Oregon
John A. Kitzhaber, MD, Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
Fax: (503) 229-6945
TTY: 711

22 July 2013

MIKE MCCRACKEN
FAR WEST FIBERS
12820 NE MARX ST
PORTLAND OR 97211

Re: Oregon Paper Fiber
UST Cleanup File No. 26-09-1265
UST Facility ID No. 12369

Dear Mr. McCracken:

The Department of Environmental Quality (DEQ) completed its review of the information submitted to date, regarding the underground storage tank (UST) decommissioning and cleanup conducted at 12820 NE Marx St. in Portland, Oregon. DEQ determined that the cleanup appears to meet the requirements of Oregon Administrative Rules (OAR) 340-122-0205 through 340-122-0360. No further action is required at this time.

This determination is a result of our evaluation and judgment based on the regulations and facts as we now understand them:

1. In November 2009, one 500-gallon waste oil UST was decommissioned, by removal, at this location. The tank was recycled at Environmentally Conscious Recycling in Portland, Oregon. Rinsate/product was transported to ThermoFluids in Portland, Oregon for recycling.

2. Up to 454 parts per million (ppm) of diesel-range petroleum hydrocarbons were detected at 3.5 feet below ground surface (bgs) in the piping run. Approximately, 1 additional foot of soil was removed. Results of confirmation sampling indicate that petroleum was not detected. Soil sample results collected from under the tank location were non-detect. Approximately, five tons of soil were excavated and taken to Hillsboro Landfill for disposal. While these results are within the Level II Soil Matrix Cleanup standard for diesel of 500 ppm, not all required sampling for waste oil was completed during the decommissioning activities.

3. In March 2013, three additional borings were installed to determine impacts to soil and groundwater from contaminants of interest from waste oil tanks. Petroleum was not detected in select soil and groundwater samples. Volatile organic compounds were not detected in select soil samples. In groundwater, up to 0.770 parts per billion (ppb) of tetrachloroethene (PCE) was detected (boring GP-3). EEM, LLC compared the result to the most stringent occupational groundwater exposure pathway (*ingestion and inhalation from tap water*). The detected PCE is below that screening level of 64 ppb. DEQ compared the detected PCE to residential screening level for this exposure pathway and the result was below the screening

level of 11 ppb. Also, it is uncertain whether or not this detected PCE is from former waste oil UST or as part of an area-wide groundwater issue.

Soil and groundwater samples were analyzed for three total metals (cadmium, chromium, and lead). The metals were detected in soil in the range of background levels in soil for the Portland Basin. In groundwater, chromium and lead were detected at concentrations above the *ingestion and inhalation from tap water* exposure pathway (90.6 ppb and 22.8 ppb, respectively). While these maximum concentrations were detected, they do not appear to be directly related to the release and consistent with background levels. Also, since drinking water in the area is supplied by the municipal supply and there are reportedly no water wells located on the property, this pathway is not applicable to the cleanup.

Polychlorinated biphenyls were not detected.

Contamination remains on this property. DEQ approves leaving this contamination since the contamination does not threaten human health, safety, welfare and the environment. Should any contaminated soil be excavated in the future, it will have to be handled and disposed of properly. You are responsible for notifying potential purchasers of the property about this remaining pocket of contamination.

Any future work in the contaminated areas of the property, including any sampling, management, and disposal of contaminated soil and groundwater must be performed in accordance with DEQ regulations and policies.

DEQ's determination will not be applicable if new or undisclosed facts show that the cleanup does not comply with the referenced rules. DEQ's determination also does not apply to any conditions at the site other than the release of petroleum products specifically addressed in this letter.

Please note that pursuant to OAR 340-122-0360(2), a copy of your reports must be retained until ten years after you transfer your property. DEQ recommends that a copy of the report be kept with your permanent records.

Your efforts to comply with the regulations to ensure that your property has been adequately cleaned up have been appreciated.

If you have any questions, please feel free to contact Rob Hood at (503) 229-5617.

Respectfully,

Kevin Parrett, Manager
NW Region Cleanup and Tanks

cc: Dave Samples
EEM, LLC
PO Box 1604
Beaverton, OR 97075

(rah:RAH)

HOOD Robert

From: GAMOLO Gerald
Sent: Friday, October 11, 2013 1:06 PM
To: HUNTER Laurie
Cc: HOOD Robert
Subject: RE: Invoice status

Importance: High

Thank you Laurie.
I'll update the database.
Rob, we can go ahead send that NFA letter to Mr. McCracken for Oregon Paper Fiber #26-09-1265.
Please draft another letter.
The letter we currently have is dated July 22, 2013.
I'm amazed they didn't bother requesting the NFA letter after payment.
Thank you.

Gerald M. Gamolo
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400,
Portland, OR 97201
Office: (503) 229-6361
Fax: (503) 229-6899
Email: gamolo.gerald@deq.state.or.us

DEQ
State of Oregon Department of Environmental Quality

From: HUNTER Laurie
Sent: Friday, October 11, 2013 12:58 PM
To: GAMOLO Gerald
Subject: RE: Invoice status

This project currently has a $0.00 balance due :-)

From: GAMOLO Gerald
Sent: Friday, October 11, 2013 11:06 AM
To: HUNTER Laurie
Subject: Invoice status

Hello Laurie,

Good day to you.
Just want to verify if the invoice is still open or unpaid for the following project:

Oregon Paper Fiber
#26-09-1265
Qtime# 41473

Timecenter Information

Timecenter: 41473 Oregon Paper Fiber

Definition:

PCA: 58367 FED-LUST GRANT #17-RESPONSIBLE PARTY LAB Alternate:

Project: T62297 OREGON PAPER FIBER

Log Number: 26-09-1265

Location: PORTLAND - NWR

Thank you.

Gerald M. Gamolo
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Email: gamolo.gerald@deq.state.or.us



GAMOLO Gerald

From: GAMOLO Gerald
Sent: Tuesday, July 30, 2013 9:28 AM
To: HOOD Robert
Subject: FW: Expedited NFA or No Further Action letter for Oregon Paper Fiber (#26-09-1265)

Importance: High

Hello Rob,

Good day to you.
Just want to let you know I haven't received a response from Mr. McCracken regarding payment for expedited NFA.
Thank you.

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DEQ
State of Oregon Department of Environmental Quality

From: GAMOLO Gerald
Sent: Tuesday, July 23, 2013 5:28 PM
To: 'mmccracken@farwestfibers.com'
Cc: HOOD Robert
Subject: Expedited NFA or No Further Action letter for Oregon Paper Fiber (#26-09-1265)
Importance: High

Hello Mr. McCracken,

Good day to you.
The estimate of the final cost recovery invoice for the Oregon Paper Fiber project #26-09-1265 is $730.59.
According to our business office, there is currently a balance due of $427.47 and the estimated July invoice amount is $303.12.

The following are payment options:

1) Cashier's check or money order payable to Oregon DEQ.

2) Via wire or electronic payment
3) Personal check payable to Oregon DEQ.

Please note that options 1 and 2 , the No Further Action (NFA) letter will be issued immediately.
Please let me know if you're choosing option 2 so I can provide you the contact person in our business office who will give you the necessary information for electronic payment.
For option 3, our agency needs to wait for the personal check to clear prior to issuing the NFA letter.
Personal check processing may take at least 2 weeks.
Please send payment to my attention at the address below.
Please note that the amount is an estimate.
Any amount in excess of the actual final cost will be refunded.
Let me know if you have questions.
Thank you.

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GAMOLO Gerald

From: HUNTER Laurie
Sent: Tuesday, July 23, 2013 3:13 PM
To: GAMOLO Gerald
Cc: ISMERIO Dawn; BAILLO Clarence
Subject: FW: Expedited NFA for - Oregon Paper Fiber (#26-09-1265)

Importance: High

Hi Gerald,

Please collect $730.59 for an early NFA.

There is currently a balance due of $427.47 and the estimated July invoice amount is $303.12.

Thanks,
Laurie

From: GAMOLO Gerald
Sent: Tuesday, July 23, 2013 1:38 PM
To: HUNTER Laurie
Subject: Expedited NFA for - Oregon Paper Fiber (#26-09-1265)
Importance: High

Hello Laurie,

Good day to you.
Please send me via email as soon as possible the total estimated invoice for the – Oregon Paper Fiber (#26-09-1265) project:

Timecenter Information

Timecenter: 41473 Oregon Paper Fiber

Definition:

PCA: 58367 LAB Alternate:

Project: T62297

Log Number: 26-09-1265

Location: PORTLAND - NWR

All time has been entered.
Please let me know if you have questions.
Thank you for your assistance.

Gerald M. Gamolo
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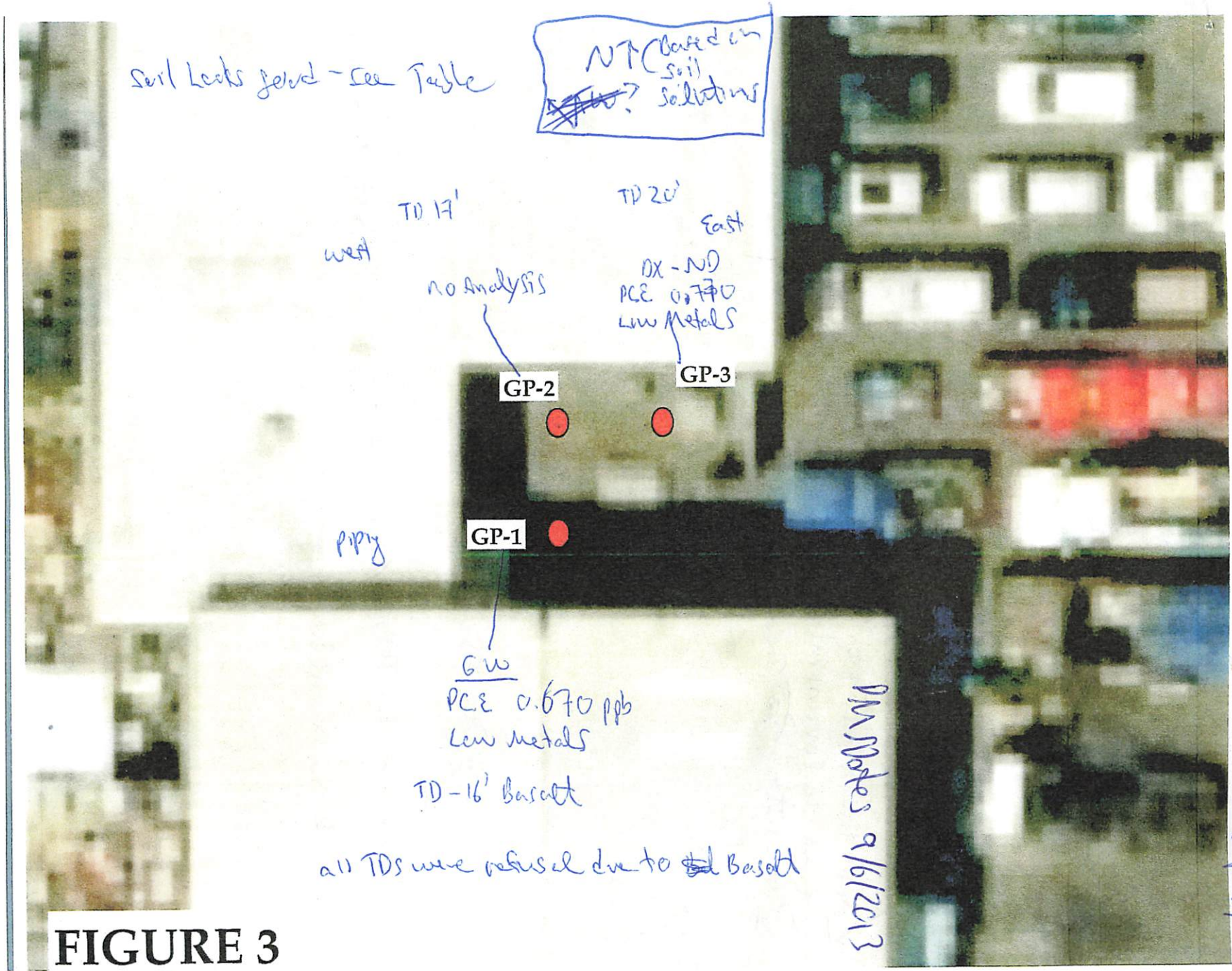


FIGURE 3

* need Scale
* N Arrow

11/2009 Soil Sol.
decom w.o. Tnk
2 Confirm Smples ~ 10' - No TPH
No GW during decom work

Dec. 2009
H.A. to 35'
454 ppm Bx < TSCU Lvl II

✓ 4.64 tons to Hillsboro
✓ Tank to Environmentally Conscious Recycly, Pdx
✓ Rinsate ... Thermofluids

EEM Inv.
3/26/13
3 GPs

only Evaluated to OCC #s
Soil ✓
GW ✓ max PCE 0.710 ppb < 64 ppb Inv/Amb. ✓ (Also Meets most cons. Res # of 11 ppb)
✓ no Bx or PCBs

TABLE 1
Soil and Groundwater Sampling Laboratory Analytical Data
Far West Fibers Property
12820 NE Marx Street, Portland, OR

