



Shane C. DeGross  
Manager Environmental  
Remediation

BNSF Railway Company  
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August 17, 2018

Mr. Kyle Parker, Site Manager  
Washington Department of Ecology  
1250 W Alder St.  
Union Gap, Washington 98903

**RECEIVED**

**AUG 22 2018**

Dept of Ecology  
Central Regional Office

Re: Site Status – Former Crop King/Woods Industries Site  
Site Name: Crop King Woods Industries  
Site Address: 1 E King, Yakima, Yakima County  
Facility/Site ID No.: 460  
Cleanup Site ID No.: 3755

Dear Mr. Parker:

BNSF Railway Company (BNSF) received Washington Department of Ecology's (Ecology's) letter regarding the former Crop King/Woods Industries site dated April 26, 2018 and has completed additional groundwater sampling as requested by Ecology.

In performing the recent groundwater sampling, BNSF's consultant Arcadis located and documented the status of the former groundwater monitoring well known as W-8. A vactor truck was used to excavate around the well monument and it was verified that the well was abandoned properly. A replacement well of similar construction and screen interval was installed on July 2, 2018 just off the concrete pad.

The replacement well was sampled and results appear consistent with what we understand observed trends to be in the regional plume. Tetrachloroethylene (PCE) and breakdown products were analyzed by Pace Analytical by EPA Method 8260. PCE was reported at a concentration of 4.94 µg/L. cis-1,2-Dichloroethene was reported at an estimated concentration of 0.260 µg/L. Both are below MTCA Method A and Method B screening levels. A copy of the laboratory report is attached to this letter.

Because PCE is below MTCA Method A, modification of the restrictive covenant that Ecology requested (i.e., removing the word "commercial") is not warranted. Based on these results and the work completed by BNSF under U.S. EPA's supervision, BNSF further requests this Site be removed from Ecology's list of confirmed and suspected cleanup sites consistent with WAC 173-340-330(7). BNSF will move forward with well abandonment upon approval from Ecology.

Sincerely,

Shane C. DeGross  
Manager Environmental Remediation  
BNSF Railway Co.

cc: Brooke Kuhl, BNSF Railway Co.





# ANALYTICAL REPORT

July 16, 2018

## ARCADIS - BNSF Region 2

Sample Delivery Group: L1007480  
Samples Received: 07/07/2018  
Project Number: WAYK2018.001  
Description: BNSF Yakima/Woods Industries  
Site: BNSFYAKIMA-FORMER CRUP KINGS  
Report To: Kyle Haslam  
1100 Olive Way, Suite 800  
Seattle, WA 98101

Entire Report Reviewed By:

Mark W. Beasley  
Project Manager

**RECEIVED**

**AUG 22 2018**

Dept of Ecology  
Central Regional Office

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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RECEIVED  
JUL 16 2018  
LABORATORY

# SAMPLE SUMMARY

ONE LAB. NATIONWIDE. 

W-8R L1007480-01 GW Collected by: K. Haslam    Collected date/time: 07/03/18 09:25    Received date/time: 07/07/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatiles Organic Compounds (GC) by Method RSK175	WG1135501	1	07/10/18 15:13	07/10/18 15:13	MEL
Volatiles Organic Compounds (GC/MS) by Method 8260C	WG1135195	1	07/09/18 07:18	07/09/18 07:18	GLN

- 1  
Cp
- 2  
Tc
- 3  
Ss
- 4  
Cn
- 5  
Sr
- 6  
Qc
- 7  
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Gl
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Al
- 10  
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Is

<sup>8</sup> GI

<sup>9</sup> AI

<sup>10</sup> Sc



Collected date/time: 07/03/18 09:25

L1007480

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	U		0.287	0.678	1	07/10/2018 15:13	<a href="#">WG1135501</a>
Ethane	U		0.296	1.29	1	07/10/2018 15:13	<a href="#">WG1135501</a>
Ethene	U		0.422	1.27	1	07/10/2018 15:13	<a href="#">WG1135501</a>

1 Cp

2 Tc

3 Ss

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
cis-1,2-Dichloroethene	0.262	J	0.260	1.00	1	07/09/2018 07:18	<a href="#">WG1135195</a>
trans-1,2-Dichloroethene	U		0.396	1.00	1	07/09/2018 07:18	<a href="#">WG1135195</a>
Tetrachloroethene	4.94		0.372	1.00	1	07/09/2018 07:18	<a href="#">WG1135195</a>
Trichloroethene	U		0.398	1.00	1	07/09/2018 07:18	<a href="#">WG1135195</a>
Vinyl chloride	U		0.259	1.00	1	07/09/2018 07:18	<a href="#">WG1135195</a>
(S) Toluene-d8	107			80.0-120		07/09/2018 07:18	<a href="#">WG1135195</a>
(S) Dibromofluoromethane	101			76.0-123		07/09/2018 07:18	<a href="#">WG1135195</a>
(S) 4-Bromofluorobenzene	91.7			80.0-120		07/09/2018 07:18	<a href="#">WG1135195</a>

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc



Method Blank (MB)

(MB) R3324465-1 07/10/18 13:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1006910-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1006910-01 07/10/18 14:13 • (DUP) R3324465-2 07/10/18 14:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	95.6	93.3	1	2.46		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1006969-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1006969-01 07/10/18 14:36 • (DUP) R3324465-3 07/10/18 14:42

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	186	181	1	2.76		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L1007434-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1007434-01 07/10/18 14:58 • (DUP) R3324465-4 07/10/18 15:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	83.5	85.7	1	2.59		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20





