Aufman, Matt

From: Aufman, Matt
Sent: Monday, July 14, 2014 1:54 PM
To: Oliphant, Dave (DAVE.OLIPHANT@aecom.com)
Subject: FW: Request of IHSB from VI Guidelines: Vapor Intrusion risk evaluation - Ardee Translite Shelby, NC

Hi Dave-
See below for Hanna's response. It looks like the TCE concentration was just too high in the soil gas samples. You will need to collect indoor air samples. Give me a call if you would like to discuss further.
Thanks,
Matt

Matthew Aufman
Phone: (919) 707-8348
http://portal.ncdenr.org/web/wm/sf/ihs/recprogram

From: Assefa, Hanna
Sent: Monday, July 14, 2014 1:03 PM
To: Aufman, Matt
Subject: RE: Request of IHSB from VI Guidelines: Vapor Intrusion risk evaluation - Ardee Translite Shelby, NC

Definatly need to move on to indoor air evaluation. TCE by itself exceeds 5x175 (if TCE is detected by itself –this is what we would allow). If you add the other contaminants it causes even greater unacceptable risk.

From: Aufman, Matt
Sent: Tuesday, July 01, 2014 3:36 PM
To: Assefa, Hanna
Cc: Oliphant, Dave (DAVE.OLIPHANT@aecom.com)
Subject: FW: Request of IHSB from VI Guidelines: Vapor Intrusion risk evaluation - Ardee Translite Shelby, NC

Hi Hanna-
See below for a risk calculation request. I have attached the site maps and the analytical table. They collected 3 soil gas samples and have some detections. Groundwater in the vicinity of the soil gas samples does not appear to be contaminated. Check with me if you have any questions.
Thanks,
Matt

Matthew Aufman
Phone: (919) 707-8348
http://portal.ncdenr.org/web/wm/sf/ihs/recprogram

From: Oliphant, Dave [mailto:DAVE.OLIPHANT@aecom.com]
Sent: Tuesday, July 01, 2014 2:59 PM
To: Aufman, Matt
Cc: Oliphant, Dave
Subject: Request of IHSB from VI Guidelines: Vapor Intrusion risk evaluation - Ardee Translite Shelby, NC

Matt,

Genlyte Thomas and AECOM have conducted subslab testing at three locations inside the building at locations SG-1, SG-2, and SG-3, indicated in the attached figure 3-1, based on the VI risk evaluation performed by NCDENR below. We also installed a monitoring well inside the building (MW-12 at location shown in Figure 3-2), in which very few VOCs were detected. Note that our scanner is not working well, so I cannot just scan one page or mark up and highlight a figure.

Issue: We exceed for TCE only at two points, SG-1 (and the duplicated, SG-1a) and SG-2, both inside one room where the former TCE degreasing operations in the 1990s were performed. See the May 2014 screening table above.

Guidance: According to Page 5 of 12 in the Supplemental Guidelines of Structural Vapor Intrusion Potential… , IHSB, 14 Mar 2014, , on the bottom bullet I read: " … IHSB can calculate the site-specific collective cancer risk and the Hazard Index posed by the contaminant and compare to acceptable … targets… (or) we can "proceed to step (5)" (indoor air testing).

Request: If it can be performed rather quickly, we would request that IHSB calculate the collective risk, for the following reasons:

- The industrial facility building was shut down this past Friday for economic/business reasons. We no longer have a situation where we can easily access the building at this time, under normal occupancy conditions. We can access the building with preparations ahead of time with the security personnel, but it may not be under static conditions.
- There are some cleaning activities, dust, etc. inside the building, that potentially could impact indoor air sampling. We probably could schedule around that, but will need to plan ahead.
- Perhaps the cumulative risk will be acceptable and we will not have to conduct indoor air sampling.

Anomaly: It is an anomaly, because the groundwater is not contaminated under the building (see location of well MW-12 in attached figure. The subslab vapor data, though, indicate the presence of TCE at concentration exceeding the screening levels. I cannot explain that phenomenon.

Attachments: Attached is the subslab screening table. Location SG-3 collected from the adjacent building did not show any exceedences, whereas locations SG-1 and SG-2 showed exceedences. I am also attaching the lab reports for both the vapor data and the soil and groundwater data, in case you want to look at actual concentrations in the report.

Request: Do you have a time later today or tomorrow where I can call you to discuss? Thanks.

