From:	Miller, Roger <rmiller@geiconsultants.com>
Sent:	Wednesday, January 13, 2021 1:27 PM
To:	James, Andrew G - DNR
Cc:	Michael.Moore@gapac.com; Killian, Paul
Subject:	Buth Oil Facility (Former) (BRRTS # 02-05-563707l) SMP & WI/MI Auto Salvage (BRRTS # 02-05-000627) PCM
Attachments:	Figures B.1.b(iii), B.2.b(i), B.2.b(ii).pdf; Tables A.2(i) and A.3 - Soil Analytical Results and Residual Soil Contamination.pdf; Photographic Log_Jan 2021.pdf; D.1 and D.2 Cap Maintenance Plan and Location Figure.pdf
Categories:	awaiting action, Review, Track

Andy,

Based on our recent communications, including your email on 11/30/20 (see email chain below), we are providing clarification on the management of soil as part of the reconstruction of Lot 3 for the Georgia-Pacific (GP) Broadway Mill (Mill) that was placed in the berms on the Mill property to supplement information provided in the Site Investigation Report (SIR) dated 3/16/20 and closure request dated 5/15/20 for the Buth Oil Facility (Former) case (BRRTS # 02-05-563707l), which was approved for final closure in a letter from the WDNR dated 8/19/20. We also reaffirm that soil from the Mill's Lot 6 reconstruction associated with the closed Wisconsin/Michigan Auto Salvage case (BRRTS #02-05-000627) was not used to construct the berms.

This email clarification provides sections on background information including a description of Soil Management Areas A and B defined in Lot 3 and responses to the questions from the WDNR's email referenced above. Except where noted, data and figures referenced in the responses below were included in the SIR and/or closure request for the Buth Oil Facility (Former) case and are also attached to this email for easier access.

Background

As described in Section 1.5 of the SIR and Section 4.A. of the closure request, Soil Management Areas (A and B) were defined to guide soil handling in Lot 3 of the resurfacing project (see Figure B.1.b (iii)) and were also described in the Soil Management Plan (SMP) for Phase 1 of the Broadway Mill Parking Lot Resurfacing Project, dated 3/17/15, and Addendum 1 to the Soil Management Plan (ASMP) dated 5/21/15. Area A occupied approximately 31,000 square feet (sf) and encompassed the portion of Lot 3 having documented petroleum volatile organic compound (VOC) impacts in soil in the areas of the former petroleum fuel aboveground storage tanks (ASTs) for the bulk plant and underground storage tanks (USTs) for a former filling station. Area A also generally coincided with the operational area for the former Buth Oil Facility. Area B occupied approximately 145,000 sf and combined Lot 1-C and the northern approximately two-thirds of Lot 3. As described in Section 4.A. of the case closure request, field or laboratory evidence of petroleum impact was not observed in Area B.

The WDNR issued an approval letter on 6/1/15 for management of contaminated soil under NR 718, Wisconsin Administrative Code, associated with both the Buth Oil Facility (Former) and the previously closed Wisconsin/Michigan Auto Salvage cases. The letter approved the SMP/ASMP for relocation of up to 2,500 cyd of contaminated soil that may be excavated during the resurfacing activities in Lot 1-C, Lot 3, and the former WI-MI site (Lot 6).

As described in the SIR and closure request, only soil from Areas A and B that did not reveal evidence for petroleum contamination was placed into the berms in the locations shown in Figure B.2.b(ii). Petroleum-contaminated soil from Area A was hauled to the landfill for disposal. The term "low-level petroleum-impacted soils" noted on Figure B.2.b(ii) represents soil from Area A that may contain some low levels of petroleum constituents and was placed into two of the berms, but which did not reveal evidence of petroleum contamination through field screening (see below) during excavation or laboratory testing. Excess soil from Area B (no evidence of contamination) was also used in the berm construction as described below and in Sections 4.A. and 4.C. of the closure request. As described in the Surface Cap Replacement Documentation Report dated 6/9/20 for the Wisconsin/Michigan Auto Salvage case (BRRTS #02-05-000627) and a clarification email on 10/19/20, no soil from Lot 6 was used to construct the berms.

An average 1.5-foot cut was made across Area A in Lot 3 for the new pavement section, and approximately 1,700 cubic yards (cyd) of soil was generated during grading for installation of the new pavement. As described in Section 1.5. of the SIR and Section 4.C. of the closure request, a proportionately small quantity of soil cut for the new pavement section in Area A was determined to be petroleum-contaminated soil and was landfilled (129.37 tons). Accordingly, field and laboratory data confirmed that the substantial proportion of the residual petroleum contamination was present below the cut depth for the pavement section in Lot 3. The estimated extent of residual petroleum soil contamination is illustrated on Figure B.2.b(i) provided in the closure request.

Responses to Questions (in bold italics)

1. Documentation of excavation and soil staging and relocation activities including:
    - ***i.*** Sample results - ***Soil analytical results are summarized on Table A.2(i) (preconstruction conditions) and Table A.3 (residual/post-construction conditions). Results for Samples SZ-1 through SZ-13 Table A.2(i) represent preconstruction conditions for the shallow soil zones (SZs) removed from Area A.***

    - ***ii.*** Appropriate figures – ***Figure B.1.b(iii) depicts soil management zones and areas in Lot 3. Figure B.2.b(ii) illustrates the locations where soil from Area A (soil not landfilled) and Area B were beneficially reused to construct berms. Figure B.2.b(i) shows the areas of residual soil contamination below the cut depth of 1.5 feet for the new pavement section in Lot 3.***

    - iii. Photo documentation
        - ***1.*** Mainly of the berms/cap and soil relocation areas – ***Refer to the attached photographic log, abridged from the photographic log included as Attachment D.3 in the case closure request, for images of the berms on the east side of the Mill property and the pavement cap in Lot 3.***

    - ***iv.*** Description of field activities and observations – ***As described in the SIR and closure request, an environmental technician screened soil graded from Area A for visual and olfactory observations and using a photoionization detector (PID) with a 10.6 electron volt lamp to qualitatively assess the presence of petroleum VOCs. PID readings above approximately 20 instrument units***

and/or petroleum odors were detected in soil removed from portions of Soil Zones 1, 4, 7, and 11 corresponding to locations of the southwestern UST excavation and areas at/near the former ASTs (note that the closure request did not list SZ-4). The majority of the residual contamination in Lot 3 was confirmed to be below the grading depth (18 inches). Petroleum-contaminated soil from portions of the soil zones listed above was hauled to Advance Disposal's Hickory Meadows Landfill in Hilbert, Wisconsin, for treatment/disposal (129.37 tons). To supplement previously provided information, PID readings averaged 108 instrument units for soil that was landfilled and 5 instrument units for other soil removed from Area A and managed on the Mill property in berms. Accordingly, data supports the conclusion that the soil placed in the two "low-level" berms shown on Figure B.2.b(ii) did not exhibit evidence of being contaminated. Rather, "low-level petroleum-impacted soils" noted on Figure B.2.b(ii) represents soil from Area A that may contain some low levels of petroleum constituents based on where it was excavated from, as opposed to exhibiting field or laboratory evidence of petroleum contamination.

v. Total volume of material transported (managed) – ***As presented in the SIR and closure request, volumes of soil managed were: 1) Area A soil to landfill – 129.37 tons of petroleum-contaminated soil. 2) Area A soil to "low level" berms – 1,500 cyd of soil not revealing evidence of contamination. 3) Area B soil – 5,500 cyd of soil not revealing evidence of contamination.***

vi. Documentation of soil relocation areas – ***Soil relocation berm locations are illustrated on Figure B.2.b(ii) and photographs of the berms are included in the attached photographic log. Approximately 1,500 cyd of soil not exhibiting evidence of petroleum contamination from Area A was placed into the two berms labelled as "low level" on the Figure B.2.b(ii). Soil from Area A was placed within an envelope of approximately 2 feet of soil from Area B (unimpacted soil). Approximately 6 inches of topsoil was placed over the berms to support a grassy vegetative cover. The other four berms were constructed using soil documented as unimpacted from Area B.***

vii. A cap maintenance plan – ***The cap maintenance plan for the residually contaminated areas containing residual petroleum contamination in Lot 3 was provided as Attachment D to the case closure request. Closure request attachments D.1 (Cap Maintenance Plan) and D.2 (Cap Location Map) are provided in the attached PDF.***

We appreciate your review of documentation provided to address questions regarding the management of soil during the Mill parking lot reconstruction associated with two interrelated cases: Buth Oil Facility (Former) Site (BRRTS #02-05-563707) in a portion of Lot 3 and Wisconsin/Michigan Auto Salvage (BRRTS #02-05-000627) in Lot 6.