Sample ID#	Date	TPH-Dx parts per million	Voltile Orgnic Compounds parts per billion	PCBs	Total Metals Cadmium, Cr & PB
GP-1 0-5'	3/26/13				parts per million
GP-1 5-10'	3/26/13	D – ND Oil – 79.5	ND	ND	Cadmium – 1.23 Chromium – 16.0 Lead – 4.94
GP-1 10-15'	3/26/13				
GP-1 15-16'	3/26/13				
GP-2 0-5'	3/26/13				
GP-2 5-10'	3/26/13				
GP-2 10-15'	3/26/13				
GP-2 15-17'	3/26/13				
GP-3 0-5'	3/26/13				
GP-3 5-10'	3/26/13				
GP-3 10-15'	3/26/13	ND	ND		
GP-3 15-20'	3/26/13				
					parts per billion
GP-1 GW	3/26/13		Tetrachlorethene (PCE) – 0.670		Cadmium –2.8 Chromium – 90.6 Lead – 22.8
GP-2 GW	3/26/13				
GP-3 GW	3/26/13	ND	Tetrachlorethene (PCE) – 0.770	ND	Cadmium –ND Chromium – 3.34 Lead – ND

not Analyzed, Poor Recovery

No Sample Collected

for chr VI but no GW use

Trg RBC 15

LEGEND

NW-TPHHCID = Northwest-Total Petroleum Hydrocarbon Identification
NWTPH-Dx = Northwest Total Petrolum Hydrocarbon-Diesel Extended
bgs = below ground surface
ND = Not Detected at method detection limit

N
W E
S

Warehouse/Office Building

WPB @ 122" bgs
12/9/09
NW-TPHHCID = ND

EPB @ 122" bgs
12/9/09
NW-TPHHCID = ND

Former UST Cavity

NPB @ 4.5' bgs
12/17/09
NWTPH-Dx
Diesel = ND
Heavy Oil = ND

Former Product Piping Line Trench

SPB @ 4.5' bgs
12/17/09
NWTPH-Dx
Diesel = ND
Heavy Oil = ND

Asphalt Parking Lot

Here 3.5' Sample
454 ppm Dx ✓ <500 Level II

SOIL SOLUTIONS
ENVIRONMENTAL SERVICES

FIGURE 3

Confirmation Soil Samples Location Map
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File #26-09-1265

PROJECT: Far West Fibers, Inc.

DATE: 10/26/07

SCALE: 1" = 10'

- Lakeney Letter
  2/4/2010
  TPH Removed (Soil)
  needed after W.O. COIS

26 09 1265

HOOD Robert

From: HOOD Robert
Sent: Thursday, June 27, 2013 10:16 AM
To: 'david samples'
Subject: RE: Oregon Paper Fiber, 26-09-1265

Dave: Your explanation in text is acceptable regarding the boring locations for this one. Already sent the nfa for manager review. -Rob

---

From: david samples [mailto:evergreenenvmgmt@me.com]
Sent: Thursday, June 27, 2013 9:57 AM
To: HOOD Robert
Subject: Re: Oregon Paper Fiber, 26-09-1265

Rob: there were no PM issues....you misunderstand... there was just sufficient limbo here that I thought I better overkill a bit on lab work etc because it would be a pain to have to come back to this site again

so...do you still want a scaled map ?

On Jun 27, 2013, at 9:51 AM, HOOD Robert <HOOD.Robert@deq.state.or.us> wrote:

Thanks Darwin that information clears it up for the record. David: Sorry you had a difficult time with another project manager and possibly multiple ones here at the Dept. regarding the appropriate sampling. Just from my end, I had no problem with the analysis (as just a report reviewer after decisions were made). However, whenever I see qualifiers that are not discussed or are not clear to me in the lab report, I need to request the additional information/explanation to ensure the results are acceptable. It is necessary for the public record.

If you have continued project manager issues, I suggest you contact one of the DEQ Cleanup managers. Hope you both have a good day. -Rob

---

From: Darwin Thomas [mailto:DThomas@Apex-Labs.com]
Sent: Wednesday, June 26, 2013 6:15 AM
To: david samples
Cc: HOOD Robert
Subject: RE: Oregon Paper Fiber, 26-09-1265

David,

I explained to Rob that the State of Oregon doesn't recognize our VE-16 qualifier. The qualifier has no value in the state of Oregon. The qualifier only applies to states that require soil samples being tested for volatile anaylsis (8260 or Gx) to be preserved in methanol within 48 hours. Since Oregon doesn't require soil samples to be preserved in methanol within 48 hours this qualifier is not applicable to your samples.

Regards,

Darwin Thomas
Business Development Director
Apex Labs
12232 SW Garden Place
Tigard, OR 97223

503.718.2323 Main
503.784.7477 Mobile

From: david samples [mailto:evergreenenvmgmt@me.com]
Sent: Monday, June 24, 2013 2:59 PM
To: Darwin Thomas
Cc: HOOD.Robert@deq.state.or.us
Subject: Re: Oregon Paper Fiber, 26-09-1265

Thanks Darwin....wil Kent discuss VE-16 as well?

On Jun 24, 2013, at 2:42 PM, Darwin Thomas <DThomas@Apex-Labs.com> wrote:

Rob,

Please see below.

Thank,

Darwin Thomas
Business Development Director
Apex Labs
12232 SW Garden Place
Tigard, OR 97223
503.718.2323 Main
503.784.7477 Mobile

From: Kent Patton
Sent: Friday, June 21, 2013 2:36 PM
To: Darwin Thomas
Subject: RE: Oregon Paper Fiber, 26-09-1265

Darwin

ME-2 qualifier was placed on the water sample for metals analyses since it was preserved with the strong acid, Hydrochloric (HCL) acid and not the typical nitric acid. Both strong acids will serve to keep dissolved cadmium, chromium and lead in solution. Nitric would be more effective in striping metals from container walls or leaching metals out of particles entrained in the water than HCL. No significant loss of these three metals would be anticipated between time of sampling and analyses. There is not a formal hold time for these metals in water with nitric but one could expect 6 months for the typical groundwater matrix. In the 2005 paper by Teresa Rauckyte, et el., "Determination of heavy metals and volatile aromatic compounds in used engine oil and sludges", the levels of the target metals are so low in the oils studied that one could not theoretically expect measureable levels of metals in the water due to the trace amount of oil detected in site soil samples.

Please let me know if Mr. Samples needs any additional information or if he would like me to discuss this further with Mr. Hood of the DEQ.

Best regards,

Kent

Kent Patton
Director of Technical Services
Apex-Laboratories LLC
kpatton@apex-labs.com
503-550-4558 cell

From: Darwin Thomas
Sent: Thursday, June 20, 2013 4:38 PM
To: Kent Patton
Subject: FW: Oregon Paper Fiber, 26-09-1265

From: david samples [mailto:evergreenenvmgmt@me.com]
Sent: Monday, June 10, 2013 7:43 AM
To: Darwin Thomas
Subject: Fwd: Oregon Paper Fiber, 26-09-1265

Darwin: do you have time today to sit down with me and do some hand holding? As you can see from Rob Hoods e-mail below he is asking for some text from me regarding lab qualifiers ME-2 and VE-16.

ME-2 regards the Total Metals for water sample GW-1. I dont normally test for this and am not quite sure I should have in this circumstance but with DEQ its a damned if you and damned if you dont scenario. Plus, prior to the actual sampling work I was having a hard time trying to get a straight answer out of them about which tests would make them happy.

VE-16 regards the VOC test for soil sample GP-3 10-15'. Take a look at that text. ??

Thanks David Samples

Begin forwarded message:

From: HOOD Robert <HOOD.Robert@deq.state.or.us>
Subject: Oregon Paper Fiber, 26-09-1265
Date: May 16, 2013 2:00:50 PM PDT
To: 'Dave Samples' <eeminc@aol.com>

Dave: I reviewed your report dated 17 April 2013. Two items:

-Provide the boring locations on a scaled map. It is ok to use the scaled Soil Solutions map to locate the borings, but they should be on scale and with north arrow.

-Discuss the lab report qualifiers ME-2 and VE-16 and how they affect the results.

Can you provide by next week? Thanks. -Rob

Rob Hood
Project Manager
UST Cleanup Section

NW Region DEQ
2020 SW 4th Ave., Ste 400
Portland, OR 97201
Phone: (503) 229-5617
Fax: (503) 229-6945
email: hood.robert@deq.state.or.us

<Determination_of_heavy_metals_and_volatile_aromatic_compounds_in_used_engine_oils_and_sludges.pdf>

HOOD Robert

From: HOOD Robert
Sent: Thursday, June 27, 2013 9:52 AM
To: 'Darwin Thomas'; david samples
Subject: RE: Oregon Paper Fiber, 26-09-1265

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To: david samples
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Fax: (503) 229-6945
email: hood.robert@deq.state.or.us

<Determination_of_heavy_metals_and_volatile_aromatic_compounds_in_used_engine_oils_and_sludges.pdf>

HOOD Robert

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Apex-Laboratories LLC
kpatton@apex-labs.com
503-550-4558 cell

From: Darwin Thomas
Sent: Thursday, June 20, 2013 4:38 PM
To: Kent Patton
Subject: FW: Oregon Paper Fiber, 26-09-1265

From: david samples [mailto:evergreenenvmgmt@me.com]
Sent: Monday, June 10, 2013 7:43 AM
To: Darwin Thomas
Subject: Fwd: Oregon Paper Fiber, 26-09-1265

Darwin: do you have time today to sit down with me and do some hand holding? As you can see from Rob Hoods e-mail below he is asking for some text from me regarding lab qualifiers ME-2 and VE-16.

ME-2 regards the Total Metals for water sample GW-1. I dont normally test for this and am not quite sure I should have in this circumstance but with DEQ its a damned if you and damned if you dont scenario. Plus, prior to the actual sampling work I was having a hard time trying to get a straight answer out of them about which tests would make them happy.

VE-16 regards the VOC test for soil sample GP-3 10-15'. Take a look at that text. ??

Thanks David Samples

Begin forwarded message:

From: HOOD Robert <HOOD.Robert@deq.state.or.us>
Subject: Oregon Paper Fiber, 26-09-1265
Date: May 16, 2013 2:00:50 PM PDT
To: 'Dave Samples' <eeminc@aol.com>

Dave: I reviewed your report dated 17 April 2013. Two items:

-Provide the boring locations on a scaled map. It is ok to use the scaled Soil Solutions map to locate the borings, but they should be on scale and with north arrow.

-Discuss the lab report qualifiers ME-2 and VE-16 and how they affect the results.

Can you provide by next week? Thanks. -Rob

Rob Hood
Project Manager
UST Cleanup Section
NW Region DEQ
2020 SW 4th Ave., Ste 400
Portland, OR 97201
Phone: (503) 229-5617
Fax: (503) 229-6945
email: hood.robert@deq.state.or.us

<Determination_of_heavy_metals_and_volatile_aromatic_compounds_in_used_engine_oils_and_sludges.pdf>

HOOD Robert

From: david samples [evergreenenvmgmt@me.com]
Sent: Monday, June 24, 2013 2:59 PM
To: Darwin Thomas
Cc: HOOD Robert
Subject: Re: Oregon Paper Fiber, 26-09-1265

Thanks Darwin....wil Kent discuss VE-16 as well?

On Jun 24, 2013, at 2:42 PM, Darwin Thomas <DThomas@Apex-Labs.com> wrote:

Rob,

Please see below.

Thank,

Darwin Thomas
Business Development Director
Apex Labs
12232 SW Garden Place
Tigard, OR 97223
503.718.2323 Main
503.784.7477 Mobile

From: Kent Patton
Sent: Friday, June 21, 2013 2:36 PM
To: Darwin Thomas
Subject: RE: Oregon Paper Fiber, 26-09-1265

Darwin

ME-2 qualifier was placed on the water sample for metals analyses since it was preserved with the strong acid, Hydrochloric (HCL) acid and not the typical nitric acid. Both strong acids will serve to keep dissolved cadmium, chromium and lead in solution. Nitric would be more effective in striping metals from container walls or leaching metals out of particles entrained in the water than HCL. No significant loss of these three metals would be anticipated between time of sampling and analyses. There is not a formal hold time for these metals in water with nitric but one could expect 6 months for the typical groundwater matrix. In the 2005 paper by Teresa Rauckyte, et el., "Determination of heavy metals and volatile aromatic compounds in used engine oil and sludges", the levels of the target metals are so low in the oils studied that one could not theoretically expect measureable levels of metals in the water due to the trace amount of oil detected in site soil samples.

Please let me know if Mr. Samples needs any additional information or if he would like me to discuss this further with Mr. Hood of the DEQ.