Dave Oliphant
AECOM
864-380-6950

From: Assefa, Hanna [mailto:hanna.assefa@ncdenr.gov]
Sent: Monday, April 28, 2014 3:00 PM
To: Aufman, Matt
Cc: Oliphant, Dave
Subject: RE: Vapor Intrusion risk evaluation-: Ardee Translite Shelby, NC

Matt, MW-4 concentrations for trichloroethene in May 2013 are high. The levels came down to an acceptable level in October 2013. I am not sure enough samples over significant time period have been collected to confirm levels are permanently down. Soil gas samples are recommended. Also I do not see on the diagram if the area under the building has been evaluated for VI. The concentrations of contaminants in MW-2 are also not stable between the sample events however, they do pass site specific screens. May be repeat sampling is in order.

om: Aufman, Matt
Sent: Tuesday, April 15, 2014 4:00 PM
To: Assefa, Hanna

Cc: Oliphant, Dave (DAVE.OLIPHANT@aecom.com)
Subject: Vapor Intrusion risk evaluation-: Ardee Translite Shelby, NC

Hi Hanna-
See below for a VI risk request. A site map and table with the GW concentrations is attached. Let me know if you have any questions.
Thanks,
Matt

Matthew Aufman
Phone: (919) 707-8348
http://portal.ncdenr.org/web/wm/sf/ihs/recprogram

From: Oliphant, Dave [mailto:DAVE.OLIPHANT@aecom.com]
Sent: Tuesday, April 15, 2014 3:35 PM
To: Aufman, Matt
Cc: Oliphant, Dave; Overgord, Jesse
Subject: RE: Ardee Translite Shelby, NC and Vapor Intrusion Questions

Matt,

Thank you for your conversation earlier today.

We have the following exceedences of the Groundwater Screening Level for 2013 data:

a. Well MW-2 for 1,1-dichloroethene: Reported values are 62, 69, 165, 233, and 160 ug/L (Screening level is 164 ug/L)
b. Well MW-2 for TCE: 2.7, 3.2, 7.5, 8.7, 7.3 and 9 ug/L (Screening value is 4.35 ug/L)
c. Well MW-4 for TCE: Reported values are 15.3, 23.6, and 1.3 (Screening value is 4.35 ug/L)

I have attached all the data for these two wells where there is a detect and a groundwater screening value, in the attached table. I have also attached a map showing the TCE plumes in the areas of those two wells. Vertically and horizontally, we have the TCE plume delineated.

As indicated we exceed the groundwater screening value but by less than one order of magnitude. We are in very tight saprolite material with no obvious preferential pathways from the wells to the manufacturing building, which is 126,000 sq. feet and is a light manufacturing building. Groundwater is 20-25 feet below ground surface. We are in the Piedmont of North Carolina.

Please proceed with the risk screening, using these values. I will follow up with you in two weeks before we go to the field.

Thank you, and let me know if you need anything else.

Dave Oliphant, RSM
AECOM
864-380-6950

Table 1
Summary of Soil Gas Analytical Data
Ardee/Translite
Shelby, North Carolina