Please contact us with any questions. We would be pleased to discuss the above responses, as needed.

Thank you,

GEI
ROGER A. MILLER, P.G., C.P.G.
Senior Hydrogeologist
920.455.8657 cell: 920.737.6373
3159 Voyager Drive, Green Bay, WI 54311

From: James, Andrew G - DNR <andrew.james@wisconsin.gov>
Sent: Monday, November 30, 2020 9:39 AM
To: Miller, Roger <rmiller@geiconsultants.com>
Subject: [EXT] WI/Mi Auto Salvage (BRRTS # 02-05-000627) PCM & Buth Oil facility (Former) (BRRTS # 02-05-563707l) SMP

Good Morning Roger,
I hope your holiday was enjoyable. I wanted to touch base with you to outline the remaining items for each of these sites.

Regarding Wi\Mi Auto Salvage (BRRTS # 02-05-000627), you had submitted D.1 of the cap maintenance plan which I reviewed and stated you had updated pictures for section D.3 of the cap maintenance plan. You also stated in an email to supplement the June 9, 2020, Surface Cap Replacement Documentation Report, that the soil (81.3 tons) removed from that site was disposed of and not reused.
Once the final cap maintenance plan is submitted and complete, that should be all of the outstanding items for WI/MI auto Salvage.

Regarding the movement of soils on the Buth Oil facility (Former) (BRRTS # 02-05-563707), as outlined in the DNR's June 1, 2015, technical assistance letter approving the management of contaminated soils, we will need the following:

1. Documentation of excavation and soil staging and relocation activities including:
    i. Sample results
    ii. Appropriate figures
    iii. Photo documentation
        1. Mainly of the berms/cap and soil relocation areas
    iv. Description of field activities and observations
    v. Total volume of material transported
    vi. Documentation of soil relocation areas
    vii. A cap maintenance plan

The above listed would seem to wrap up the outstanding items for Georgia Pacific regarding these 2 sites. Thanks Roger,

Andy

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Andy James
Hydrogeologist Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313
Cell: 715-527-0114
Andrew.James@wisconsin.gov

dnr.wi.gov

CAP MAINTENANCE PLAN

(to be included in Form 4400-202, as Attachment D)

May 6, 2020

1919 South Broadway
Green Bay, WI 54304

BRRTS No. 02-05-563707, FID No. 405032870

Parcel ID No. 1-1407

Introduction

This document is the Maintenance Plan for an asphalt cap at in a portion of a paved parking lot for the Broadway Mill at the above-referenced property in accordance with the requirements of s. NR 724.13 (2), Wis. Adm. Code. The maintenance activities relate to the existing asphalt pavement which addresses or occupies the area over the contaminated groundwater plume or soil.

More site-specific information about this property/site may be found in:

- The case file in the DNR Northeast office
- At http://dnr.wi.gov/topic/Brownfields/wrrd.html, which includes:
  - BRRTS on the Web (DNR's internet based data base of contaminated sites)for the link to a PDF for site-specific information at the time of closure and on continuing obligations;
  - RR Sites Map for a map view of the site, and
- The DNR project manager for Brown County.

D.1. Descriptions:

Description of Contamination

Soil contaminated by residual petroleum impacts (VOCs and lead) is located at depths of approximately 1.5 to 8 feet in the southern portion of Lot 3. The extents of the residual soil and groundwater contamination are shown on the attached Figure D.2. Contamination is not interpreted to extend beyond the area encompassed by Lot 3 which includes the former Buth Oil site.

Description of the Asphalt Cap to be Maintained

The cap consists of 4 inches of asphalt overlying 14 inches of aggregate and a layer of Geogrid, all overlying compacted subgrade or engineered fill. The asphalt pavement is located above the areas of remaining soil and groundwater contamination in the southern portion of Lot 3, as shown on the attached Figure D.2. The asphalt pavement on Lot 3 is contiguous with other lots for the Broadway Mill.

Purpose of Asphalt Cap

The asphalt cap over the contaminated soil and groundwater plume serves as a partial infiltration barrier to minimize future soil-to-groundwater contamination migration that would violate the groundwater standards in ch. NR 140, Wisconsin Administrative Code. Based on the current industrial use of the property, the barrier should function as intended unless disturbed.

Annual Inspection

The asphalt cap overlying the contaminated soil and groundwater as depicted in Figure D.2 will be inspected once a year, normally in the spring after all snow and ice is gone, for deterioration, cracks and other potential problems that can cause additional infiltration into underlying soils. The inspections will be performed by the property owner or their designated representative. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where infiltration from the surface will not be effectively minimized will be documented.

A log of the inspections and any repairs will be maintained by the property owner and is included as D.4, Form 4400-305, Continuing Obligations Inspection and Maintenance Log. The log will include recommendations for necessary repair of any areas where underlying soils are exposed and where infiltration from the surface will not be effectively minimized. Once repairs are completed, they will be documented in the inspection log. A copy of the maintenance plan and inspection log will be kept at the site; or, if there is no acceptable place (for example, no building is present) to keep it at the site, at the address of the property owner and available for submittal or inspection by Wisconsin Department of Natural Resources (DNR) representatives upon their request.

Maintenance Activities

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs can include patching and filling or larger resurfacing or construction operations. In the event that necessary maintenance activities expose the underlying soil, the owner must inform maintenance workers of the direct contact exposure hazard and provide them with appropriate personal protection equipment (PPE). The owner must also sample any soil that is excavated from the site prior to disposal to ascertain if contamination remains. The soil must be treated, stored and disposed of by the owner in accordance with applicable local, state and federal law.

In the event the asphalt cap overlying the contaminated soil and groundwater is removed or replaced, the replacement barrier must be equally impervious. Any replacement barrier will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the DNR or its successor.

The property owner, in order to maintain the integrity of the asphalt cap, will maintain a copy of this Maintenance Plan at the site; or, if there is no acceptable place to keep it at the site (for example, no building is present), at the address of the property owner and make it available to all interested parties (i.e. on-site employees, contractors, future property owners) for viewing.

Prohibition of Activities and Notification of DNR Prior to Actions Affecting a Cover/Barrier

The following activities are prohibited on any portion of the property where asphalt cap is required as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; 6) construction or placement of a building or other structure; or 7) changing the use or occupancy of the property to a residential exposure setting, which may include certain uses, such as single or multiple family residences, a school, day care, senior center, hospital, or similar residential exposure settings.

If removal, replacement or other changes to a cover, or a building which is acting as a cover, are considered, the property owner will contact DNR at least 45 days before taking such an action, to determine whether further action may be necessary to protect human health, safety, or welfare or the environment, in accordance with s. NR 727.07, Wis. Adm. Code.

Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of DNR.