Best regards,

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Kent Patton

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<Determination_of_heavy_metals_and_volatile_aromatic_compounds_in_used_engine_oils_and_sludges.pdf>

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Determination of heavy metals and volatile aromatic compounds in used engine oils and sludges

Teresa Rauckyte[a,*], Douglas J. Hargreaves[b], Zenon Pawlak[a,b]

[a]*Faculty of Technology and Chemical Engineering, University of Technology and Agriculture, 85-326 Bydgoszcz, Seminaryjna 3, Poland*
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Received 27 December 2004; received in revised form 2 August 2005; accepted 3 August 2005
Available online 30 August 2005

Abstract

Assessment of contaminant releases during utilization of used oils is essential for the determination of environmental acceptability. These paper reports the results of the study examining a toxic metal leachability from used engine oil and sludge samples employing leaching test (TCLP). The leaching test indicated that lead in oil samples exceeded 5-ppm concentration level what qualified them as a toxic waste. The samples of contaminated sludge were found to contain high concentration of total lead, barium and chromium, but the leaching test showed concentration below regulatory limit. The total content of benzene, ethylbenzene, toluene, and xylenes (BETX), and naphthalene in used oil and sludge samples was also determined and was found not to be a significant factor to contamination.
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Keywords: Used engine oil and sludges; Leachability of heavy metals; Volatile aromatic hydrocarbons (BETX)

1. Introduction

The term used oil was employed to describe engine oils, transmission oils, and industrial oils (hydraulic and cutting oils) after use. The 1.7 and 3.5 million tone of used oil is collected in the EU and US each year, respectively [1–3]. Parts of used oils are collected and ultimately aggregated in permitted treatment, storage and disposal facilities. The millions of tones of used oils are disposed of through dumping on the ground or in water, land filling, or non-energy-recovery [4].

Burning as a fuel, re-refining and distillation are the three major methods for recycling of used oils. Used oil, burned for energy recovery, is the subject to regulatory limit which is (in ppm) for arsenic (5), cadmium (2), chromium (10), lead (100), total halogens (4000); and the flash point, according to regulation, cannot be lower than 45 °C [5,6]. Highly contaminated used oil is commonly blended with other fuel oils before combustion. Combustion of a blended fuel is assumed not to affect the net release of emissions with time; from an environmental perspective, the net emissions remain the same regardless of dilution [1,7,8].

Evidence of leakage from more than a million of the underground storage tanks have been identified. The leakage-contaminated soil has been found with up to 100 ppm of gasoline and up to 200 ppm of diesel and lubricating oil. No guidelines for fuel leachability test (TCLP) have been established. It was estimated that maximum of 10 ppm should not be exceeded for fuels in soil [9]. Used oil containing more than 1000 ppm of total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste compounds [10]. When testing used oils as a part of waste disposal, minimum analysis should address metals, halogenated solvents, aromatics, and polychlorinated bi-phenols (PCBs). Many of analytical methods can be used to analyse organic compounds e.g., solid phase extraction (SPE), gas chromatography with flame ionization detection (GC-FID), gas chromatography with mass spectrometric detection (GC–MS), and UV- and IR-spectrometric analyses [4].

The leaching test evaluation is a possible option for the sludge and used oil samples contaminated by heavy metals. In Europe, the most used leaching procedure since 1984 has been DIN 38414-S4: 'Sludge and sediments (group 5)

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determination of leachability by water'. Presently, the European Commission based on DIN norm developed a new procedure Norm prEN 12457: 'Compliance test for leaching of granular waste materials'. This new standard established procedure uses the water eluant (W) to solid (S) in ratio (W/S) of 2–10. In leaching tests, pH is allowed to vary freely, being dictated solely by the waste matrix dissolution [11,12]. The EPA leaching test (TCLP) was performed at eluent/solid ratio of 20:1 in agitated closed vessel for 18 h [13].

The leaching test (TCLP) is expected to test contaminated soils and sediments, sludges, metallurgical process residues, combustion residues, waste oils and fuels. Tested materials passing leaching test are deposited in landfills, yet not stable over the long term, can release toxic components into the groundwater. The waste is considered toxic when the leaching test shows that extracted hazardous metals exceeded regulatory limit which is (in ppm) for arsenic (5), barium (100), cadmium (1), chromium (5), lead (5), and silver (5) [13].

Used oil is recognized as a posing carcinogenic risk to a man. The main carcinogenic substances in used oil are polycyclic aromatic hydrocarbons (PAHs) with 3–7 rings, such as benzopyrene, benzantracene, and chrystene [14]. The compound, 3-nitrobenzotrone (nitro-PAH), discovered in the exhaust fumes of diesel engine may be the strongest carcinogen ever analyzed, has highest score in Ames test [15]. 3-Nitrobenzatrone is produced during reactions between ketone by-products of burning diesel fuel and air borne nitrogen oxides. The concentration of 3-nitrobenzatrone in diesel exhaust fumes was found to be 0.6 and 6.6 ppm for engine loads of 6 and 80%, respectively.

The objective of the research was to determine if contaminated engine oil and sludge samples exceed the regulatory limit of toxicity characteristic concentration. Also, total content of organic volatile contaminants (benzene, ethylbenzene, toluene and xylenes) (BETX) and naphthalene were determined.

2. Experimental

2.1. Chemical analysis

Oil and sludge samples were collected from auto-mechanic workshops, petroleum refinery, and gas stations. Samples were digested with nitric acid and peroxide; the hot block digestion procedure was used to analyze metals [16]. The toxicity characteristics leaching procedure (TCLP) is a leaching test used to determine content of heavy metals in contaminated material [13].

The Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES) was used for analysis of total metals and TCLP extract. The performance of instrument was evaluated by determining the method detection limit (MDL) for each metal and several (QC) parameters. Values of method reported limit (MRL), based on MDL results are shown in Table 1.

The Gas Chromatography–Mass Spectrometry (GC–MS) was used for analysis of benzene, toluene, ethylbenzene, xylene (BETX), and naphthalene in used oil/sludge samples. The method reporting limit (MRL) are 0.025 ppm for benzene, toluene ethylbenzene, *m*-xylene and 0.050 ppm for *o*- and *p*-xylene and naphthalene.

Table 1
Content of total metals (1) and leaching test (TCLP) metals (2) in used oil and sludge samples

Sample number and description	pH[a] in H_2O	As[b] (ppm)		Cd[b] (ppm)		Pb[b] (ppm)		Ag[b] (ppm)		Ba[b] (ppm)		Cr[b] ppm3B	
		(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
A—sludge	13.0	20	<[c]	2	<[c]	62	<[c]	1	<[c]	245	5	5.6	<[c]
B—sludge	12.9	44	<	18	0.1	2700	0.3	6	<	1900	2.6	550	0.1
C—sludge	12.6	35	<	16	<	1800	<	4	<	1500	1.6	360	0.1
D—sludge	12.5	39	<	15	0.1	2700	0.3	7	<	1900	1.8	560	0.2
E—sludge	12.6	340	<	25	0.1	580	0.6	17	<	88	2.2	110	1.2
F—sludge	12.2	19	<	2	<	120	<	1	<	100	1.5	25	0.1
G—used oil	8.0	0.5	<	1	<	88	17	0.5	<	13.1	11.13	4.5	0.5
H—used oil	8.7	0.5	<	1	0.2	160	30	0.5	<	24	23	4.6	0.4
I—used oil	8.1	0.5	<	1.4	0.3	110	34	0.4	<	18.1	17.2	6.1	0.5
J—used oil	8.3	1.3	<	1.3	0.3	140	40	0.8	<	23	21	5.4	0.7

Quality control parameters: Standard reference material: SRM (95–104% recovery), Continuing check standard, CSTD (94–104%), Lab spike blank, LSB (96–103%), Lab spike blank duplicate, LSBD (95–104%), Lab spike matrix, LSM (94–107%), Lab spike matrix duplicate, LSMD (95–106%).

[a] pH (5 g of sample +96.5 ml D.I. water), if pH is <5.0, use extraction fluid no. 1 and go to extraction. If pH is >5.0, than 3.5 ml 1 N HCl was added to determine extraction fluid, if pH is <5.0, use extraction fluid no. 1, if pH is > 5.0 use extraction fluid no. 2. Extraction fluid no.1 (11.4 ml HOAc+128.6 ml 1 M NaOH for 2 L) pH=4.93±0.05 to each sample pH dropped below 5 pH, and extraction fluid no. 1 was used for extraction.

[b] Value is less (<) than method reported limit (MRL). The results of MRL values are (ppm): arsenic 0.5, cadmium 0.05, barium 0.04, chromium 0.06, lead 0.30, selenium 0.5, silver 0.04, and mercury 0.2.

[c] Accuracy and precision of metals analysis: Accuracy was determined as a ratio of LSB_{found} and LSB_{true} (96–104%), or LSM_{found} and LSM_{true} (93% to 106%); the precision was determined by calculating the difference between the results found for the LSB and LSBD, and then dividing the difference by the average of the two results (3–9%).

The standards were prepared as specified in US EPA Method 8020B [17].

2.2. Quality assurance (QA)/quality control (QC)

The ICP-AES calibration standards were prepared from multi-element standard solution. Three standard and one blank samples were used for calibration. The standard samples were prepared in nitric acid/hydrochloric acid matrix, as specified in US EPA method 6010 [18]. To assure the accuracy and precision of a method, a series of QA/QC procedures were performed to validate the data from US EPA methods (see summary Tables 1 and 4). The samples were spiked before digestion (1 ppm for Ag, Ba, and 2 ppm for Cr, Cd, As, and Pb).

During the TCLP extraction, blank and duplicate samples, and standard reference materials (SRM) were processed along with the samples. Blank extraction samples were run in order to detect contamination introduced in the sample processing and analysis procedure. Additionally, sample duplicates were also extracted to assure reproducibility of the method. The reported concentration could not deviate more than 20% between the duplicates and reference materials. An extraction blank was processed and analyzed with each leached sample set of 10. In addition, laboratory spike blank (LSB) and laboratory spike blank duplicate (LSBD) were analyzed with each leached sample set of 10. The performance of instrument was evaluated by determining the method detection limit (MDL) for each analyte using EPA protocol [19]. Method reported limit (MRL) are given in Table 1.

2.3. Leaching test (TCLP)

The TCLP tests were performed as specified in the method 1311 [13]. The samples were tested as received and sampled with no preservation being added. A sample of at least 100 g had been tumbled for 18 h with fluid number 1; fluid no.1 is 0.1 N acetic acid, which has been adjusted with NaOH to pH of 4.93. The ratio of extracting fluid to sample was 20: 1. After tumbling, extracts were filtered using a 0.1 μm cellulose nitrate filter, acidified with nitric acid, digested, and analyzed for content of metals. The results are shown in Table 1.

3. Results and Discussion

3.1. Total metals and leaching test (TCLP) analysis

Ten sludge and used oil samples were analyzed for total metal content and metal content after using leaching TCLP test. The results are shown in Table 1.

Six samples of contaminated sludge were found to contain high concentration of total lead (av. 330 ppm), barium (av. 960 ppm) and chromium (av. 270 ppm), however, after leaching concentration of those metals did not exceed regulatory limit. Different results were obtained with used oil samples. Total concentration of heavy metals was much lower than in sludge. Total leached lead concentration was in range of 88–160 ppm and after leaching exceeded regulatory limit of 5 ppm. Leached barium concentration, in some oil samples, was in range of 11–23 ppm but below the regulatory limit of 100 ppm. Our spiked matrix recoveries, continuing check standard (CSTD), laboratory blank spikes (LSB, LSBD), and standard reference material (SRM) deviate only a few percent from the listed true values shown in Table 1.

Prediction of concentration of leached metals, based on total metal contents, is difficult because there are many variables that affect leaching behavior including matrix redox properties, reduction by metal not being hazardous e.g., iron, additives present, sorption processes, and contaminated oil samples could differ [20].

In Table 2 content of metals leached from contaminated oils using TCLP test was compared with the total metal values. Percent of leached lead (19–31%) and leached barium (86–96%) were very high in comparison with sludge or solid samples [21]. This is a very valuable information on contaminated engine oil, which is leaching much higher than any solid material with high concentration of metals.

The other authors reported the following results for total heavy metals in used engine oils for the last two decades, see Table 3 below.

Table 3 shows the distinct decrease in lead content for engine oil. The most significant finding, related to the content of metals, is that lead is present over regulatory interest (5 ppm) when using leaching test (TCLP) and is identified as a hazardous waste, therefore cannot be disposed of in landfill sites [5,6].

Table 2
Total and leached barium and lead content in used engine oil samples and their ratios

Sample number and description	[T-Pb] (ppm)	[TCLP-Pb] (ppm)	Ratio [TCLP-Pb]/[T-Pb] (%) extracted	[T-Ba] (ppm)	[TCLP-Ba] (ppm)	Ratio [TCLP-Ba]/[T-Ba] (%) extracted
G—used oil	88	17	19.3	13.1	11.3	86.3
H—used oil	160	30	18.8	24	23	95.8
I—used oil	110	34	30.9	18.1	17.2	95.0
J—used oil	140	40	28.6	23	21	91.3

Table 3
Concentration of metals in used mineral-based engine oil. Comparison of results with past studies.

