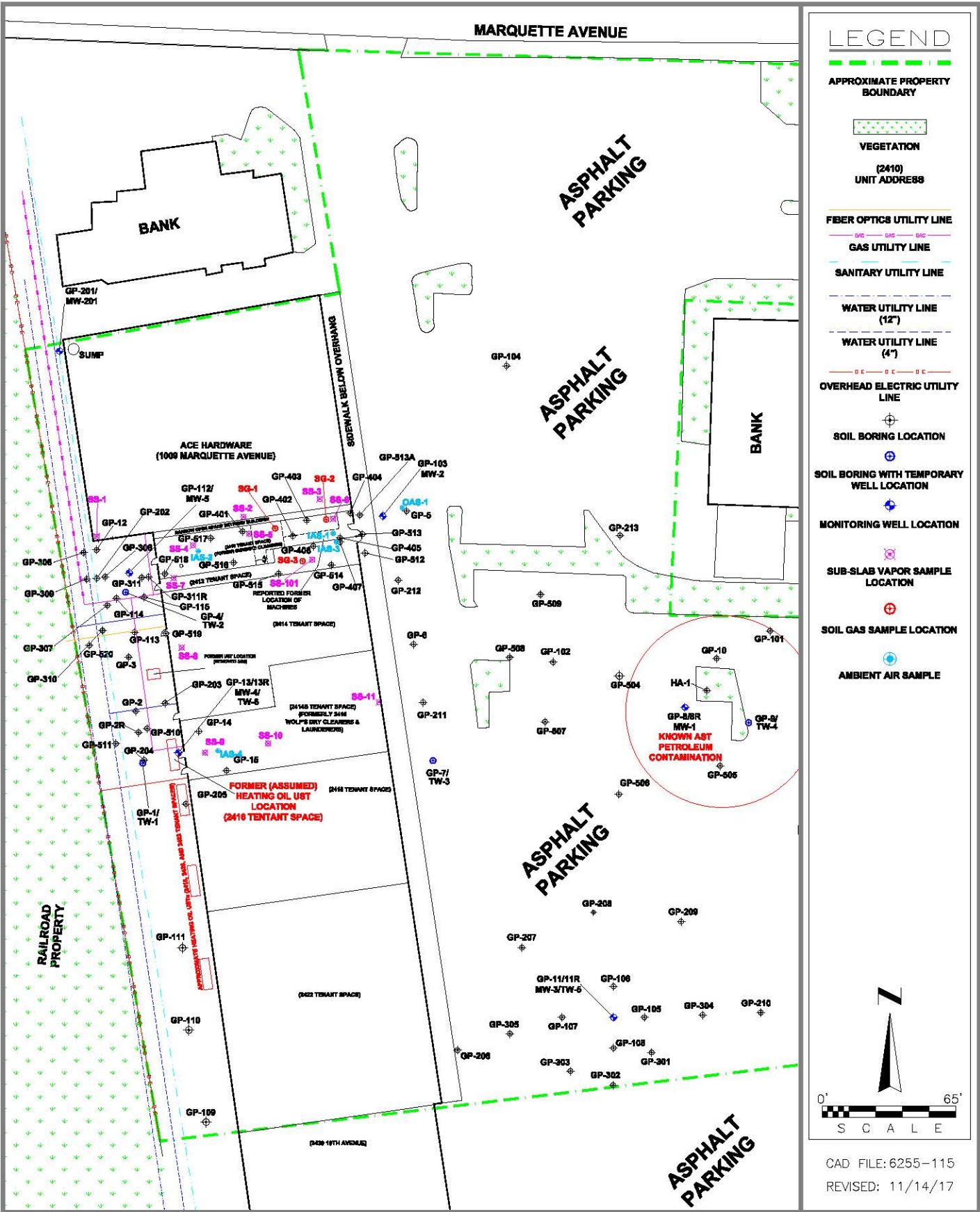


Christopher Cailles, P.E.
Project Engineer

Attachment

cc: Steven Dukatt – Carol Investment Corporation (w/attachment)

ATTACHMENT A
FIGURE

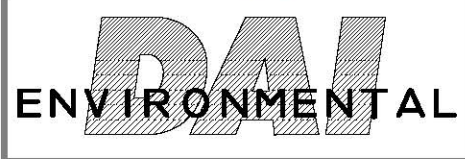


LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- VEGETATION
- (2410) UNIT ADDRESS
- FIBER OPTICS UTILITY LINE
- GAS UTILITY LINE
- SANITARY UTILITY LINE
- WATER UTILITY LINE (12")
- WATER UTILITY LINE (4")
- OVERHEAD ELECTRIC UTILITY LINE
- SOIL BORING LOCATION
- SOIL BORING WITH TEMPORARY WELL LOCATION
- MONITORING WELL LOCATION
- SUB-SLAB VAPOR SAMPLE LOCATION
- SOIL GAS SAMPLE LOCATION
- AMBIENT AIR SAMPLE

0' 65'
SCALE

CAD FILE: 6255-115
REVISED: 11/14/17



**SUNRISE SHOPPING CENTER
2410-2424 10TH AVENUE
1009 MARQUETTE AVENUE
SOUTH MILWAUKEE, WISCONSIN**

**FIGURE B.1.b.2
DETAILED SITE MAP SHOWING
SOIL, GROUNDWATER, AND VAPOR
SAMPLING LOCATIONS**