Contact Information

May 2020

Site Owner and Operator: Georgia-Pacific Consumer Products
Mr. Michael Moore
1919 South Broadway Street, P.O. Box 19130, Green Bay, WI 54307
920-438-4081

Signature: 

Consultant: GEI Consultants
Mr. Roger Miller
3159 Voyager Drive, Green Bay, WI 54311
920-455-8200

DNR: Mr. Andrew James
2984 Shawano Avenue, Green Bay, WI 54313
920-662-5149

D.2 Location Map(s)

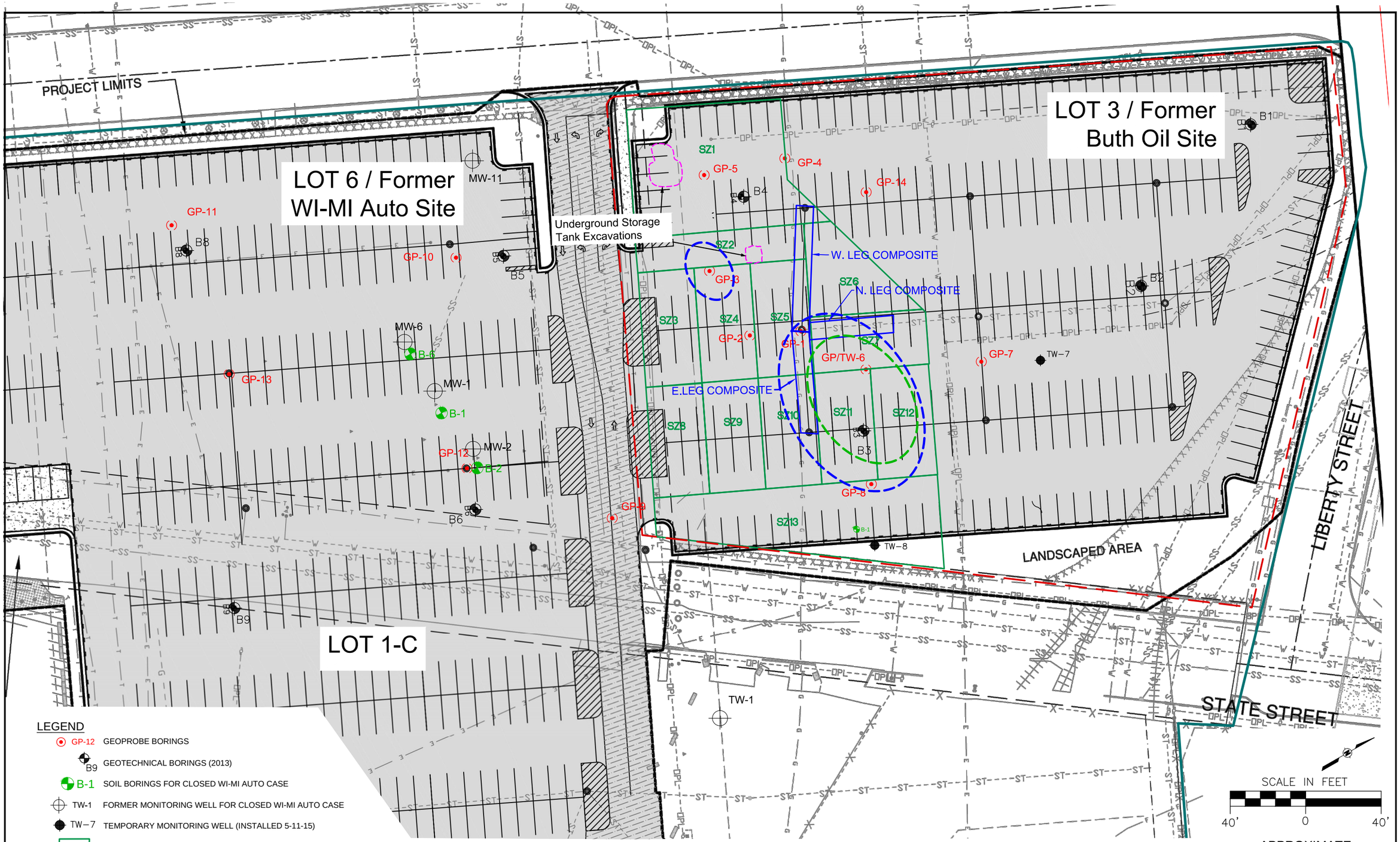
Figure D.2 is attached.

D. 3 Photographs of Cover/Barrier

The photographic log is attached.

D.4 Continuing Obligations Inspection and Maintenance Log

DNR Fillable Form Form 4400-305 is attached.



LEGEND

- GP-12 GEOPROBE BORINGS
- B9 GEOTECHNICAL BORINGS (2013)
- B-1 SOIL BORINGS FOR CLOSED WI-MI AUTO CASE
- TW-1 FORMER MONITORING WELL FOR CLOSED WI-MI AUTO CASE
- TW–7 TEMPORARY MONITORING WELL (INSTALLED 5-11-15)
- SZ8 SOIL MANAGEMENT ZONE
- APPROXIMATE PROPERTY BOUNDARY
- FORMER BUTH OIL SITE BOUNDARY
- ESTIMATED EXTENT OF NON-INDUSTRIAL DIRECT CONTACT RCL EXCEEDANCE
- ESTIMATED EXTENT OF GROUNDWATER PATHWAY RCL EXCEEDANCE

NO.	DATE	ISSUE/REVISION	APP
0	X	X	X

Designed: RAM
Checked: RAM
Drawn: TJF
Submittal Date: December 2017

GEI Consultants
3159 Voyager Drive
Green Bay, Wisconsin 54311
920-455-8200

GP-BROADWAY MILL PARKING LOT

GEI Project 1506470

FORMER BUTH OIL CLOSURE REQUEST

CAP LOCATION MAP

FIG. NO. D.2.

Filename: J:\2014\1401830 - GP BROADWAY MILL PARKING LOT\CASE CLOSURE B.2.B(I)_051220.DWG Last saved by: TFLOOD Last Plotted: 2020-05-13

SCALE IN FEET

40’ 0 40’

APPROXIMATE

LEGEND

GP-14	GEOPROBE BORINGS
B4	GEOTECHNICAL BORINGS
TW-1	FORMER MONITORING WELL FOR CLOSED WI-MI AUTO CASE
TW–7	TEMPORARY MONITORING WELL (INSTALLED 5-11-15)
	APPROXIMATE EXTENT OF PETROLEUM IMPACTS
	APPROXIMATE PARKING LOT LIMIT (PHASE 1 OF RESURFACING PROJECT)
	SOIL MANAGEMENT AREA A
	SOIL MANAGEMENT AREA B
SZ7	SOIL MANAGEMENT ZONE