Location	As, ppm	Ba, ppm	Cd, ppm	Cr, ppm	Pb, ppm	Zn, ppm
Franklin Assoc. 1984 [22]	nr	nr	nr	nr	2500	Nr
EPA Composite, 1985 [23]	10	210	2	11	2570	980
Oregon State, 1986 [24]	0.2	nr	1.2	3	662	357
ABB-Environm. 1990 [25]	5	48	3	6.6	240	480
Vermont State, 1996 [26]	nr[a]	3 (7)[b]	2 (6.6)[b]	3 (6.8)[b]	49 (146)[b]	1150
California State, 1996 [27]	nr	18 (26)[b]	1 (2)[b]	1.4 (2)[b]	33 (38)[b]	822
Spain, 2000 [28]	nr	nr	7	3	41	Nr
Portugal, 1996 [29]	nr	Nr	<2	<10	1500	Nr
Canada, 1995 [30]	nr	nr	<2	10 (233)[b]	29 (265)[b,c]	Nr
Poland,1999 [2]	nr	nr	nr	10	7000	1100
This work, 2004	0.7	20	1.2	5	125[c]	Nr
Leaching test (TCLP) requirements [10]	<5	<100	<1	<5	<5	Not reg.

[a] nr, not reported.
[b] Max concentration.
[c] Leaching test (TCLP) is above the TCLP limit of 5 ppm.

Used oil is contaminated not only with heavy metals but also with polycyclic aromatic hydrocarbons that are insignificant in the unused oil. In our study total volatile organic compounds in used oil and sludge samples were analyzed by gas chromatography–mass spectrometry [17]. The volatile compounds selected as target analytes were benzene, toluene, ethylbenzene, and *o*-, *m*-, and *p*- (total)-xylenes, and naphthalene. Table 4 presents the results for ten oil/sludge-contaminated samples. The results indicated that analyzed samples were contaminated by volatile aromatics in low concentration, below 1 ppm for most analytes. They correspond to concentration of volatile hydrocarbons found, by the other research group, in diesel fuel [31].

Total aliphatic/aromatic hydrocarbons in used engine oil determined (in ppm) by the other researchers were as follows: dichlorodifluoromethane (20), trichlorotrifluoroethane (160), (1,1,1)-trichloroethane (200), trichloroethylene (100), tetrachloroethylene (106), benzene (20), toluene (380), xylenes (530), benz(a)antracene (12), benzo(a)pyrene (10), naphthalene (330), and polychlorinated biphenyl or PCB (5) [25].

The high solubility in water of the BETX compounds originated from gasoline contaminated soil e.g., benzene (29.5 ppm), toluene (42.6 ppm), ethylbenzene (2.4 ppm), and *o*-, *m*-, *p*-xylenes (14 ppm), can lead to significant contamination of groundwater [4]. In the soil samples studied by the others, correlation between the organic matter and the leachable and volatile hydrocarbons was noted. Their results indicated that volatile hydrocarbon contamination seems to be primarily associated with the organic fraction of the soil [11].

Organic contaminants from underground tank fuel leaks, industrial oily hazardous waste release, and pesticide formulations are almost always released to the environment as solute mixture. The competitive sorption of 1,2-dichlorobenzene and other chemicals in soils is associated with voids in natural organic matter (NOM) structure, and (NOM) plays a central role in determining sorption characteristic. Our understanding of factors controlling the competitive interaction among hydrophobic organic compounds, in geo-sorbents having natural organic matter, is still limited [32].

4. Conclusions

The efficacy of cleanup methods in reducing oil contamination at spill sites is typically determined by

Table 4
Total volatile organic aromatic hydrocarbons (BETX) in the oil/sludge samples

Sample no.	Aromatic compounds (ppm)
1—sludge	Toluene (0.27), xylene (0.09)
2—sludge	Ethylbenzene (0.03), toluene (0.15), xylene (0.62)
3—sludge	Ethylbenzene (0.04), toluene (0.40), xylene (0.20)
4–sludge	Ethylbenzene (0.20), toluene (2.00), xylene (0.90)
5—sludge	Ethylbenzene (0.08), toluene (0.30), xylene (0.16)
6—sludge	Ethylbenzene (0.05), toluene (0.07)
7—used oil	Ethylbenzene (0.08), toluene (0.40), xylene (0.62)
8—use oil	Ethylbenzene (0.15), toluene (0.70), xylene (1.20)
9—used oil	Ethylbenzene (0.15), toluene (0.42), xylene (0.72)
10—used oil	Ethylbenzene (0.11), toluene (0.51), xylene (0.67)

Quality control (QC) parameters. Reference standard material, SRM (85–115% recovery), Continuing check standard, CSTD (80–120%), Lab spike blank, LSB (85–115%), Lab spike blank duplicate, LSBD (85–115%), Lab spike matrix, LSM (80–120%), Lab spike matrix duplicate LSMD (80–120%). Accuracy and precision of BETX analysis: Accuracy was determined as a ratio of LSB_{found} and LSB_{true} (85–115%), or LSM_{found} and LSM_{true} (80–120%); the *precision* was determined by calculating the difference between the results found for the LSB and LSBD, and then dividing the difference by the average of the two results (85–115%).

measuring concentration of benzene, toluene, ethylbenzene, xylenes (BETX), naphthalene and hazardous metals in used oil and sludge samples. Although, these values may provide a direct concentration of contaminants, they may not be indicative of what is transferred to groundwater. When sludge and used oil is released onto the soil or water, BETX compounds cause serious damage to the natural environment. The lead concentrations observed are much lower than earlier studies due to the change of unleaded gasoline, but lead is still a problem.

References

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HOOD Robert

From: david samples [evergreenenvmgmt@mac.com]
Sent: Monday, June 17, 2013 8:56 AM
To: HOOD Robert; Darwin Thomas
Cc: Mike McCracken; Jan Yutzy
Subject: Re: Oregon Paper Fibers, LUST 26-09-1265

Rob: with regard to the two items you want addressed prior to issuance of an NFA for this site..

(1) Regarding the two lab notes, I spoke with Darwin Thomas at Apex Lab and he wants you to call him and discuss it as opposed to me trying to write a thesis on why these are insignificant. Please be aware that I may have done extra testing such as for Total Metals, because I didnt want to be in a situation where DEQ would later say "oh you should have run that as well.....I spoke with the former Project Manager (Laurie Cook) about the site before I did my drilling.

(2) Regarding the need for a scaled map. For such a small site do you really think thats necessary? I took extensive measurements of the area during the drilling and on page 3 of my report I state the distances between the three borings. Its such a relatively small area that any good hillbilly could spit from one wall the other. Photo # 6 in particular shows the site well Unless you decide other wise I'l go ahead and whip something up.

David Samples Evergreen Environmental Management 503-985-1717

On Jun 7, 2013, at 9:43 AM, HOOD Robert <HOOD.Robert@deq.state.or.us> wrote:

Hi Dave. Looks like I have your new email address now. See the attached emails and please let me know your turnaround time for some info. I requested (in case you didn't get them at the other email. I sent a request for delivery and it just said message was relayed). Thanks and hope things are well with you. -Rob

Rob Hood
Project Manager
UST Cleanup Section
NW Region DEQ
2020 SW 4th Ave., Ste 400
Portland, OR 97201
Phone: (503) 229-5617
Fax: (503) 229-6945
email: hood.robert@deq.state.or.us

<Mail Attachment.eml><Mail Attachment.eml><Mail Attachment.eml>

HOOD Robert

From: HOOD Robert
Sent: Friday, June 07, 2013 9:43 AM
To: Dave Samples (evergreenenvmgmt@mac.com)
Subject: Oregon Paper Fibers, LUST 26-09-1265
Attachments: Oregon Paper Fiber, 26-09-1265; RE: Oregon Paper Fiber UST Cleanup, File 26-09-1925; Oregon Paper Fiber UST Cleanup, File 26-09-1925

Hi Dave. Looks like I have your new email address now. See the attached emails and please let me know your turnaround time for some info. I requested (in case you didn't get them at the other email. I sent a request for delivery and it just said message was relayed). Thanks and hope things are well with you. -Rob

Rob Hood
Project Manager
UST Cleanup Section
NW Region DEQ
2020 SW 4th Ave., Ste 400
Portland, OR 97201
Phone: (503) 229-5617
Fax: (503) 229-6945
email: hood.robert@deq.state.or.us

HOOD Robert

From: HOOD Robert
Sent: Thursday, May 16, 2013 2:01 PM
To: Dave Samples
Subject: Oregon Paper Fiber, 26-09-1265

Dave: I reviewed your report dated 17 April 2013. Two items:

-Provide the boring locations on a scaled map. It is ok to use the scaled Soil Solutions map to locate the borings, but they should be on scale and with north arrow.

-Discuss the lab report qualifiers ME-2 and VE-16 and how they affect the results.

Can you provide by next week? Thanks. -Rob

Rob Hood
Project Manager
UST Cleanup Section
NW Region DEQ
2020 SW 4th Ave., Ste 400
Portland, OR 97201
Phone: (503) 229-5617
Fax: (503) 229-6945
email: hood.robert@deq.state.or.us

HOOD Robert

From: HOOD Robert
Sent: Thursday, May 16, 2013 10:01 AM
To: 'mmccracken@farwestfibers.com'
Cc: Dave Samples
Subject: Oregon Paper Fiber UST Cleanup, File 26-09-1925

Hi Mike: I wanted to inform you that I picked up the above-reference project from the wait list and plan to review the Evergreen and soil solutions investigation work. If you have any questions in the meantime, please contact me. Thanks.
–Rob Hood

Rob Hood
Project Manager
UST Cleanup Section
NW Region DEQ
2020 SW 4th Ave., Ste 400
Portland, OR 97201
Phone: (503) 229-5617
Fax: (503) 229-6945
email: hood.robert@deq.state.or.us

DANA Kevin

From: Mike McCracken [mmccracken@farwestfibers.com]
Sent: Wednesday, March 27, 2013 9:28 AM
To: david samples; DANA Kevin
Subject: RE: 26-09-1265 needs to be re-opened

The only things that's changed is that TJ no longer works at FWF. I am an officer of the company and was his manager, so I don't see any reason why I couldn't sign in place of TJ, if (and I hope) that would make it easier.

Mike

Mike McCracken, CFO
Far West Fibers, Inc.
12820 NE Marx St.
Portland, OR 97230
Tel. 503.255.2299 ext. 5008
Dir. 503.200.5008
Cell. 503.572.1497
Fax. 503.257.0502

www.farwestfibers.com

-----Original Message-----
From: david samples [mailto:evergreenenvmgmt@me.com]
Sent: Wednesday, March 27, 2013 9:22 AM
To: DANA Kevin
Cc: Mike McCracken
Subject: Re: 26-09-1265 needs to be re-opened

Mike....has anything changed per Dana's e-mail? It sounds like you can use the old CRA. Let us know. Thanks

On Mar 27, 2013, at 9:20 AM, DANA Kevin <DANA.Kevin@deq.state.or.us> wrote:

> David,
>
> The original Cost Recovery Agreement was signed by T.J. Millbrooke, with invoices to be sent to Mike McCracken at the site address. If this hasn't changed, then we can just re-open the project under the CRA. If the authorizing signature or invoice information needs to change, though, then you should submit a new CRA with the changes.
>
> Let me know which way you want to go. Thanks!
>
> Kevin Dana
> Cleanup Project Coordinator
> (503) 229-5379
>
> -----Original Message-----
> From: david samples [mailto:evergreenenvmgmt@me.com]
> Sent: Wednesday, March 27, 2013 8:57 AM
> To: DANA Kevin
> Cc: Mike McCracken

> Subject: Re: 26-09-1265 needs to be re-opened
>
> Dana: I did my drilling yesterday at Far West Fibers at that old used oil tank site. Can you tell me if Far West needs to complete a new Cost Recovery Agreement so we can get a PM assigned? The reason I ask is that there was a 2009 letter from Far West asking to cancel the CRA that was in effect at that time. Thanks
>
> David Samples Evergreen Env Mgmt 503-985-1717
>
>
> On Mar 20, 2013, at 1:26 PM, DANA Kevin <DANA.Kevin@deq.state.or.us> wrote:
>
>> David,
>>
>> Normally we would re-assign the project to the previous Project Manager (Laurey Cook in this case) since they could get up-to-speed the quickest, but Laurey is no longer in the LUST program.
>>
>> I understand you'll be coming over to view the file. There might be some information as to what additional actions we were requiring before the project was backlogged. If you still have some questions, though, let me know and we'll see if we can get an expedited review of your sampling and analysis plan.
>>
>> Kevin Dana
>> LUST Program Coordinator
>> (503) 229-5369
>>
>> -----Original Message-----
>> From: david samples [mailto:evergreenenvmgmt@me.com]
>> Sent: Wednesday, March 20, 2013 10:22 AM
>> To: DANA Kevin
>> Cc: hood.rob@deq.state.or.us; Mike McCracken; Jan Yutzy
>> Subject: 26-09-1265 needs to be re-opened
>>
>> Kevin: I just spoke with Rob Hood and Laurie Cook. We need to re-open 26-09-1265 and get this thing closed so that re-financing can proceed muy pronto. Essentially an NFA was not issued because Soil Solutions did not test for solvents in their soil samples nor was a groundwater sample obtained. So here we are.... There is a good chance I will take a push probe rig out to the site next Monday and put in 2-3 borings to water and collect soil samples at every 5 feet. Representative soil and water samples will be tested for solvents and a summary report submitted to DEQ when the data . There already is a Cost Recovery Agreement in place. I know there is a huge backlog but this should be a relatively simple site even thought its near the Slough. Please let me know your thoughts on the matter.
>>
>> David Samples Evergreen Env Mgmt 8503-985-1717 cell is 503-784-5444
>

DANA Kevin

From: DANA Kevin
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To: 'david samples'
Cc: Mike McCracken; DANA Kevin
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DANA Kevin

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To: 'david samples'
Cc: DANA Kevin; DROUIN Mark; HOOD Robert; PARRETT Kevin; SCHATZ Jeff
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David Samples Evergreen Env Mgmt 8503-985-1717 cell is 503-784-5444

INTEROFFICE MEMORANDUM

OREGON MPOK FEB 62

26-09-1265

TO: FILE

FROM: LAUREY COOK

SUBJECT: BACKLOG

DATE: 4/22/2010

CC:

There was a line release from a waste oil tank. The release was 454 ppm waste oil at a depth of 3.5 feet. Soil was removed to a depth of 4.5 feet and the results were ND. The initial sample was not analyzed for VOCs or other constituents as required by rule. I indicated that this could be a disposal consideration. After discussing the lack of sampling with Mike Kortenhof and Jeff Schatz, it seemed prudent to require an additional sample to ensure that there was no waste oil release. The site is located in the well field protection area and in an area that drains to the Columbia Slough. It has been my experience that if there was a solvent release, it not always apparent in the soil. I requested a groundwater sample. Soil Solutions advised against groundwater sampling based on the industrial nature of the surrounding area. DEQ indicated that if the sample was not obtained we would back log the site rather than close the site. The RP indicated that backlogging was fine. I recommend backlogging the site.