Sample Location Date Collected Laboratory Sample ID	Screening Level (1)	SG-BG / 92200694020 05/08/14 F051202-05	SG-1/ 92200694016 05/08/14 F051202-01	SG-1-a / 92200694017 05/08/14 F051202-02	SG-2 / 92200694018 05/08/14 F051202-03	SG-3 / 92200694019 05/08/14 F051202-04	Trip Blank / 92200694021 05/08/14 F051202-06
VOCs by Method TO-15 (ug/m^3)							
1,1,1-Trichloroethane	438000	< 18	< 18	< 14	**29**	< 15	< 5.5
1,1,2,2-Tetrachloroethane	211	< 45	< 46	< 36	< 38	< 38	< 14
1,1,2-Cl 1,2,2-F ethane (113)	1220	< 25	< 26	< 20	< 21	< 21	< 7.7
1,1,2-Trichloroethane	17.5	< 18	< 18	< 14	< 15	< 15	< 5.5
1,1-Dichloroethane	7670	< 13	**22**	**24**	< 11	< 11	< 4
1,1-Dichloroethene	17500	< 13	**1900**	**2000**	**830**	**3500 d**	< 4
1,2,4-Trichlorobenzene	175	< 48	< 50	< 38	< 41	< 41	< 15
1,2,4-Trimethylbenzene	613	< 32	< 33	< 25	< 27	< 27	< 9.8
1,2-Cl-1,1,2,2-F ethane (114)	NS	< 23	< 24	< 18	< 19	< 19	< 7
1,2-Dibromoethane	20.4	< 25	< 26	< 20	< 21	< 21	< 7.7
1,2-Dichlorobenzene	17500	< 20	< 20	< 16	< 16	< 16	< 6
1,2-Dichloroethane	472	< 13	< 14	< 10	< 11	< 11	< 4
1,2-Dichloropropane	350	< 15	< 16	< 12	< 13	< 13	< 4.6
1,3,5-Trimethylbenzene	NS	< 32	< 33	< 25	< 27	< 27	< 9.8
1,3-Dichlorobenzene	NS	< 20	< 20	< 16	< 16	< 16	< 6
1,4-Dichlorobenzene	1110	< 20	< 20	< 16	< 16	< 16	< 6
1,4-Dioxane	NS	< 59	< 61	< 47	< 49	< 49	< 18
2-Butanone	438000	**21**	**31**	**36**	**16**	**13**	< 2.9
2-Hexanone	2630	< 13	< 14	< 11	< 11	< 11	< 4.1
4-Ethyl Toluene	NS	< 16	< 17	**16**	< 13	< 13	< 4.9
4-Methyl-2-Pentanone	263000	< 13	< 14	< 11	< 11	< 11	< 4.1
Acetone	2720000	< 39	**65**	**69**	**40**	**61**	< 12
Benzene	1570	< 10	< 11	**9.2**	< 8.7	< 8.7	< 3.2
Benzyl Chloride	87.6	< 17	< 17	< 13	< 14	< 14	< 5.2
Bromodichloromethane	331	< 22	< 23	< 17	< 18	< 18	< 6.7
Bromoform	NS	< 34	< 35	< 27	< 28	< 28	< 10
Bromomethane	438	< 13	< 13	< 10	< 11	< 11	< 3.9
c-1,2-Dichloroethene	NS	< 13	< 13	< 10	< 11	< 11	< 4
c-1,3-Dichloropropene	1750	< 15	< 15	< 12	< 12	< 12	< 4.5
Carbon Disulfide	61300	**130**	**220**	**220**	**91**	**48**	< 16
Carbon Tetrachloride	2040	< 21	< 21	< 16	< 17	< 17	< 6.3
Chlorobenzene	4380	< 15	< 16	< 12	< 13	< 13	< 4.6
Chloroethane	876000	< 8.6	< 8.9	< 6.8	< 7.2	< 7.2	< 2.6
Chloroform	533	< 16	**62**	**68**	**17**	< 13	< 4.9
Chloromethane	7880	< 13	< 14	< 11	< 11	< 11	< 4.1
Dibromochloromethane	454	< 28	< 29	< 22	< 23	< 23	< 8.5
Dichlorodifluoromethane (12)	8760	< 16	< 17	< 13	< 14	< 14	< 4.9
Ethylbenzene	4910	< 14	< 15	< 11	< 12	< 12	< 4.3
Hexachlorobutadiene	NS	< 35	< 36	< 28	< 29	< 29	< 11
Methylene Chloride	52600	< 11	< 12	< 9	< 9.5	< 9.5	< 3.5
o-Xylene	8760	< 14	**23**	**20**	**70**	< 12	< 4.3
p,&m-Xylene	8760	< 14	**38**	**40**	**30**	< 12	< 4.3
Styrene	87600	< 14	**16**	< 11	< 12	< 12	< 4.3
t-1,2-Dichloroethene	5260	< 13	< 13	< 10	< 11	< 11	< 4
t-1,3-Dichloropropene	1750	< 15	< 15	< 12	< 12	< 12	< 4.5
t-Butyl Methyl Ether (MTBE) (2)	47200	< 12	< 12	< 9.3	< 9.8	< 9.8	< 3.6
Tetrachloroethene	3500	< 22	**460**	**490**	**680**	**55**	< 6.8
Toluene	438000	< 12	**27**	**29**	< 10	< 10	< 3.8
Trichloroethene	175	< 18	**1300**	**1300**	**500**	**31**	< 5.4
Trichlorofluoromethane (11)	61300	< 18	< 19	< 15	< 15	< 15	< 5.6
Vinyl Acetate	17500	< 57	< 59	< 46	< 48	< 48	< 18
Vinyl Chloride	2790	< 8.3	< 8.6	< 6.6	< 7	< 7	< 2.6