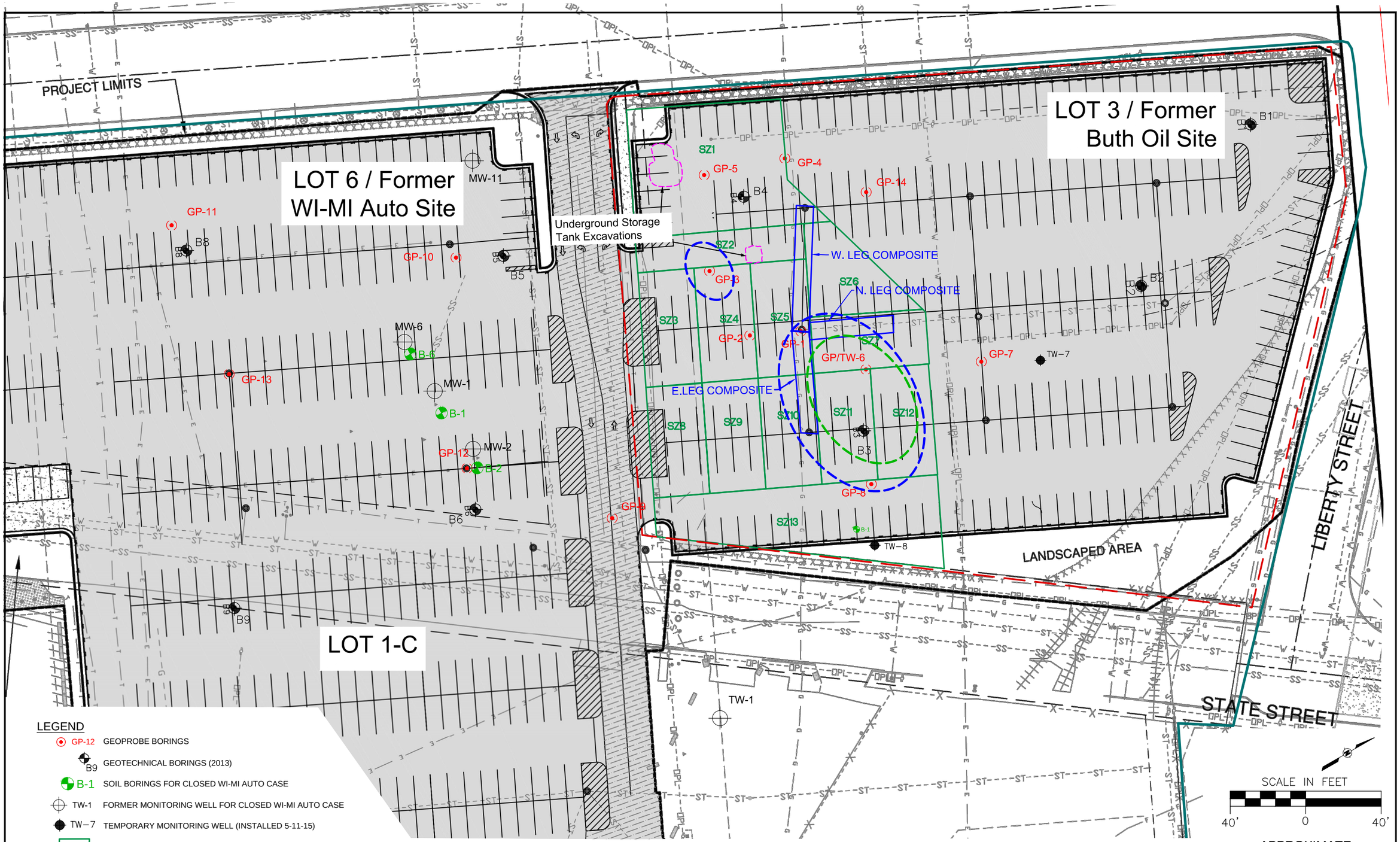
GP-BROADWAY MILL PARKING LOT
SOUTH BROADWAY STREET
PROPOSED PAVING PLAN - 2015

GEI Consultants

Soil Management Areas
Lot 3

Project 1506470 | Dec. 2017 | B.1.b(iii)

J:\2014\1401830 - GP Broadway Mill Parking Lot\150647001 soil grid



LEGEND

- GP-12 GEOPROBE BORINGS
- B9 GEOTECHNICAL BORINGS (2013)
- B-1 SOIL BORINGS FOR CLOSED WI-MI AUTO CASE
- TW-1 FORMER MONITORING WELL FOR CLOSED WI-MI AUTO CASE
- TW–7 TEMPORARY MONITORING WELL (INSTALLED 5-11-15)
- SZ8 SOIL MANAGEMENT ZONE
- APPROXIMATE PROPERTY BOUNDARY
- FORMER BUTH OIL SITE BOUNDARY
- ESTIMATED EXTENT OF NON-INDUSTRIAL DIRECT CONTACT RCL EXCEEDANCE
- ESTIMATED EXTENT OF GROUNDWATER PATHWAY RCL EXCEEDANCE

NO.	DATE	ISSUE/REVISION	APP
0	X	X	X

Designed: RAM
Checked: RAM
Drawn: TJF
Submittal Date: December 2017

GEI Consultants
3159 Voyager Drive
Green Bay, Wisconsin 54311
920-455-8200

GP-BROADWAY MILL PARKING LOT

GEI Project 1506470

FORMER BUTH OIL CLOSURE REQUEST

RESIDUAL SOIL CONTAMINATION

FIG. NO. B.2.b(i)

Filename: J:\2014\1401830 - GP BROADWAY MILL PARKING LOT\CASE CLOSURE B.2.A_051220.DWG Last saved by: TFLOOD Last Plotted: 2020-05-13

Figure B.2.b(ii) – Soil Beneficial Reuse Area

PHOTOGRAPHIC LOG

PHOTOGRAPH NO: 1	DATE: October 2016	GEI PROJECT NO: 1506470	CLIENT: Georgia-Pacific
DIRECTION: NE	SITE LOCATION: FORMER BUTH OIL SITE – GP BROADWAY MILL, GREEN BAY, WI		
DESCRIPTION: View of a soil berm constructed along the east side of the Mill property looking northeast.			

PHOTOGRAPH NO: 2	DATE: October 2016	GEI PROJECT NO: 1506470	CLIENT: Georgia-Pacific
DIRECTION: NE	SITE LOCATION: FORMER BUTH OIL SITE – GP BROADWAY MILL, GREEN BAY, WI		
DESCRIPTION: View of a storm water catch basin between soil berms constructed along the east side of the Mill property looking northeast.			

PHOTOGRAPHIC LOG

PHOTOGRAPH NO: 3	DATE: August 2020	GEI PROJECT NO: 1506470	CLIENT: Georgia-Pacific
DIRECTION: NW	SITE LOCATION: FORMER BUTH OIL SITE – GP BROADWAY MILL, GREEN BAY, WI		
DESCRIPTION: View across paved Lot 3 (former Buth Oil site) from near the southeast corner looking northwest.			

PHOTOGRAPH NO: 4	DATE: August 2020	GEI PROJECT NO: 1506470	CLIENT: Georgia-Pacific
DIRECTION: SE	SITE LOCATION: FORMER BUTH OIL SITE – GP BROADWAY MILL, GREEN BAY, WI		
DESCRIPTION: View across paved Lot 3 from near the northwest corner looking southeast.			

PHOTOGRAPHIC LOG

PHOTOGRAPH NO: 5	DATE: August 2020	GEI PROJECT NO: 1506470	CLIENT: Georgia-Pacific
DIRECTION: N	SITE LOCATION: FORMER BUTH OIL SITE – GP BROADWAY MILL, GREEN BAY, WI		
DESCRIPTION: View of the location of abandoned monitoring well BW-3 (asphalt patch in the foreground) looking north across the western half of paved Lot 3.			

PHOTOGRAPH NO: 6	DATE: August 2020	GEI PROJECT NO: 1506470	CLIENT: Georgia-Pacific
DIRECTION: S	SITE LOCATION: FORMER BUTH OIL SITE – GP BROADWAY MILL, GREEN BAY, WI		
DESCRIPTION: View of the location of abandoned monitoring well BW-6 (asphalt patch in foreground) looking south across the central portion of Lot 3.			