Site Score 350

OK to Backlog.

7/8/10 MHK

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED

APR 19 2010

NORTHWEST REGION
GRESHAM OFFICE

FAR WEST FIBERS, INC.

CORPORATE OFFICE
12820 N.E. Marx Street
P.O. Box 20669 (97294)
Portland, OR 97230
Phone 503-255-2299
Fax 503-257-0502
www.farwestfibers.com

To: Laurey Cook, DEQ UST Cleanup Specialist
Department of Environmental Quality
1550 NW Eastman Parkway, Suite 290 Gresham, Or 97030

From: TJ Millbrooke, Operations Manager
Far West Fibers
12820 NE Marx St., Portland, Or 97230

Date: April 14, 2010

Subject: UST Cleanup File No. 26-09-1265
UST Facility ID No. 12369

Laurey,

Thank you for your help in discussing our options with our underground storage tank. Far West Fibers would like to request to terminate our cost recovery agreement effective April 30th, 2010. We will gladly perform the work when our site cycle's to the top of the backlog list.

Sincerely,

TJ Millbrooke
503.200.5014

cc: Stan Girard, Far West Fibers COO

.

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- Water samples must be tested for BTEX at a minimum. Because of concerns about fuel additives, we have also been asking for MTBE testing in water samples at most sites.[10] At sites where diesel or other non-gasoline products have been released, you should also test for polynuclear aromatic hydrocarbons (PAHs).

Note: The soil matrix option allows you to use TPH analyses on groundwater samples as a preliminary screen for PAHs. The TPH method detection limit must be no greater than 0.5 ppm. Any groundwater sample for which TPH is detected must be analyzed for PAHs by the methods specified in OAR 340-122-0218. Although this may be a useful screen for very simple sites, at more complex sites where risk questions may arise you will be better off having the actual PAH results. For this reason, we normally recommend that you skip the screen and test directly for PAHs.

If you encounter contamination from a waste oil tank, you must follow special requirements. When there is a release from a waste oil tank, you must collect a sample of the contaminated soil and test it for the presence of non-petroleum contaminants such as volatile chlorinated solvents, leachable metals (cadmium, chromium, and lead), and, in some cases, PCBs. Note that this must be an obviously contaminated sample. You should try to obtain a sample from the most contaminated area ("worst case" sample). The purpose of this sample is to identify constituents in the waste oil contamination, not to confirm that you have reached a particular cleanup level. You must prove to the Department that there are no non-petroleum contaminants in the release of waste oil in order to get approval to use soil matrix cleanup levels for waste oil contamination.

340-122-0345 Sample Collection Methods

You must collect soil and water samples in ways that will not cause volatile compounds to be released to the air. Therefore, as you collect the samples, disturb the soil as little as possible. Collect and store all samples individually in proper containers, and store them immediately on ice. **Composite samples[11] are not acceptable.** You must also carefully label each sample, mark its location on a site diagram, record the name of the sample collector, note any unusual conditions that you encounter during sample collection, and use proper chain-of-custody procedures.

If you intend to collect your own samples, you should contact the laboratory that will analyze your samples and get the proper sampling equipment. The laboratory will usually also be able to give you tips on collecting samples as well as on logging, handling, storing, filtering, and transporting the samples. Make sure that you fill out chain-of-custody forms for all of your samples. Proper handling and documentation are critical. If there are doubts about the sample collection methods used at your site, you may be required to collect and analyze another set of samples.

340-122-0355 Evaluation of Analytical Results

When the results of your sample analyses come back from the laboratory, you should examine the data to determine if your site meets the required soil matrix cleanup standards. This will usually require only a simple comparison of the lab results to the site-specific soil matrix cleanup level. However, you should contact the appropriate regional UST Cleanup project manager to discuss how best to proceed if:

- Water samples analyzed are found to contain detectable levels of BTEX and/or MTBE; or
- Waste oil contaminated soil samples are found to contain detectable levels of BTEX, volatile chlorinated hydrocarbons, PCBs or leachable metals.

If contamination remains at a concentration greater than the calculated numeric soil cleanup level, you will usually have to perform additional cleanup. When you think the contamination has been adequately cleaned up, another round

[10] *If you have a question about MTBE testing, check with a UST project manager at the appropriate regional office.*

[11] *Composite samples are made up by mixing several samples from different locations into one final sample. Such mixing of samples is not allowed.*

COOK Laurey

From: COOK Laurey
Sent: Wednesday, April 14, 2010 8:24 AM
To: 'Albright, Randy'; KENT Mavis D
Subject: FW: Can you help me with this update?
Attachments: List of PWB Well Field Sites.041210 RA update.docx

I added a site located at 12820 NE Marx. I was the PM but they decided to cancel their cost recovery agreement.
Laurey

From: KENT Mavis D
Sent: Tuesday, April 13, 2010 5:56 PM
To: 'Albright, Randy'
Cc: COOK Laurey
Subject: FW: Can you help me with this update?

I reviewed the table and made a couple of additions and comments.

From: Albright, Randy [mailto:Randy.Albright@portlandoregon.gov]
Sent: Tuesday, April 13, 2010 5:42 PM
To: COOK Laurey; KENT Mavis D
Subject: Can you help me with this update?

Laurey / Mavis - Mavis put this table together last July, and I'm updating it. I think I found everything I could in the ECSI and LUST online databases, supplemented by whatever I've received recently via email or USPS. Can the two of you please briefly review and let me know if I missed any thing pertinent?

Thanks!

-Randy

				quarter 2009 has been delayed.
4682	Verizon NE 122nd	Chuck Harman	XPA (ICP site)	Further site investigation results pending, VOC contamination potentially shallow.
LUST SITES (DATABASE)				
26-89-0267	Panoco 39 12235 N Jantzen Drive (Hayden Is, PWB water rights area)	Laurey Cook	Remediated	Outside CSSWF. GW impacts on/offsite. Submitted CSM requesting closure in 2009.
26-91-0431	GMC (National Rental Car) 9225 NE Airport Way	Laurey Cook	Remediation	Current remedial action stopped until CAP is revised. 2009 GW modeling indicates potential impact to hypothetical well. Resume remedial action when revised CAP is approved.
26-94-0063	Unocal 12205 N Center Drive (Hayden Is, PWB water rights area)	Laurey Cook	Remediated	Outside CSSWF. GW impacts on/offsite. Site redeveloped w/ vapor barrier. They propose GW ingestion pathway not complete.
26-96-0727	Avis 9555 NE Airport Way	Laurey Cook	Proposed Closure for review	GW ingestion pathway was excluded. MTBE is a contaminant of concern.
26-98-0824	Dollar Rental Car 9105 NE Airport Way	Laurey Cook	Remediation (1st stage)	2004 Work Plan for RBCA. CAP not accepted by DEQ; revision to include drinking water pathway. Current goal to reduce vapor intrusion risk.
26-09-0283	Oregon Paper Fiber 12820 NE Marx St	Unassigned	Requested additional sampling	Removed waste oil tank, reported soil release and removal of contaminated soils. Did not analyze contamination per soil matrix rule requirements. DEQ requested a groundwater sample to insure no chlorinated solvent impact. Far West Fibers cancelled cost recovery agreement.
26-03-2208	Sandy Cardlock (spill) 11426 NE Sandy Blvd	Jeff Schatz	Proposed Closure	Diesel spill. GW monitoring suspended. Proposal for closure out for comments. EES prohibiting water wells on property in works.
COMPLETED SITES – NO FURTHER DEQ ACTION EXPECTED				
331	Wagner Mining & Construction 4424 NE 158th Avenue	Bruce Gilles	NFA	Interim actions taken in OD and Columbia Slough sediment; NFA issued June 2003.
1219	ICN	Jennifer Sutter	NFA; Final Closure	NFA issued Oct. 2005 with GW monitoring

	NE Holman Street		pending MW Decommissioning	required for 5 years ending in Oct. 2009. Termination of GW monitoring approved by DEQ Jan 2010. Certificate of Completion is pending decommissioning of remaining site monitoring wells.
1490	Norris 4415 NE 148th Avenue	Mavis Kent		DEQ conducted XPA for the site in 2002. No significant groundwater contamination found, DEQ will conduct no further work.
2215	Cadet Manufacturing 6225 NE 105th Avenue	Dan Hafley	NFA	NFA issued 4/24/09, Certificate of Completion filed with Multnomah District Court 3/18/09.
2474	Tube Specialties 5131 NE 148th Avenue	Bob Williams	NFA	NFA issued January 2010.
3037	Port of Portland former wrecking yd	Jennifer Sutter	NFA	NFA Issued March 2009.

Oregon
Theodore R. Kulongoski, Governor

Department of Environmental Quality
Northwest Region - East Side Office
1550 NW Eastman Parkway, Suite 290
Gresham, Oregon 97030
(503) 667-8414
Fax: (503) 674-5148

March 29, 2010

TJ MILBROOK
FAR WEST FIBERS
12820 NE MARX ST
PORTLAND OR 97230

Re: Oregon Paper Fiber
UST Cleanup File No. 26-09-1265
UST Facility ID No. 12369

Dear Mr. Milbrook:

This letter is in regard to the Department of Environmental Quality's (DEQ's) request for additional investigation at the underground storage tank (UST) release site located at 12820 NE Marx Street in Portland, Oregon. DEQ noted that if contamination is present due to a release from a waste oil tank, at least one sample of the waste oil contaminated soils must be collected and analyzed for volatile chlorinated solvents, volatile aromatic solvents, and leachable metals.

DEQ requested groundwater sampling in the area of the former waste oil tank, since the appropriate constituent sampling was not performed on visibly contaminated soil when a UST system was decommissioned by removal from the site. It is my understanding that Soil Solutions expressed concern regarding contamination that may be present in groundwater in the general area. DEQ notes that the site is in the Columbia South Shore Well Field Wellhead Protection Area and near the Columbia Slough. The site is not within the vicinity of known or anticipated solvent contamination.

DEQ prioritized the site and assigned a project manager to provide oversight based on a signed cost recovery agreement. You may terminate the cost recovery agreement by submitting a notice in writing to DEQ 15 days prior to the intended date of termination. Terminating the cost recovery agreement will not relieve liability or responsibility, but may result in a lower priority.

The UST release file for the site cannot be closed unless the requested work is performed. However, if the company is not currently willing to perform the requested work, the file may be backlogged. Eventually, the site will cycle to the top of DEQ's priority list and any outstanding work will need to be performed or reviewed at that time.

Please contact me and let me know if you do not plan to continue with the voluntary agreement. If you have any questions, please feel free to contact me at (503) 667-8414 extension 55007.

Sincerely,

Laurey Cook

Laurey Cook, UST Cleanup Specialist
UST Cleanup and Compliance Section

cc: PAT GERBIC
SOIL SOLUTIONS ENVIRONMENTAL SERVICES, INC.
3540 SE 28TH AVENUE
PORTLAND OREGON 97202

COOK Laurey

From: COOK Laurey
Sent: Monday, March 01, 2010 1:53 PM
To: KORTENHOF Mike
Cc: SCHATZ Jeff
Subject: Waste oil release with no VOC sampling

Mike,

I just talked with TJ Millbrooke – regarding the Oregon paper fiber tank release. Soil Solutions removed a waste oil tank at the site. They did not submit a contaminated sample for constituents analysis as required under the soil matrix rules. The release was fairly small -- 4.5 tons the highest impact reported 450 ppm heavy oil – nds after soils removal. After discussing this with you and with Jeff, I asked them to take a groundwater sample and soil sample in the vicinity if the former tank, as they did not follow the rules.

TJ says the Soil Solutions is telling him this is very unusual, that I am not following DEQ practices. That they may detect chlorinated solvents and would not know where they are from. This is a contaminated area, and as far as the rules go, the requirement for VOC analysis is a gray area.