Notes:
(1) - Sub Slab and Exterior Soil Gas Screening Level from Division of Waste Management Non-Residential Vapor Intrusion Screening Levels, January 2014.
1,3-dichloropropene value used for cis- and trans-1,2-dichloroethene.
(2) t-butyl methyl ether (MTBE) was analyzed using Method TO-16 for samples SG-1/ 92200694016 and SG-BG / 92200694020.
Bold font and shading indicate the analyte was detected.
Bold outline indicates the concentration exceeds the screening criterion.
"-a" in the Sample Location field indicates a field duplicate.
"d" beside result indicates the analyte result is from a secondary dilution.
ug/m^3 - micrograms per cubic meter
NA - Not Analyzed
NS - No Standard

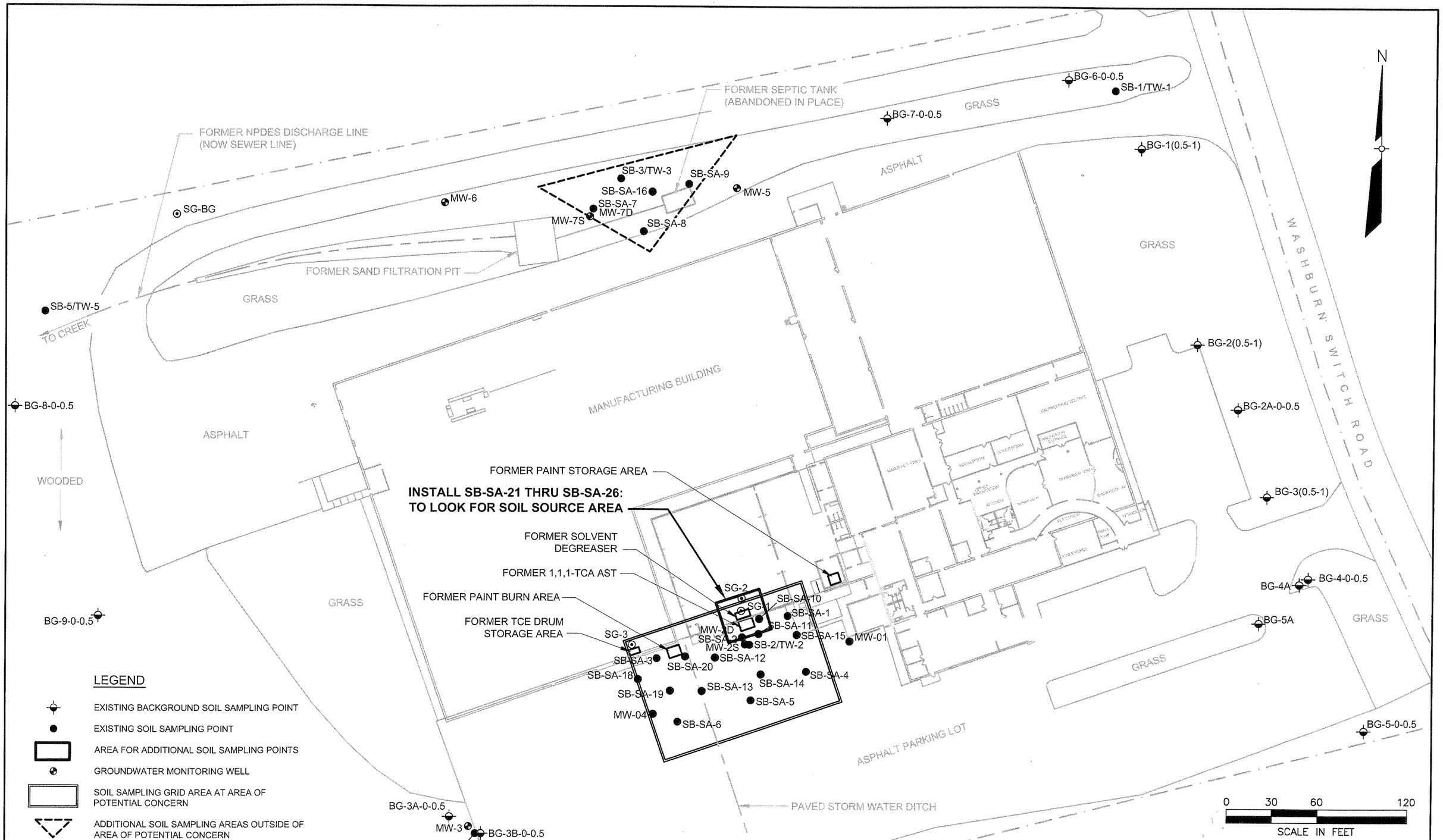

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FIGURE 3-1
PROPOSED ADDITIONAL RI SOIL AND CONTINGENT SOIL GAS SAMPLING LOCATIONS
RI WORK PLAN ADDENDUM
ARDEE TRANSLITE
SHELBY, NORTH CAROLINA