Table A.2(i)

Soil Analytical Results
Project 1506470
Georgia-Pacific Broadway Mill Parking Lot
Green Bay, Wisconsin
Former Buth Oil Site

		Wisconsin Regulatory Standards[1,2]				Sample Location	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-6	GP-7	GP-7	GP-8	GP-8
						Sample Date	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14
	CAS #	**BTV**	**Non-Industrial DC**	**Industrial DC**	**GW**	Sample Depth (ft)	2.5 - 4.0 (WT)	0.5 - 2.0	1.0 - 2.0	1.0 - 2.0	1.0 - 2.0	1.0 - 2.0	2.0 - 3.0 (WT)	1.0 - 2.0	2.0 - 3.0 (WT)	0.5 - 1.5	2.0 - 3.0 (WT)
METALS (detected analytes)[3,4] (mg/kg)																	
Lead	7439-92-1	52	400	800	27		6.9	3.8	8.0	19.4	8.4	55.2	20.2	8.2	7.9	9.2	70.0
VOCs (detected analytes)[3] (µg/kg)																	
Benzene	71-43-2	NE	1,600	7,070	5.1		< 25.0	< 25.0	35.8 J	< 25.0	< 25.0	30.0 J	*6320*	< 25.0	< 25.0	< 25.0	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		95.7	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	10100	< 25.0	< 25.0	< 25.0	< 25.0
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		251	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	2740	< 25.0	< 25.0	< 25.0	< 25.0
tert-Butylbenzene	98-06-6	NE	183,000	183,000	NE		177	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	2270	< 25.0	< 25.0	< 25.0	< 25.0
2-Chlorotoluene	95-49-8	NE	907,000	907,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
4-Chlorotoluene	106-43-4	NE	253,000	253,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichlorobenzene	95-50-1	NE	376,000	376,000	1,168		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
cis-1,2-Dichloroethene	156-59-2	NE	156,000	2,340,000	41.2		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		< 25.0	< 25.0	41.9 J	< 25.0	46.8 J	31.4 J	*9040*	< 25.0	< 25.0	< 25.0	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		32.6 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	1910	< 25.0	< 25.0	< 25.0	< 25.0
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	4830	< 25.0	< 25.0	< 25.0	< 25.0
Methylene Chloride	75-09-2	NE	61,800	1,150,000	2.6		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Naphthalene	91-20-3	NE	5,520	24,100	658.2		< 40.0	< 40.0	90.8 J	< 40.0	94.6 J	90.0 J	*6490*	< 40.0	< 40.0	< 40.0	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		64.9 J	< 25.0	36.9 J	< 25.0	< 25.0	< 25.0	3970	< 25.0	< 25.0	< 25.0	< 25.0
Toluene	108-88-3	NE	818,000	818,000	1,107.2		< 25.0	< 25.0	205	< 25.0	201.0	86.1	3720	< 25.0	< 25.0	< 25.0	68.0 J
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000	1,382.1		< 25.0	< 25.0	49.5 J	< 47.6	76.7	58.7 J	29300	< 25.0	< 25.0	< 25.0	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	15800	< 25.0	< 25.0	< 25.0	< 25.0
Trichloroethene	79-01-6	NE	1,300	8,410	3.6		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		< 50.0	< 50.0	110 J	< 50.0	143.0 J	84.7 J	20900	< 50.0	< 50.0	< 50.0	< 50.0
o-Xylene							< 25.0	< 25.0	91.5	< 25.0	97.1	62.3 J	5310	< 25.0	< 25.0	< 25.0	< 25.0

Notes

(mg/kg) = milligrams per kilogram; (µg/kg) = micrograms per kilogram; -- = not analyzed;
< = not detected above method detection limit; DC = Direct Contact; GW = Groundwater
J = concentration between detection limit and reporting limit; NE = Not Established; WT = Water Table
PAHs = Polycyclic Aromatic Hydrocarbons; VOCs = Volatile Organic Compounds;
WT = Sample below observable water table

[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Residual Contaminant Level;

[2] RCLs & BTVs, PAHs, and VOCs are based on USEPA methodology; presented in WDNR Guidance, Soil RCL Determinations using USEPA Regional Screening Level Web Calculator (RR-890) and summarized in the WDNR's R&R Program RCE Spreadsheet (March 2017).

[3] Only detected analytes are listed; refer to the laboratory analytical report for a full list of assessed analytes

[4] Metal concentrations above an RCL, but not noted as such on this table, are considered to be representative of background conditions in Wisconsin soils.

[5] RCLs for chromium reported as Chomium III/Chromium VI; based on property history, it is anticipated that chromium detected on the Property is Chromium III, and as such, sample result was not considered an exceedence of the RCL.

Exceeds the NR 720 Non-Industrial Direct Contact RCL: *100* Exceeds the NR 720 Industrial Direct Contact RCL: **100**

Exceeds the NR 720 Groundwater Pathway RCL: 100 Exceeds the BTV: 100*

Table A.2(i)

Soil Analytical Results
Project 1506470
Georgia-Pacific Broadway Mill Parking Lot
Green Bay, Wisconsin
Former Buth Oil Site

		Wisconsin Regulatory Standards[1,2]				Sample Location	GP-9	GP-10	GP-11	GP-12	GP-13	GP-14	GP-14	TW-6	TW-8	E. LEG COMP.	W. LEG COMP.	N. LEG COMP.
						Sample Date	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	5/11/15	5/11/15	5/11/15	5/11/15	6/2/15	6/2/15	6/2/15
	CAS #	**BTV**	**Non-Industrial DC**	**Industrial DC**	**GW**	Sample Depth (ft)	1.0 - 2.0	1.0 - 2.5 (WT)	1.0 - 2.0	1.0 - 3.0 (WT)	1.0 - 2.0	0.8-1.5	3.0-4.0 (WT)	10.0-12.0 (WT)	0.5-1.5	1.0-6.0	1.0-6.0	1.0-6.0
METALS (detected analytes)[3,4] (mg/kg)																		
Lead	7439-92-1	52	400	800	27		--	--	--	--	--	44.7	7.8	6.1	66.7	8.8	10.9	11.1
VOCs (detected analytes)[3] (µg/kg)																		
Benzene	71-43-2	NE	1,600	7,070	5.1		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	42	< 25.0	38.4 J	< 25.0	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		< 25.0	< 25.0	< 25.0	1550	63.0 J	< 25.0	< 25.0	< 25.0	< 25.0	234	< 25.0	210
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		< 25.0	< 25.0	< 25.0	1250	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	113	98.5	197
tert-Butylbenzene	98-06-6	NE	183,000	183,000	NE		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	35.4 J	< 25.0	80.8	95.5	110
2-Chlorotoluene	95-49-8	NE	907,000	907,000	NE		< 25.0	< 25.0	< 25.0	734	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
4-Chlorotoluene	106-43-4	NE	253,000	253,000	NE		< 25.0	< 25.0	< 25.0	338	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichlorobenzene	95-50-1	NE	376,000	376,000	1,168		< 25.0	< 25.0	< 25.0	116 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
cis-1,2-Dichloroethene	156-59-2	NE	156,000	2,340,000	41.2		< 25.0	< 25.0	< 25.0	< 50.0	38.4 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		< 25.0	< 25.0	< 25.0	494	32.7 J	< 25.0	< 25.0	< 25.0	< 25.0	111	< 25.0	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		< 25.0	< 25.0	< 25.0	445	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	56.4 J	< 25.0	44.5 J
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	104	< 25.0	< 25.0
Methylene Chloride	75-09-2	NE	61,800	1,150,000	2.6		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Naphthalene	91-20-3	NE	5,520	24,100	658.2		< 40.0	< 40.0	< 40.0	101 J	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0	475	< 40.0	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		< 25.0	< 25.0	< 25.0	1510	< 25.0	< 25.0	< 25.0	44.1 J	< 25.0	120	< 25.0	83.9
Toluene	108-88-3	NE	818,000	818,000	1,107.2		< 25.0	< 25.0	< 25.0	< 50.0	67.2 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000	1,382.1		< 25.0	< 25.0	< 25.0	7900	75.0	< 25.0	< 25.0	< 25.0	< 25.0	523	< 25.0	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000			< 25.0	< 25.0	< 25.0	98.9 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	328	< 25.0	< 25.0
Trichloroethene	79-01-6	NE	1,300	8,410	3.6		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		< 50.0	< 50.0	< 50.0	184 J	102.0 J	< 50.0	< 50.0	< 50.0	< 50.0	106 J	< 50.0	< 50.0
o-Xylene							< 25.0	< 25.0	< 25.0	215	31.0 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0