TJ is also upset at the time that I charged and the billing rate. I asked him if he wanted to have a meeting with me and my manager. He said he did not want to meet, as it is too costly (unless we waived the costs). He also wanted to know what we would do if they did not collect the sample. I indicated that most likely the site could not be NFAed, but did not know if we would actively pursue the additional work.

I thought I would let you know. I also told him that I had consulted with you and another project manager before asking for the additional work. We would be happy to meet with him, but I could not say if we would waive cost recovery. I also told him at this point DEQ could not NFA the site.

Laurey

3/1/2010

TJ Millbrooke called this morning
I returned his call & left
a voice message

Laurey Cook

COOK Laurey

From: COOK Laurey
Sent: Tuesday, February 16, 2010 4:33 PM
To: 'TJ Millbrooke'
Subject: RE: Oregon paper fiber

TJ,

This sampling plan is approved by DEQ, and is in accordance with the plan DEQ previously discussed with Soil Solutions. Thanks you for your cooperation.

Laurey Cook
Oregon DEQ
503 667 8414

From: TJ Millbrooke [mailto:TJMillbrooke@farwestfibers.com]
Sent: Tuesday, February 16, 2010 4:27 PM
To: COOK Laurey
Subject: FW: Oregon paper fiber

Hi Laurey-

Thanks for taking the time to review that the attached process will sufficiently meet your requirements.

Thanks,

TJ Millbrooke
Far West Fibers
Operations Manager - Eastside
12820 NE Marx St., Portland, Or 97230
Direct: 503.200.5014

From: Pat Gerbic [mailto:pat@soilsolutionsenvironmental.com]
Sent: Tuesday, February 16, 2010 2:02 PM
To: TJ Millbrooke
Subject: RE: Oregon paper fiber

Hi TJ,

I have reviewed the letter, spoke with the DEQ, and have prepared the attached cost estimate for the DEQ requested sampling. Please review the estimate and let me know if you have any questions.

Patrick Gerbic
Project Manager
Soil Solutions
Environmental Services, Inc.
503-234-2118
www.soilsolutionsenvironmental.com

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3540 SE 28th Avenue . Portland, Oregon 97202

Office 503.234.2118
Toll Free 877.234.2118
Fax 503.331.7133

www.soilsolutionsenvironmental.com

Soil Sampling Contract

February 16, 2010

Property Owner: Oregon Paper Fiber / Far West Fiber
Site Address: 12820 NE Marx Street
Portland, OR 97230

Soil Solutions was contracted Oregon Paper Fiber Company to decommission a 500-gallon underground storage tank (UST) by removal. The UST was contained used oil. UST decommission services were completed on December 9, 2009 and the excavation was backfilled on December 10, 2009.

Three confirmation soil samples were collected, two from beneath the tank, and one along the product line that ran from the building to the UST. The samples were submitted for northwest total petroleum hydrocarbon – hydrocarbon identification (NWTPH-HCID) analysis. There were no NWTPH-HCID detections found in the two sample collected from beneath the tank. One soil sample was collected along the product line and submitted for NWTPH-HCID analysis. Laboratory results confirmed the presence of heavy oil. The sample was submitted for northwest total petroleum hydrocarbon - diesel range (NWTPH-Dx) analysis. Laboratory results detected the heavy oil concentration of 454 milligrams per kilogram (mg/kg).

Soil Solutions prepared their closure assessment report and submitted to the Oregon Department of Environmental Quality (DEQ). In a letter dated February 4, 2010, the dEQ requested further investigation to determine if contamination migrated to "ensure that there was no release of volatiles to the environmental media". Soil Solutions has prepared this scope of work to address DEQ's comments.

One soil boring will be advanced in the former tank piping area. The boring will be advanced to a depth of approximately 15-20 feet below the ground surface or until groundwater is encountered. Soil conditions will be checked for visual or olfactory indications of petroleum contamination and screened using a photoionization detector (PID). Soil samples will be collected where the heaviest physical indications of petroleum is observed or where the highest PID readings are observed OR at soil/groundwater interface. A groundwater sample will be collected. The samples will be submitted for total petroleum hydrocarbons diesel range (TPH-Dx) and volatile organic compounds (VOCs) by EPA 2860 analysis.

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3540 SE 28th Avenue . Portland, Oregon 97202

Office 503.234.2118
Toll Free 877.234.2118
Fax 503.331.7133

[illegible]environmental.com

Soil Solutions consulted with the DEQ project manager to confirm what analysis would be required. However, if the DEQ requests additional analysis, a change order will be required to address the circumstance.

The cost for this scope of work is **$895**. To proceed with the soil sample, please sign this agreement in the space provided below.

The above proposal for **12820 NE Marx Street in Portland, Oregon** has been read and understood and is hereby agreed to and accepted as evidenced by my signature below:

By_____Date_____

Name_____Title_____

Payment in full is due within thirty (30) days of invoice date. A late charge of 1.5% monthly (18% APR) will be applied to all past due accounts. Any alteration or deviation from above specifications involving extra costs will be executed only upon written order and will become an extra charge over and above the agreed upon costs as noted above. All agreements contingent upon strikes, accidents or delays are beyond our control. Proposal is valid for 90 days.

Oregon
Theodore R. Kulongoski, Governor

Department of Environmental Quality
Northwest Region - East Side Office
1550 NW Eastman Parkway, Suite 290
Gresham, OR 97030
(503) 667-8414
Fax: (503) 674-5148

February 4, 2010

MIKE MCCRACKEN
OREGON PAPER FIBER
12820 NE MARX ST
PORTLAND OR 97230

Re: Oregon Paper Fiber
UST Cleanup File No. 26-09-1265
UST Facility ID No. 12369

Dear Mr. McCracken:

I have recently been assigned as project manager for the above referenced underground storage tank (UST) cleanup site and I have completed a review of the December 29, 2009, Soil Solutions report entitled *Waste Oil Tank Decommissioning by Removal.* The site appears to comply with the Soil Matrix Level II cleanup criteria, with the exception of OAR 340-122-0340(6):

> In situations where TPH analysis indicates that contamination is present due to a release from a waste oil tank, at least one sample of the waste oil contaminated soils must be collected and analyzed for volatile chlorinated solvents, volatile aromatic solvents, and leachable metals (Cadmium, Chromium and Lead) using the analytical methods specified in OAR 340-122-0218(1)(c). Analysis for PCBs is also required if the contamination is from a waste oil tank other than one used exclusively for storage of automotive waste oils.

DEQ understands that the petroleum contaminated soil was removed from the site. However, since there is a possibility of solvent contamination, and the soil matrix rules require additional analysis for waste oil releases, DEQ requests an additional sampling to determine if waste oil contaminants may be present. Because the contaminated soil has been removed, DEQ requests that you sample soil and groundwater to ensure that there was no release of volatiles to environmental media.

The Department of Environmental Quality appreciates your efforts to comply with the regulations to ensure that your property has been adequately cleaned up. If you have any questions, please feel free to contact me at (503) 667-8414 extension 55007.

Sincerely,

Laurey Cook

Laurey Cook, UST Cleanup Specialist
UST Cleanup and Compliance Section

cc: PAT GERBIC
SOIL SOLUTIONS ENVIRONMENTAL SERVICES, INC.
3540 SE 28TH AVENUE
PORTLAND OREGON 97202

COOK Laurey

From: KORTENHOF Mike
Sent: Tuesday, February 02, 2010 8:06 AM
To: COOK Laurey
Subject: Re: Oregon Paper Fiber

Sounds good. Thx

From: COOK Laurey
To: KORTENHOF Mike
Sent: Mon Feb 01 08:21:48 2010
Subject: RE: Oregon Paper Fiber

I discussed this with Jeff Schatz, he said it did not pass the straight face test – he would require additional sampling. I was trying to get a feel for what is reasonable. I contacted the consultant and indicated that additional sampling would be required. Thanks! Laurey

---

From: KORTENHOF Mike
Sent: Sunday, January 31, 2010 9:35 PM
To: COOK Laurey
Subject: RE: Oregon Paper Fiber

I'll sending the file back to you. I haven't looks at it more than this e-mail, but suspect they need to sample per the rules. It's not just for disposal but because waste oil tanks commonly have other hazardous substances. Feel free to discuss with others and proceed as you think appropriate one way or the other, or we can discuss when we next meet. Mike

---

From: COOK Laurey
Sent: Thursday, January 28, 2010 10:14 AM
To: KORTENHOF Mike
Subject: Oregon Paper Fiber

Mike – I recommended soil matrix closure for the Oregon Paper Fiber site (Bruce likely brought you the file), but found that there is a missing analysis. The release was relatively minor, Soil Solutions removed all contamination, but did not follow the soil matrix rules since they detected heavy oil range TPH, although at less than soil matrix levels, they should have run VOCs and metals. This is most likely important for disposal purposes as the impacts were shallow and apparently did not impact groundwater. Contaminated media from USTs is exempt from hazardous waste regulations, but only to a point – which does not include chlorinated solvents or metals. Groundwater is fairly shallow, it is near the Columbia Slough.

340-122-0335

In situations where TPH analysis indicates that contamination is present due to a release from a waste oil tank, at least one sample of the waste oil contaminated soils must be collected and analyzed for volatile chlorinated solvents, volatile aromatic solvents, and leachable metals (Cadmium, Chromium and Lead) using the analytical methods specified in OAR 340-122-0218(1)(c). Analysis for PCBs is also required if

the contamination is from a waste oil tank other than one used exclusively for storage of automotive waste oils.

I am not sure how to handle this now.

COOK Laurey

From: Pat Gerbic [pat@soilsolutionsenvironmental.com]
Sent: Wednesday, January 27, 2010 10:26 AM
To: COOK Laurey
Subject: RE: Oregon paper fiber
Attachments: SKMBT_C25210012711310.pdf

Laurey –

Attached you will find our rinse water disposal receipt. It is the receipt is from the liquids generated during our tank decommission services in December, which included this tank. The tank contained approximately 2" (15 gallons) of oil. Approximately 30 gallons of liquids (oil and rinse water) was transported to Thermofluids for disposal/recycling.

Yes, the observation wells were pulled when the tank was removed.

The tank was in use.

I hope this helps. Thanks!

Pat

From: COOK Laurey [mailto:COOK.Laurey@deq.state.or.us]
Sent: Wednesday, January 27, 2010 9:52 AM
To: Pat Gerbic
Subject: RE: Oregon paper fiber

Pat,

Just a couple of questions – I did not see the receipts for the tank pump out and rinsate. I saw Environmentally Conscious Recycling and Waste Management receipts but no receipt for liquid. I need the receipt from the company that transported and disposed or recycled the liquid.

Were the observations wells decommissioned?

Was the tank in use, and did it contain waste oil? I will be checking Bob McCoy on the status of UST compliance.

Thanks Laurey

From: Pat Gerbic [mailto:pat@soilsolutionsenvironmental.com]
Sent: Wednesday, January 27, 2010 8:44 AM
To: COOK Laurey
Cc: 'Kevin Kelty'
Subject: RE: Oregon paper fiber

Hi Laurey –

Yep – they were hoping to have it closed ASAP. Thanks for checking.

Pat

From: COOK Laurey [mailto:COOK.Laurey@deq.state.or.us]
Sent: Wednesday, January 27, 2010 8:38 AM
To: pat@soilsolutionsenvironmental.com
Cc: Kevin Kelty
Subject: Oregon paper fiber

Pat

This is to let you know that I have been assigned as project manager for the UST release site 26-09-1265 Oregon Paper Fiber. Seems pretty straight forward. It sounds like the client may be in a hurry. If so let me know. It should be pretty quick site as far as I can tell from the initial scan.

Thanks, Laurey

503 667-8414 extension 55007

1670993

THERMO FLUIDS

The Responsible Solution
(800) 350-7565

INVOICE/Bill of Lading - C

PO # _____

Next Delivery _____

☐ Uniform Hazardous Waste Manifest _____

Truck Gross Wt _____
Tare Wt _____
Truck Net Wt _____
Truck # VAT20

FED ID 59-3210374 US DOT # 641752

CUST LOC #

Cust/Gen Name	Transporter Name	Receiving Facility
Soil Solutions	130	130
Address 3540 SE 28th Ave	Address	Address
City, St Zip Portland, OR 97202	City, St Zip	City, St Zip
Phone 503 234 2118	Phone	Phone
EPA # (if Required)	EPA # (if Required)	EPA # (if Required)

Billing Address (if Different) _____

Field Screen Test (Circle One): HydroChlor, Q-4000 Result: _____

Quantity P/U	Quantity DEL	U of M	RQ	Shipping Description	Inventory/ Rate	Tank Size	Total
				UN1993, Combustible Liquid, N.O.S. (Methanol), Class 3, PG III, ERG 128 (Washer Fluid)			
				UN1268, Petroleum Products, N.O.S., Class 3, PG III ERG 128 (New Solvent)			
				UN1268, Petroleum Products, N.O.S., Class 3, PG III ERG 128 (Used Solvent)			
				UN1993, Flammable Liquid, N.O.S., Class 3, PG III Circle One: Diesel, Jet Fuel, Gasoline ERG 128 (Unused Fuel)			
				UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Ethylene Glycol), Class 9, PG III ERG 171 (Used Antifreeze)			
				UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Ethylene Glycol), Class 9, PG III Circle One: Premix, Conc, Ext Life ERG 171 (New Antifreeze)			
				Non-Regulated Liquid, Used Oil			
				Non-Regulated Liquid, Used Oil Filters			
				Non-Regulated Solid, Specialty Filters			
				Non-Regulated Solid: Circle One: Dirt, Sludge, Absorbent Profile:			
2800		Gal		Non-Regulated Liquid, Circle One: Grit Trap Separator, Storm Drain, Mop Water, Other_____ Profile:			
1		Each		Service Fee			
1		Each		Other: Fuel Surcharge			
				Other:			
						Total	

GENERATOR SIGN BELOW, Subject to terms and conditions as specified on reverse side of form.