APRIL 2014 60302815

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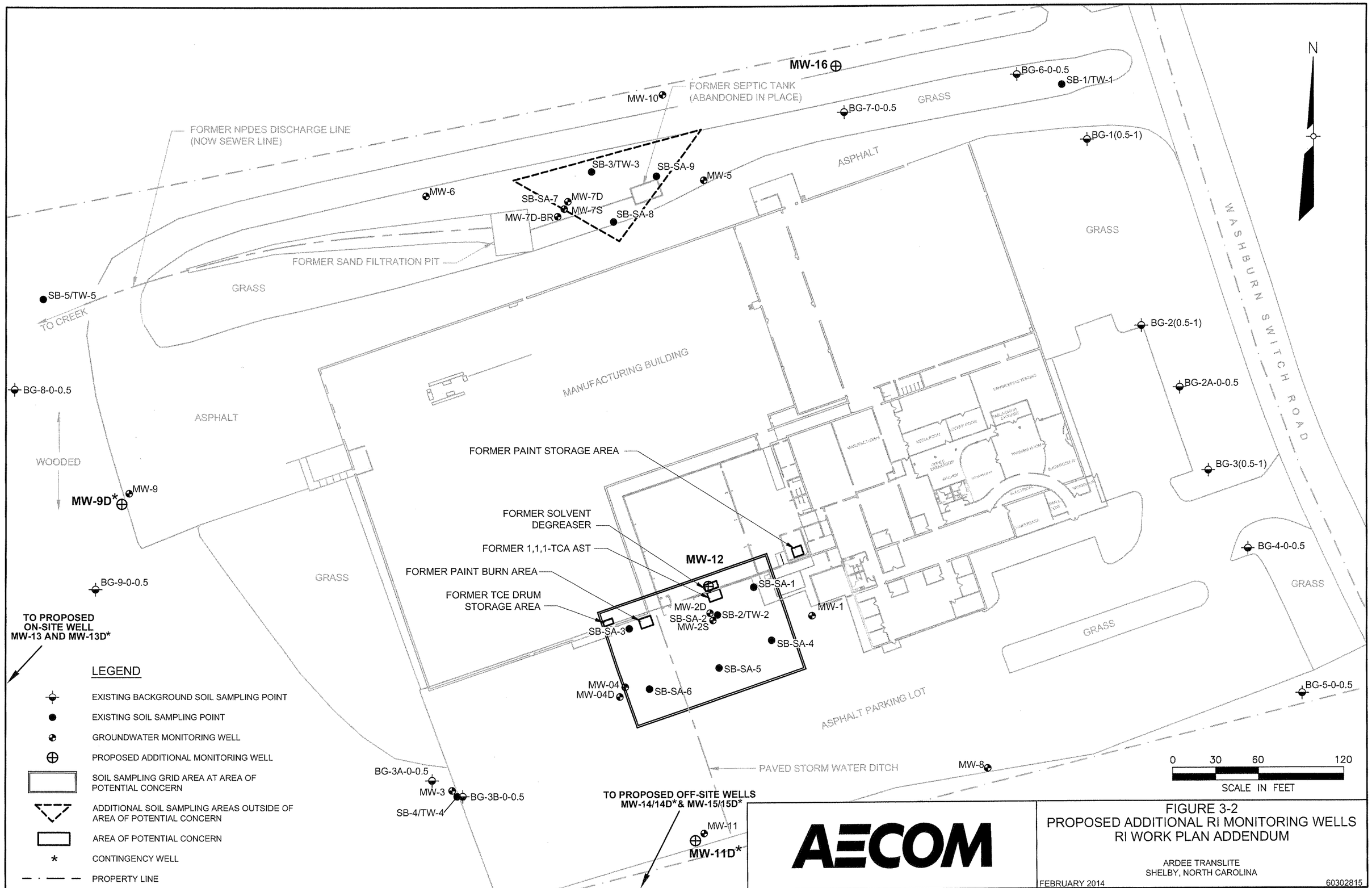

FIGURE 3-2
PROPOSED ADDITIONAL RI MONITORING WELLS
RI WORK PLAN ADDENDUM

ARDEE TRANSLITE
SHELBY, NORTH CAROLINA

FEBRUARY 2014 60302815

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