Notes

(mg/kg) = milligrams per kilogram; (µg/kg) = micrograms per kilogram; -- = not analyzed;
< = not detected above method detection limit; DC = Direct Contact; GW = Groundwater
J = concentration between detection limit and reporting limit; NE = Not Established; WT = Water Table
PAHs = Polycyclic Aromatic Hydrocarbons; VOCs = Volatile Organic Compounds;
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[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Residual Contaminant Level;

[2] RCLs & BTVs, PAHs, and VOCs are based on USEPA methodology; presented in WDNR Guidance, Soil RCL Determinations using USEPA Regional Screening Level Web Calculator (RR-890) and summarized in the WDNR's R&R Program RCE Spreadsheet (March 2017).

[3] Only detected analytes are listed; refer to the laboratory analytical report for a full list of assessed analytes

[4] Metal concentrations above an RCL, but not noted as such on this table, are considered to be representative of background conditions in Wisconsin soils.

[5] RCLs for chromium reported as Chomium III/Chromium VI; based on property history, it is anticipated that chromium detected on the Property is Chromium III, and as such, sample result was not considered an exceedence of the RCL.

Exceeds the NR 720 Non-Industrial Direct Contact RCL: *100* Exceeds the NR 720 Industrial Direct Contact RCL: **100**

Exceeds the NR 720 Groundwater Pathway RCL: 100 Exceeds the BTV: 100*

Table A.2(i)

Soil Analytical Results
Project 1506470
Georgia-Pacific Broadway Mill Parking Lot
Green Bay, Wisconsin
Former Buth Oil Site

		Wisconsin Regulatory Standards[1,2]				Sample Location	SZ-1	SZ-2	SZ-3	SZ-4	SZ-5	SZ-6	SZ-7	SZ-8	SZ-9	SZ-10	SZ-11	SZ-12	SZ-13
						Sample Date	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15	6/15/15
	CAS #	**BTV**	**Non-Industrial DC**	**Industrial DC**	**GW**	Sample Depth (ft)	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5	0.5-1.5
METALS (detected analytes)[3,4] (mg/kg)																			
Lead	7439-92-1	52	400	800	27		41.8	8.4	6.9	13.6	13.7	12.5	22	14.2	11.9	14.4	60.0	11.6	11.7
VOCs (detected analytes)[3] (µg/kg)																			
Benzene	71-43-2	NE	1,600	7,070	5.1		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		< 25.0	< 25.0	< 25.0	< 100	< 25.0	143.0	65.4 J	42.2 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
tert-Butylbenzene	98-06-6	NE	183,000	183,000	NE		< 25.0	< 25.0	< 25.0	< 100	< 25.0	51.6 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
2-Chlorotoluene	95-49-8	NE	907,000	907,000	NE		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
4-Chlorotoluene	106-43-4	NE	253,000	253,000	NE		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichlorobenzene	95-50-1	NE	376,000	376,000	1,168		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
cis-1,2-Dichloroethene	156-59-2	NE	156,000	2,340,000	41.2		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		< 25.0	< 25.0	< 25.0	464	< 25.0	< 25.0	90.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		< 25.0	< 25.0	< 25.0	194 J	< 25.0	< 25.0	33.5 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		< 25.0	< 25.0	< 25.0	502.0	< 25.0	< 25.0	130.0	139.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Methylene Chloride	75-09-2	NE	61,800	1,150,000	2.6		48.5 J	48.7 J	40.1 J	500.0	< 25.0	46.0 J	68.5 J	84.6	82.4	93.2	53.6 J	81.7	63.1 J
Naphthalene	91-20-3	NE	5,520	24,100	658.2		< 40.0	< 40.0	< 40.0	< 160	< 40.0	< 40.0	206.0 J	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		< 25.0	< 25.0	< 25.0	227 J	< 25.0	55.3 J	73.4 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Toluene	108-88-3	NE	818,000	818,000	1,107.2		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000	1,382.1		< 25.0	< 25.0	< 25.0	2360	< 25.0	< 25.0	419.0	37.3 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000			< 25.0	< 25.0	< 25.0	261 J	< 25.0	< 25.0	217.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Trichloroethene	79-01-6	NE	1,300	8,410	3.6		< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 25.0 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		< 50.0	< 50.0	< 50.0	< 692	< 50.0	< 50.0	114.0 J	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
o-Xylene							< 25.0	< 25.0	< 25.0	< 100	< 25.0	< 25.0	< 40.7 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0

Notes

(mg/kg) = milligrams per kilogram; (µg/kg) = micrograms per kilogram; -- = not analyzed;
< = not detected above method detection limit; DC = Direct Contact; GW = Groundwater
J = concentration between detection limit and reporting limit; NE = Not Established; WT = Water Table
PAHs = Polycyclic Aromatic Hydrocarbons; VOCs = Volatile Organic Compounds;
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[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Residual Contaminant Level;

[2] RCLs & BTVs, PAHs, and VOCs are based on USEPA methodology; presented in WDNR Guidance, Soil RCL Determinations using USEPA Regional Screening Level Web Calculator (RR-890) and summarized in the WDNR's R&R Program RCE Spreadsheet (March 2017).

[3] Only detected analytes are listed; refer to the laboratory analytical report for a full list of assessed analytes

[4] Metal concentrations above an RCL, but not noted as such on this table, are considered to be representative of background conditions in Wisconsin soils.

[5] RCLs for chromium reported as Chomium III/Chromium VI; based on property history, it is anticipated that chromium detected on the Property is Chromium III, and as such, sample result was not considered an exceedence of the RCL.

Exceeds the NR 720 Non-Industrial Direct Contact RCL: *100* Exceeds the NR 720 Industrial Direct Contact RCL: **100**

Exceeds the NR 720 Groundwater Pathway RCL: 100 Exceeds the BTV: 100*

Table A.2(i)

Soil Analytical Results
Project 1506470
Georgia-Pacific Broadway Mill Parking Lot
Green Bay, Wisconsin
Former Buth Oil Site