Generator Signature	Transporter Signature	Receiver Signature
Name Chris Canon	Name Tony Tentsworth	Name
Date 1/6/10	Date 1/6/2010	Date

In Case of Emergency, Call: Chemtrec 1-800-262-8200

REMIT TO: **THERMO FLUIDS INC.**
39354 TREASURY CENTER
CHICAGO, IL 60694-9300

METHOD OF PAYMENT:
CASH / CREDIT CARD / TERMS
CHECK # _____

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December 29, 2009

RECEIVED
DEC 29 2009
DEPT. OF ENVIRONMENTAL QUALITY
NORTHWEST REGION

Mr. Bob McCoy
Oregon Department of Environmental Quality
Northwest Region
2020 S.W. Fourth Avenue, Suite 400
Portland, Oregon 97201

RE: Waste Oil Tank Decommissioning by Removal, Oregon Paper Fiber Facility, 12820 N.E. Marx Street, Portland, Oregon 97230
DEQ File # 26-09-1265

INTRODUCTION

This report documents the decommissioning by removal of a 500-gallon waste oil Underground Storage Tank (UST) by Soil Solutions Environmental Services, Inc. (SS) at the above referenced commercial facility (see Figure 1). Soil samples collected during the UST decommissioning activities were transported to Wy' East Environmental Sciences, Inc. (Wy'East) under Chain-of-Custody documentation for subsequent laboratory analyses. Site map, sample location map, disposal receipts for the UST and the contents of the UST, Chain-of-Custody documents and laboratory analytical reports are included as appendices with this report. UST decommissioning activities conducted by SS are discussed below in chronological order. SS was retained by Far West Fibers, Inc. on November 25, 2009 to decommission by removal a fiberglass waste oil UST system located on the eastern side of the Oregon Paper Fiber facility building at the above referenced address.

UST DECOMMISSIONING BY REMOVAL

Prior to commencing the decommissioning activities a 30-Day Notice of Intent to Decommission USTS was submitted to the Oregon Department of Environmental Quality (DEQ) on November 24, 2009. SS personnel then removed a concrete pad that was positioned over the UST along with two observation wells on December 9, 2009 and excavated to the top of the tank where an access hole was cut into the top of the UST. Residual waste oil and sludge was then removed and the tank interior was triple rinsed. The UST and associated bedding material were then removed from the UST cavity. The bedding material was stockpiled on the site and the UST was transported to Environmentally Conscious Recycling located in Portland, Oregon for disposal. Groundwater was not encountered during the excavation activities. The disposal receipts for the UST and UST rinsate are located in the appendix.

Following removal of the UST and bedding material two soil samples were collected for analysis from native soil on opposite bottom ends of the former UST cavity. The soil samples were placed in sample jars within a cooler and transported following chain-of-custody documentation to Wy'East for analyses following Oregon DEQ Method Northwest-Total Petroleum

Hydrocarbon Identification (NW-TPHHCID). These two soil samples laboratory analytical results are summarized in the following table.

Former UST Cavity Soil Sample Analytical Results 12/9/09				
Sample	**Depth** (inches bgs)	**NW-TPHHCID**		
		Gasoline (ppm)	**Diesel** (ppm)	**Heavy Oil** (ppm)
EPB @ 122" bgs	122	ND	ND	ND
WPB @ 122" bgs	122	ND	ND	ND

NW-TPHHCID = Northwest-Total Petroleum Hydrocarbon Identification
inches bgs = inches below ground surface
ppm = parts per million
ND = Not Detected at method detection limit

After receiving verbal approval from the Oregon DEQ the former UST cavity was backfilled with the stockpiled bedding material and clean soil to ground surface on December 11, 2009 and site restoration activities were then completed.

UST PIPING LINES TRENCH SOIL INVESTIGATION

SS conducted a soil investigation beneath three piping lines positioned within a 15-feet long trench between the former UST and the adjacent warehouse/office building to determine if the piping lines had released waste oil. The activities completed during this investigation are discussed below.

Utilizing hand auger equipment SS personnel collected one soil sample for analysis on December 11, 2009 from one hand auger boring positioned and drilled to approximately 3.5-feet below ground surface (bgs) at the approximate mid point of the piping trench run. This soil sample was placed in a glass jar within a cooler and transported under chain-of-custody documentation to Wy'East and analyzed following Oregon DEQ Methods NW-TPHHCID and Northwest Total Petroleum Hydrocarbon-Diesel Extended (NWTPH-Dx). This soil sample analytical result is summarized below.

Piping Lines Soil Investigation Soil Sample Analytical Results 12/11/09				
Sample	**Depth** (feet bgs)	**NW-TPHHCID**		
		Gasoline (ppm)	**Diesel** (ppm)	**Heavy Oil** (ppm)
Product Line Trench @ 3.5' bgs	3.5	ND	ND	D

NW-TPHHCID = Northwest-Total Petroleum Hydrocarbon Identification
feet bgs = feet below ground surface
D = Detected ND = Not Detected at method reporting limit

Piping Lines Soil Investigation Soil Sample Analytical Results 12/11/09			
Sample	Depth (feet bgs)	NWTPH-Dx	
		Diesel (ppm)	Heavy Oil (ppm)
Product Line Trench @ 3.5' bgs	3.5	ND	454

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon-Diesel Extended
ppm = parts per million
feet bgs = feet below ground surface
ND = Not Detected at method reporting limit

Following receipt of the soil sample analytical results SS reported a release of heavy oil from the UST piping lines to the Oregon DEQ.

SOIL MATRIX CLEANUP LEVEL

As required under Oregon Administrative Rule 340-122-325 (OAR 340-122-325), SS completed a Soil Matrix Cleanup evaluation for the site. Based on site specific parameters a Soil Matrix Score of 34 was calculated by SS designating an Oregon DEQ Soil Matrix Level 2 cleanup standard of 500 parts per million (ppm) heavy oil concentrations in soil for the site. The Soil Matrix Score Sheet is located in the Appendix.

PIPING LINES TRENCH EXCAVATION

On December 17, 2009 SS excavated and removed the three piping lines. Approximately 4.64-tons of gravel fill and waste oil impacted soil was then excavated from the piping line trench and transported to the Waste Management landfill in Hillsboro, Oregon for disposal. The disposal receipt for the gravel fill and impacted soil is located in the appendix. Two confirmation soil samples were then collected from the bottom of the overexcavated former piping line trench in the two locations illustrated on Figure 3. The two samples were placed in glass jars within a cooler and transported under chain-of-custody documentation to Wy'East and analyzed following Oregon DEQ Method NWTPH-Dx. The two confirmation soil sample analytical results are summarized below.

Piping Lines Trench Confirmation Soil Samples Analytical Results 12/17/09			
Sample	Depth (feet bgs)	NWTPH-Dx	
		Diesel (ppm)	Heavy Oil (ppm)
NPB @ 4.5' bgs	4.5	ND	ND
SPB @ 4.5' bgs	4.5	ND	ND

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon-Diesel Extended
ppm = parts per million
feet bgs = feet below ground surface
ND = Not Detected at method reporting limit

The overexcavated former piping line trench was backfilled on December 18, 2009 and site restoration activities were then completed.

SUMMARY AND CONCLUSIONS

SS decommissioned by removal a 500-gallon waste oil UST system located on the eastern side of a combination warehouse and office building on the above referenced property. Groundwater was not encountered during the decommissioning activities. Two analyzed soil samples collected from native soil on the bottom of the former UST cavity did not contain detectable petroleum hydrocarbon concentrations indicating the UST had not released waste oil. One analyzed soil sample collected from native soil on the bottom of a 15-feet long piping line trench between the UST and building contained a measureable waste oil concentration of 454 ppm indicating waste oil had been released from the UST system piping lines.

Approximately 4.64-tons of waste oil impacted soil was excavated from the former piping line trench and disposed of along with the UST and piping lines at licensed disposal facilities. Two analyzed confirmation soil samples collected from the bottom of the overexcavated former piping line trench upon completion of the excavation activities did not contain detectable waste oil concentrations. Therefore the site appears to be in compliance with the Oregon DEQ Soil Matrix Level II cleanup standard established for the site.

The former UST cavity and piping line trench were backfilled to ground surface with clean backfill material and site restoration activities were completed.

Please contact Kevin Kelty if you have any questions related to the activities conducted on this site.

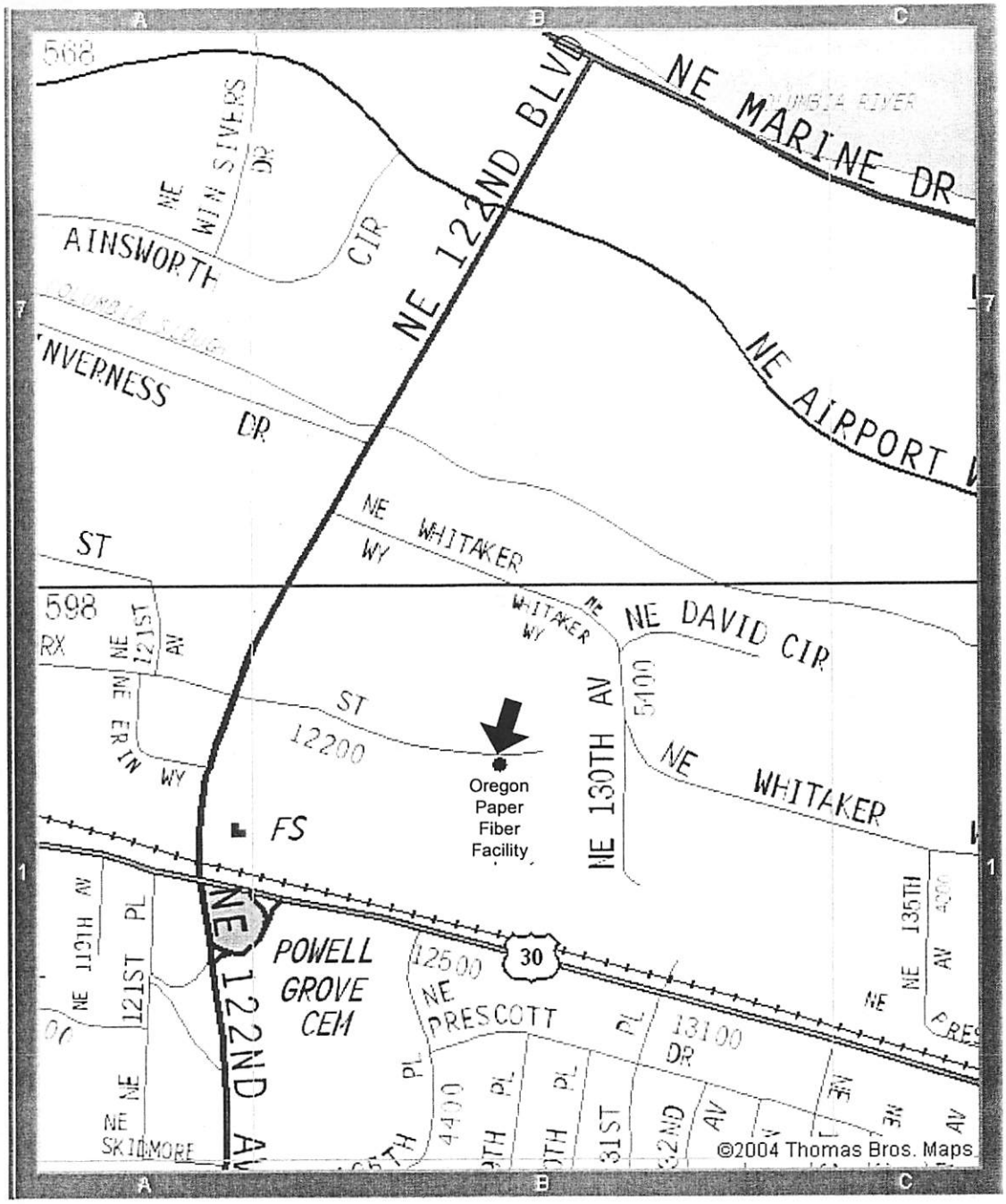
Sincerely,

SOIL SOLUTIONS ENVIRONMENTAL SERVICES, INC.