Volatile Organic Compounds (GC) by Method RSK175

[L1007480-01](#)

L1007439-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1007439-01 07/10/18 15:06 • (DUP) R3324465-5 07/10/18 15:23

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	132	132	1	0.0394		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

1 Cp

2 Tc

3 Ss

4 Cn

L1007441-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1007441-01 07/10/18 15:09 • (DUP) R3324465-6 07/10/18 15:26

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	75.3	70.8	1	6.09		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

5 Sr

6 Qc

7 Is

8 GI

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3324465-7 07/10/18 15:29 • (LCSD) R3324465-8 07/10/18 15:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	67.8	72.7	76.9	107	113	85.0-115			5.53	20
Ethane	129	118	118	91.6	91.5	85.0-115			0.0746	20
Ethene	127	117	117	92.5	91.8	85.0-115			0.682	20

9 AI

10 Sc



Method Blank (MB)

(MB) R3324181-4 07/08/18 22:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
Tetrachloroethene	U		0.372	1.00
Trichloroethene	U		0.398	1.00
Vinyl chloride	U		0.259	1.00
(S) Toluene-d8	103			80.0-120
(S) Dibromofluoromethane	99.8			76.0-123
(S) 4-Bromofluorobenzene	94.0			80.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3324181-1 07/08/18 21:08 • (LCSD) R3324181-2 07/08/18 21:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
cis-1,2-Dichloroethene	25.0	23.8	23.1	95.2	92.5	73.0-120			2.86	20
trans-1,2-Dichloroethene	25.0	23.8	23.6	95.2	94.3	71.0-121			0.927	20
Tetrachloroethene	25.0	24.9	23.7	99.6	95.0	70.0-127			4.71	20
Trichloroethene	25.0	25.0	24.4	100	97.7	78.0-120			2.33	20
Vinyl chloride	25.0	25.1	23.5	101	93.9	64.0-133			6.82	20
(S) Toluene-d8				104	103	80.0-120				
(S) Dibromofluoromethane				93.5	95.4	76.0-123				
(S) 4-Bromofluorobenzene				90.3	91.2	80.0-120				

7 Is

8 GI

9 AI

10 Sc

# INTERNAL STANDARD SUMMARY



Instrument: VOCMS7 • File ID: 0708\_32-3

07/08/18 21:08

Sample ID	File ID	8260-PENTAFLUOROBENZENE Response	8260-1,4-DIFLUOROBENZENE Response	8260-2-BROMO-1-CHLOROPROPANE Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0708_32-3	232893	355341	58692	141367
Upper Limit		465786	710682	117384	282734
Lower Limit		116447	177671	29346	70684
LCS R3324181-1 WG1135195 1x	0708_32LCS	232893	355341	58692	141367
LCSD R3324181-2 WG1135195 1x	0708_33	241087	364369	61340	141938
BLANK R3324181-4 WG1135195 1x	0708_37	211985	335086	56886	126667

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Instrument: VOCMS7 • File ID: 0708\_32-4

07/08/18 21:08

Sample ID	File ID	8260-PENTAFLUOROBENZENE Response	8260-1,4-DIFLUOROBENZENE Response	8260-2-BROMO-1-CHLOROPROPANE Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0708_32-4	232893	355341	58692	141367
Upper Limit		465786	710682	117384	282734
Lower Limit		116447	177671	29346	70684
L1007480-01 WG1135195 1x	0708_61	194095	311496	51434	121805

7 Is

8 GI

9 AI

10 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

1 Cp

2 Tc

3 Ss

4 Cn

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Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
---	---



# ARCADIS - BNSF Region 2

1100 Olive Way, Suite 800  
Seattle, WA 98101

Billing Information:  
Kyle Haslam  
1100 Olive Way, Suite 800  
Seattle, WA 98101

Pres  
Chl:

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5854  
Phone: 800-767-5859  
Fax: 615-758-5859



L# 1007480

F104

Account: BNSF2ARCA

Template: T137235

Prelogin: P658531

TSR: 134 - Mark W. Beasley

PB:

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

Report to:  
Kyle Haslam

Email To: kyle.haslam@arcadis.com

Project Description: BNSF Yakima/Woods Industries

City/State Collected: Yakima, WA

Phone: 206-719-6991

Client Project #  
WAYK2018.0001

Lab Project #  
BNSF2ARCA-YAKIMA

Fax:

Collected by (print):

K. Haslam

Site/Facility ID #  
BNSFYakima - Former Corp King

P.O. #  
WAYK2018.0001

Collected by (signature):

Rush? (Lab MUST Be Notified)

Same Day Five Day  
Next Day 5 Day (Rad Only)  
Two Day 10 Day (Rad Only)  
Three Day

Quote #

Date Results Needed

No. of Cnt's

Immediately Packed on Ice: N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnt's	RSK175LL 40mlAmb-HCl	V8260C 40mlAmb-HCl
WW-8R	Grab	GW	-	7/3/18	9:25	4	X	X
		GW				4	X	X
		GW				4	X	X

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: 12 HCl VOAs collected from WW-8R

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
UPS  FedEx  Courier \_\_\_\_\_

Tracking #: 4361 6936 2324

Sample Receipt Checklist	
COC Seal Present/Intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If Applicable	
VOA Zero Headpace:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Relinquished by: (Signature)

Date:

7-6-2018

Time:

10:00

Received by: (Signature)

Cooler KA

Trip Blank Received: Yes/No  
HCl/MeOH  
TBR

Temp: 2.4°C  
Bottles Received: 12

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

asm

Date: 7/7/18  
Time: 845

Hold:

Condition:  
NCF / OK