		Wisconsin Regulatory Standards[1,2]				Sample Location	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12
						Sample Date	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15
	CAS #	**BTV**	**Non-Industrial DC**	**Industrial DC**	**GW**	Sample Depth (ft)	4 (WT)	3.5 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)
METALS (detected analytes)[3,4] (mg/kg)																		
Lead	7439-92-1	52	400	800	27		--	--	--	--	--	--	--	--	--	--	--	--
VOCs (detected analytes)[3] (µg/kg)																		
Benzene	71-43-2	NE	1,600	7,070	5.1		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		< 25.0	325	< 25.0	< 25.0	< 50.0	192	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		95.3	118	78.1	224	461	151	80.9	127.0	36.9 J	176.0	< 25.0	< 25.0
tert-Butylbenzene	98-06-6	NE	183,000	183,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	52.5 J	111.0	< 25.0	< 25.0
2-Chlorotoluene	95-49-8	NE	907,000	907,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
4-Chlorotoluene	106-43-4	NE	253,000	253,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichlorobenzene	95-50-1	NE	376,000	376,000	1,168		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
cis-1,2-Dichloroethene	156-59-2	NE	156,000	2,340,000	41.2		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	70.4 J	< 25.0	< 25.0	< 25.0	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		120	< 25.0	< 25.0	< 25.0	81.4 J	< 25.0	< 25.0	164.0	< 25.0	< 25.0	< 25.0	< 25.0
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		194	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	276.0	< 25.0	< 25.0	< 25.0	< 25.0
Methylene Chloride	75-09-2	NE	61,800	1,150,000	2.6		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Naphthalene	91-20-3	NE	5,520	24,100	658.2		< 40.0	< 40.0	< 40.0	< 40.0	< 80.1	235 J	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		< 25.0	82.4	< 25.0	< 25.0	175	103 J	49.8 J	287.0	< 25.0	< 25.0	< 25.0	< 25.0
Toluene	108-88-3	NE	818,000	818,000	1,107.2		198.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000	1,382.1		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	649.0	< 25.0	< 25.0	< 25.0	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000			155	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	172.0	< 25.0	< 25.0	< 25.0	< 25.0
Trichloroethene	79-01-6	NE	1,300	8,410	3.6		150	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		< 50.0	< 50.0	< 50.0	< 50.0	< 100.0	< 50.0	< 50.0	72.3 J	< 50.0	< 50.0	< 50.0	< 50.0
o-Xylene							< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0

Notes

(mg/kg) = milligrams per kilogram; (µg/kg) = micrograms per kilogram; -- = not analyzed;
< = not detected above method detection limit; DC = Direct Contact; GW = Groundwater
J = concentration between detection limit and reporting limit; NE = Not Established; WT = Water Table
PAHs = Polycyclic Aromatic Hydrocarbons; VOCs = Volatile Organic Compounds;
WT = Sample below observable water table

[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Residual Contaminant Level;

[2] RCLs & BTVs, PAHs, and VOCs are based on USEPA methodology; presented in WDNR Guidance, Soil RCL Determinations using USEPA Regional Screening Level Web Calculator (RR-890) and summarized in the WDNR's R&R Program RCE Spreadsheet (March 2017).

[3] Only detected analytes are listed; refer to the laboratory analytical report for a full list of assessed analytes

[4] Metal concentrations above an RCL, but not noted as such on this table, are considered to be representative of background conditions in Wisconsin soils.

[5] RCLs for chromium reported as Chomium III/Chromium VI; based on property history, it is anticipated that chromium detected on the Property is Chromium III, and as such, sample result was not considered an exceedence of the RCL.

Exceeds the NR 720 Non-Industrial Direct Contact RCL: *100* Exceeds the NR 720 Industrial Direct Contact RCL: **100**

Exceeds the NR 720 Groundwater Pathway RCL: 100 Exceeds the BTV: 100*

Table A.3

Residual Soil Contamination
Project 1506470
Georgia-Pacific Broadway Mill Parking Lot
Green Bay, Wisconsin
Former Buth Oil Site

		Wisconsin Regulatory Standards[1,2]				Sample Location	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	GP-6	GP-7	GP-7	GP-8
						Sample Date	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14
	CAS #	**BTV**	**Non-Industrial DC**	**Industrial DC**	**GW**	Sample Depth (ft)	2.5 - 4.0 (WT)	1.5 - 2.0	1.5 - 2.0	1.5 - 2.0	1.5 - 2.0	1.5 - 2.0	2.0 - 3.0 (WT)	1.5 - 2.0	2.0 - 3.0 (WT)	2.0 - 3.0 (WT)
METALS (detected analytes)[3,4] (mg/kg)																
Lead	7439-92-1	52	400	800	27		6.9	3.8	8.0	19.4	8.4	55.2	20.2	8.2	7.9	70.0
VOCs (detected analytes)[3] (µg/kg)																
Benzene	71-43-2	NE	1,600	7,070	5.1		< 25.0	< 25.0	35.8 J	< 25.0	< 25.0	30.0 J	*6320*	< 25.0	< 25.0	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		95.7	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	10100	< 25.0	< 25.0	< 25.0
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		251	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	2740	< 25.0	< 25.0	< 25.0
tert-Butylbenzene	98-06-6	NE	183,000	183,000	NE		177	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	2270	< 25.0	< 25.0	< 25.0
2-Chlorotoluene	95-49-8	NE	907,000	907,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
4-Chlorotoluene	106-43-4	NE	253,000	253,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichlorobenzene	95-50-1	NE	376,000	376,000	1,168		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
cis-1,2-Dichloroethene	156-59-2	NE	156,000	2,340,000	41.2		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		< 25.0	< 25.0	41.9 J	< 25.0	46.8 J	31.4 J	*9040*	< 25.0	< 25.0	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		32.6 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	1910	< 25.0	< 25.0	< 25.0
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	4830	< 25.0	< 25.0	< 25.0
Methylene Chloride	75-09-2	NE	61,800	1,150,000	2.6		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Naphthalene	91-20-3	NE	5,520	24,100	658.2		< 40.0	< 40.0	90.8 J	< 40.0	94.6 J	90.0 J	*6490*	< 40.0	< 40.0	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		64.9 J	< 25.0	36.9 J	< 25.0	< 25.0	< 25.0	3970	< 25.0	< 25.0	< 25.0
Toluene	108-88-3	NE	818,000	818,000	1,107.2		< 25.0	< 25.0	205	< 25.0	201.0	86.1	3720	< 25.0	< 25.0	68.0 J
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000	1,382.1		< 25.0	< 25.0	49.5 J	< 47.6	76.7	58.7 J	29300	< 25.0	< 25.0	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	15800	< 25.0	< 25.0	< 25.0
Trichloroethene	79-01-6	NE	1,300	8,410	3.6		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		< 50.0	< 50.0	110 J	< 50.0	143.0 J	84.7 J	20900	< 50.0	< 50.0	< 50.0
o-Xylene							< 25.0	< 25.0	91.5	< 25.0	97.1	62.3 J	5310	< 25.0	< 25.0	< 25.0

Notes

(mg/kg) = milligrams per kilogram; (µg/kg) = micrograms per kilogram; -- = not analyzed;
< = not detected above method detection limit; DC = Direct Contact; GW = Groundwater
J = concentration between detection limit and reporting limit; NE = Not Established; WT = Water Table
PAHs = Polycyclic Aromatic Hydrocarbons; VOCs = Volatile Organic Compounds;
WT = Sample below observable water table

[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Residual Contaminant Level;

[2] RCLs & BTVs, PAHs, and VOCs are based on USEPA methodology; presented in WDNR Guidance, Soil RCL Determinations using USEPA Regional Screening Level Web Calculator (RR-890) and summarized in the WDNR's R&R Program RCE Spreadsheet (March 2017).

[3] Only detected analytes are listed; refer to the laboratory analytical report for a full list of assessed analytes

[4] Metal concentrations above an RCL, but not noted as such on this table, are considered to be representative of background conditions in Wisconsin soils.

[5] RCLs for chromium reported as Chomium III/Chromium VI; based on property history, it is anticipated that chromium detected on the Property is Chromium III, and as such, sample result was not considered an exceedence of the RCL.

Exceeds the NR 720 Non-Industrial Direct Contact RCL: *100* Exceeds the NR 720 Industrial Direct Contact RCL: **100**

Exceeds the NR 720 Groundwater Pathway RCL: 100 Exceeds the BTV: 100*

Table A.3

Residual Soil Contamination
Project 1506470
Georgia-Pacific Broadway Mill Parking Lot
Green Bay, Wisconsin
Former Buth Oil Site

		Wisconsin Regulatory Standards[1,2]				Sample Location	GP-9	GP-10	GP-11	GP-12	GP-13	GP-14	TW-6	E. LEG COMP.	W. LEG COMP.	N. LEG COMP.
						Sample Date	6/19/14	6/19/14	6/19/14	6/19/14	6/19/14	5/11/15	5/11/15	6/2/15	6/2/15	6/2/15
	CAS #	**BTV**	**Non-Industrial DC**	**Industrial DC**	**GW**	Sample Depth (ft)	1.5 - 2.0	1.5 - 2.5	1.5 - 2.0	1.5 - 3.0 (WT)	1.5 - 2.0	3.0-4.0 (WT)	10.0-12.0 (WT)	1.5 - 6.0	1.5 - 6.0	1.5 - 6.0
METALS (detected analytes)[3,4] (mg/kg)																
Lead	7439-92-1	52	400	800	27		--	--	--	--	--	7.8	6.1	8.8	10.9	11.1
VOCs (detected analytes)[3] (µg/kg)																
Benzene	71-43-2	NE	1,600	7,070	5.1		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	42	38.4 J	< 25.0	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		< 25.0	< 25.0	< 25.0	1550	63.0 J	< 25.0	< 25.0	234	< 25.0	210
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		< 25.0	< 25.0	< 25.0	1250	< 25.0	< 25.0	< 25.0	113	98.5	197
tert-Butylbenzene	98-06-6	NE	183,000	183,000	NE		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	35.4 J	80.8	95.5	110
2-Chlorotoluene	95-49-8	NE	907,000	907,000	NE		< 25.0	< 25.0	< 25.0	734	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
4-Chlorotoluene	106-43-4	NE	253,000	253,000	NE		< 25.0	< 25.0	< 25.0	338	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichlorobenzene	95-50-1	NE	376,000	376,000	1,168		< 25.0	< 25.0	< 25.0	116 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
cis-1,2-Dichloroethene	156-59-2	NE	156,000	2,340,000	41.2		< 25.0	< 25.0	< 25.0	< 50.0	38.4 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		< 25.0	< 25.0	< 25.0	494	32.7 J	< 25.0	< 25.0	111	< 25.0	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		< 25.0	< 25.0	< 25.0	445	< 25.0	< 25.0	< 25.0	56.4 J	< 25.0	44.5 J
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	104	< 25.0	< 25.0
Methylene Chloride	75-09-2	NE	61,800	1,150,000	2.6		< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Naphthalene	91-20-3	NE	5,520	24,100	658.2		< 40.0	< 40.0	< 40.0	101 J	< 40.0	< 40.0	< 40.0	475	< 40.0	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		< 25.0	< 25.0	< 25.0	1510	< 25.0	< 25.0	44.1 J	120	< 25.0	83.9
Toluene	108-88-3	NE	818,000	818,000	1,107.2		< 25.0	< 25.0	< 25.0	< 50.0	67.2 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000	1,382.1		< 25.0	< 25.0	< 25.0	7900	75.0	< 25.0	< 25.0	523	< 25.0	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000			< 25.0	< 25.0	< 25.0	98.9 J	< 25.0	< 25.0	< 25.0	328	< 25.0	< 25.0
Trichloroethene	79-01-6	NE	1,300	8,410	3.6		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		< 50.0	< 50.0	< 50.0	184 J	102.0 J	< 50.0	< 50.0	106 J	< 50.0	< 50.0
o-Xylene							< 25.0	< 25.0	< 25.0	215	31.0 J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0

Notes

(mg/kg) = milligrams per kilogram; (µg/kg) = micrograms per kilogram; -- = not analyzed;
< = not detected above method detection limit; DC = Direct Contact; GW = Groundwater
J = concentration between detection limit and reporting limit; NE = Not Established; WT = Water Table
PAHs = Polycyclic Aromatic Hydrocarbons; VOCs = Volatile Organic Compounds;
WT = Sample below observable water table

[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Residual Contaminant Level;

[2] RCLs & BTVs, PAHs, and VOCs are based on USEPA methodology; presented in WDNR Guidance, Soil RCL Determinations using USEPA Regional Screening Level Web Calculator (RR-890) and summarized in the WDNR's R&R Program RCE Spreadsheet (March 2017).

[3] Only detected analytes are listed; refer to the laboratory analytical report for a full list of assessed analytes

[4] Metal concentrations above an RCL, but not noted as such on this table, are considered to be representative of background conditions in Wisconsin soils.

[5] RCLs for chromium reported as Chomium III/Chromium VI; based on property history, it is anticipated that chromium detected on the Property is Chromium III, and as such, sample result was not considered an exceedence of the RCL.

Exceeds the NR 720 Non-Industrial Direct Contact RCL: *100* Exceeds the NR 720 Industrial Direct Contact RCL: **100**

Exceeds the NR 720 Groundwater Pathway RCL: 100 Exceeds the BTV: 100*

Table A.3

Residual Soil Contamination
Project 1506470
Georgia-Pacific Broadway Mill Parking Lot
Green Bay, Wisconsin
Former Buth Oil Site

		Wisconsin Regulatory Standards[1,2]				Sample Location	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12
						Sample Date	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15	6/30/15
	CAS #	**BTV**	**Non-Industrial DC**	**Industrial DC**	**GW**	Sample Depth (ft)	4 (WT)	3.5 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)	4 (WT)
METALS (detected analytes)[3,4] (mg/kg)																		
Lead	7439-92-1	52	400	800	27		--	--	--	--	--	--	--	--	--	--	--	--
VOCs (detected analytes)[3] (µg/kg)																		
Benzene	71-43-2	NE	1,600	7,070	5.1		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		< 25.0	325	< 25.0	< 25.0	< 50.0	192	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		95.3	118	78.1	224	461	151	80.9	127.0	36.9 J	176.0	< 25.0	< 25.0
tert-Butylbenzene	98-06-6	NE	183,000	183,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	52.5 J	111.0	< 25.0	< 25.0
2-Chlorotoluene	95-49-8	NE	907,000	907,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
4-Chlorotoluene	106-43-4	NE	253,000	253,000	NE		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichlorobenzene	95-50-1	NE	376,000	376,000	1,168		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
cis-1,2-Dichloroethene	156-59-2	NE	156,000	2,340,000	41.2		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	70.4 J	< 25.0	< 25.0	< 25.0	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		120	< 25.0	< 25.0	< 25.0	81.4 J	< 25.0	< 25.0	164.0	< 25.0	< 25.0	< 25.0	< 25.0
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		194	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	276.0	< 25.0	< 25.0	< 25.0	< 25.0
Methylene Chloride	75-09-2	NE	61,800	1,150,000	2.6		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Naphthalene	91-20-3	NE	5,520	24,100	658.2		< 40.0	< 40.0	< 40.0	< 40.0	< 80.1	235 J	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		< 25.0	82.4	< 25.0	< 25.0	175	103 J	49.8 J	287.0	< 25.0	< 25.0	< 25.0	< 25.0
Toluene	108-88-3	NE	818,000	818,000	1,107.2		198.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000	1,382.1		< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	649.0	< 25.0	< 25.0	< 25.0	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000			155	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	172.0	< 25.0	< 25.0	< 25.0	< 25.0
Trichloroethene	79-01-6	NE	1,300	8,410	3.6		150	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		< 50.0	< 50.0	< 50.0	< 50.0	< 100.0	< 50.0	< 50.0	72.3 J	< 50.0	< 50.0	< 50.0	< 50.0
o-Xylene							< 25.0	< 25.0	< 25.0	< 25.0	< 50.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0

Notes

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Exceeds the NR 720 Non-Industrial Direct Contact RCL: *100* Exceeds the NR 720 Industrial Direct Contact RCL: **100**

Exceeds the NR 720 Groundwater Pathway RCL: 100 Exceeds the BTV: 100*