Kevin B. Kelty

Kevin B. Kelty, R.G.
Soil Matrix Cleanup License # 14258

cc: T.J. Millbrooke, Far West Fibers, Inc.
File



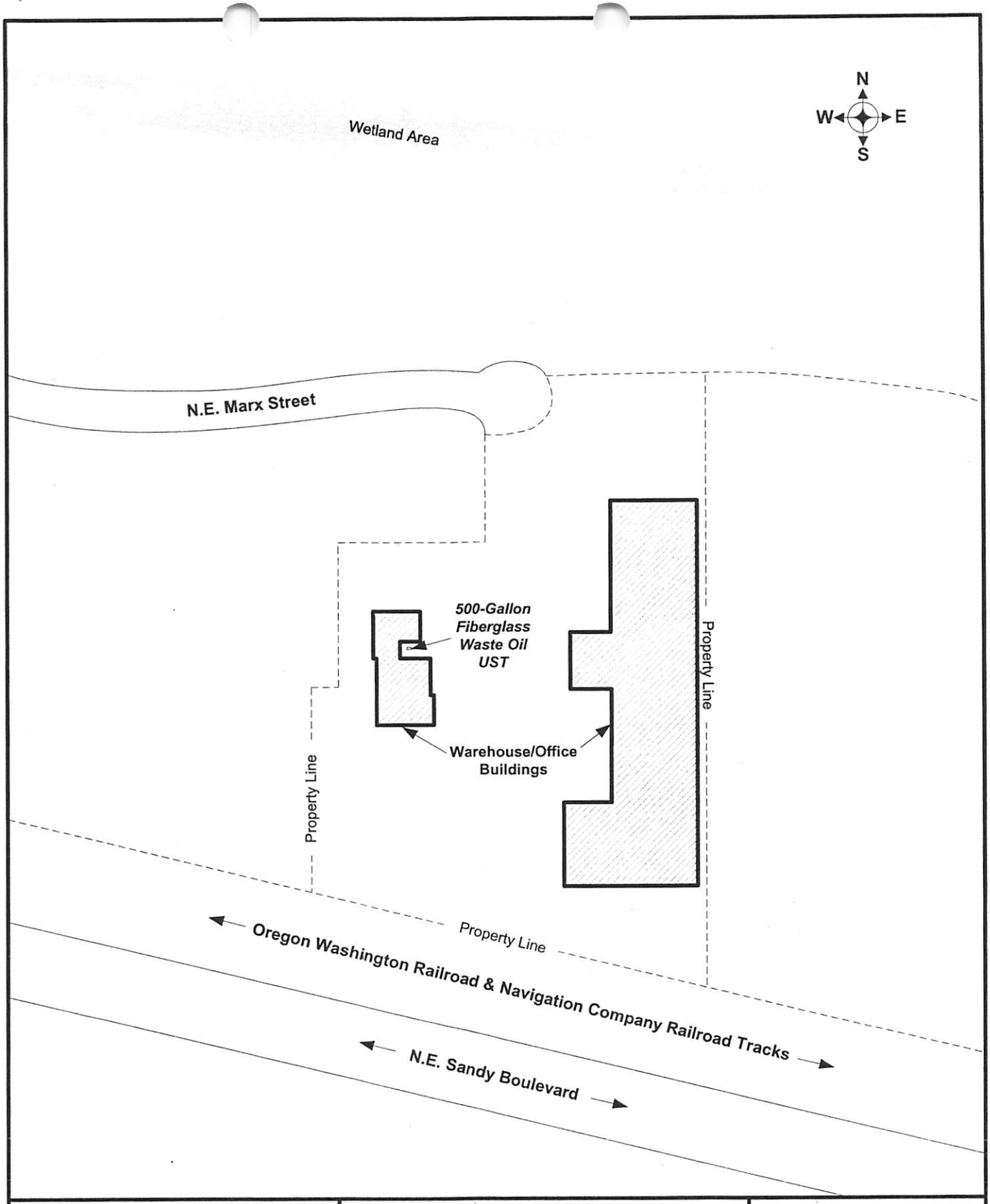
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FIGURE 1
Site Location Map
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File # 26-09-1265

Scale: 1-inch = 850-feet

PROJECT: Far West Fibers Inc.

DATE: 12/21/09



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FIGURE 2
Site Map
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File # 26-09-1265

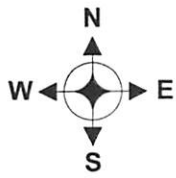
PROJECT: Far West Fibers, Inc.

DATE: 12/21/09

SCALE 1" = 150'

LEGEND

NW-TPHHCID = Northwest-Total Petroleum Hydrocarbon Identification
NWTPH-Dx = Northwest Total Petrolum Hydrocarbon-Diesel Extended
bgs = below ground surface
ND = Not Detected at method detection limit



Warehouse/Office Building

WPB @ 122" bgs
12/9/09
NW-TPHHCID = ND

EPB @ 122" bgs
12/9/09
NW-TPHHCID = ND

Asphalt Parking Lot

Former UST Cavity

NPB @ 4.5' bgs
12/17/09
NWTPH-Dx
Diesel = ND
Heavy Oil = ND

Former Product Piping Line Trench

SPB @ 4.5' bgs
12/17/09
NWTPH-Dx
Diesel = ND
Heavy Oil = ND

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FIGURE 3

Confirmation Soil Samples Location Map
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File #26-09-1265

PROJECT: Far West Fibers, Inc.

DATE: 10/26/07

SCALE: 1" = 10'

Oregon Paper Fiber
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File # 26-09-1265

Matrix Checklist

☑ **1.** The release of petroleum has been reported to the DEQ (220).

☑ **2.** The Matrix Score Sheet has been completed for this site, unless the site is cleaned up to the most stringent cleanup level (320).

☑ **3.** The required hydrocarbon identification test (TPH-HCID) has been performed (335(3)), and, if detectable levels were found, the appropriate analytical method or methods have been used to measure the levels of contamination (350).

☑ **4.** A sketch has been made of this site (345(1)) which clearly shows:

- ☑ **a.** The location of all buildings and other key features, both man-made and natural;
- ☑ **b.** The names of adjacent streets and properties;
- ☑ **c.** The location of all excavations including those that were for the removal of tanks and associated piping as well as those that were strictly for the removal of contaminated soils.
- ☑ **d.** The location of all product storage tanks, lines and dispensers, including those that were decommissioned as well as those that remain on site; and
- ☑ **e.** All soil and water sample locations.

☑ **5.** If any contaminated soil exceeding matrix limits has been left on site, the reason for leaving this soil has been explained and the requirements of 355 (4) have been met.

☐ **6.** If water was present in the tank pit, the Department was notified, the water was pumped from the pit, and the requirements of 340 (4) have been met.

☑ **7.** All soil and/or water samples have been collected, coded, stored and shipped as specified in the rules, and proper chain-of-custody forms have been filled out (345).

☐ **8.** If a release from a waste oil tank was discovered, at least one sample has been analyzed by the methods specified in 350(5).

☑ **9.** If a tank was decommissioned in place, the department gave prior approval for a site-specific sampling plan (340(5)).

☑ **10.** A report has been prepared which includes a detailed description of everything that was observed and performed at the site, contains all of the information required by the rules (360), and presents findings and recommendations which are consistent with departmental regulations.

Oregon Paper Fiber
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ # 26-09-1265

MATRIX SCORE SHEET

1.	Depth to Groundwater		10
	< 25 feet	(10)	
	25 – 50 feet	(7)	
	51 – 100 feet	(4)	
	> 100 feet	(1)	
2.	Mean Annual Precipitation		10
	>45 inches	(10)	
	20 – 45 inches	(5)	
	<20 inches	(1)	
3.	Native Soil Type		5
	Coarse sands, gravels	(10)	
	Silts, fine sands	(5)	
	Clays	(1)	
4.	Sensitivity of Uppermost Aquifer		4
	Sole Source	(10)	
	Current Potable	(7)	
	Future Potable	(4)	
	Non-potable	(1)	
5.	Potential Receptors		5
	Many, Near	(10)	
	Medium	(5)	
	Few, Far	(1)	
	TOTAL SCORE	=	34

Matrix Score		Cleanup Level in ppm TPH	
		Gasoline	Diesel
Level 1:	> 40 pts.	40	100
Level 2:	**25 – 40 pts.**	80	**500**
Level 3:	< 25 pts.	130	1000

Environmentally Conscious Recycling
Thank You for Recycling
(503)253-0867

Ticket: 239276
Date: 12/11/2009
Time: 14:24:07 - 14:33:34

			Scale
Gross:	15660 lb	In	Scale 1
Tare:	14860 lb	Out	Scale 2
Net:	800 lb		

Truck: 3408
Customer: 3408/SOIL SOLUTIONS

Comment:

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
1/PORTLAND	100% of 01/DRY COMMINGLED	0.40	ton	$74.50/Ton	$29.80
1/PORTLAND	EN/ENVIRONMENTAL FEE	1.00	each	$9.50/Each	$9.50
				Transaction Fee:	$7.50
				Total Amount:	$46.80

Driver: Todd Irwin

Deputy Weighmaster: STEPHANIE

From:

WASTE MANAGEMENT

Coffin Butte Landfill, Inc.
3205 SE Minster Avenue
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 1230357

Customer Name SOILSOLUTION SOIL SOLUTIONS E
Ticket Date 12/18/2009
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO MCCRACKEN
Profile 1051360R (PCS-HEATING OIL)
Generator OR-MIKE MCCRACKEN MIKE MCCRACKEN

Carrier SELFHLD SELF HAULED
Vehicle# 28 Volume
Container
Driver nathan
Check#
Billing # 00002022
Gen EPA ID N/A

Grid

	Time	Scale	Operator	Inbound		
In	12/18/2009 11:33:23	Inbound 1	jdb		Gross	40240 lbs
Out	12/18/2009 11:49:09	Outbound	jdb		Tare	30960 lb
			* Manual Weight		Net	9280 lb
					Tons	4.64

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.64	Tons				MULT-IN
2	EVL-Env Fee Lg. -	100	1	Load				MULT-IN
3	AF1-Approval Fee S	100	1	Each				MULT-IN

Total Tax
Total Ticket

Driver's Signature

03WM

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Far West Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBER:

REPORT NUMBER: 76221
REPORT DATE: 12/18/09

NW-TPHDx
Analytes: Total Diesel and Heavy Oil range petroleum in Soil

Field ID	LAB ID	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
NPB @ 4.5' bgs	B0752	**ND**	**ND**	109%	78FL912-17-1	D091217-2	12/17/2009
SPB @ 4.5' bgs	B0753	**ND**	**ND**	115%	78FL912-17-1	D091217-2	12/17/2009
Reporting Limit:	--	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
This report shall not be reproduced, except in full, without the written approval of WyEast Environmental Sciences, Inc.

Chemist Initials: Robin A. Funk

Hy East
Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214
Phone(503) 231-9320 FAX(503) 231-9344

CHAIN OF CUSTODY

Report Number 76221

Company: Soil Solutions	Phone: 234-2118		
Project #: 12820 NE Mark St.	FAX:		
Project Name: Far West Fibers	Purchase Order #:		
Site: Portland, OR	Report Attention: Pat	Collected By: T. Ind	
Samples: Temperature____ On Ice? (Yes) / No	Turnaround Time: [X] Regular [ ] 3-5 Business Days		

LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B	Comments / Analysis Requested
B752	NPB @ 4.5' BGS	12/17/09	350	Soil	GLASS	4oz	Y						
B753	SPB @ 4.5' BGS	12/17/09	345	Soil	GLASS	4oz	Y						

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
[signature]	S/S	12/17/09		[signature]	12-17-09	[signature]	
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Far West Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBE

REPORT NUMBER: 76159
REPORT DATE: 12/13/09

NW-TPHHCID
Analytes: Gasoline, Diesel and Heavy Oil range petroleum Identification

Field ID	LAB ID	Gasline (mg/Kg)	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
Product Line Trench @ 3.5' bgs	B0152	**ND**	**ND**	**Detected**	141%	78FL91211-1	D091211-1	12/11/2009
Reporting Limit:	--	**20**	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
This report shall not be reproduced, except in full, without the written approval of WyEast Environmental Sciences, Inc.

Chemist Initials: C.Y Chan

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Far West Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBER:

REPORT NUMBER: 76159
REPORT DATE: 12/14/09

NW-TPHDx
Analytes: Total Diesel and Heavy Oil range petroleum in Soil

Field ID	LAB ID	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
Product Line Trench @ 3.5' bgs	B0152	**ND**	**454**	141%	78FL91211-1	D091211-2	12/11/2009
Reporting Limit:	--	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
This report shall not be reproduced, except in full, without the written approval of WyEast Environmental Sciences, Inc.

Chemist Initials: C.Y Chan

WyEast

Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214

CHAIN OF CUSTODY

76159

Report Number_____

Phone(503) 231-9320 FAX(503) 231-9344

Company: Soil Solutions	Phone: 234-2118												
Project #: 12820 NE Mark St.	FAX:												
Project Name: Fox West Fibers	Purchase Order #:												
Site: Portland, OR	Report Attention: Pat	Collected By: T. Trumbo											
Samples: Temperature_____ On Ice? (Yes) No	Turnaround Time: [X] Regular [ ] 3-5 Business Days												
LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B	Comments / Analysis Requested
B152	Product Line Trench @ 35ft	12/11/09	330	Soil	Glass	4oz			Y				

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
[signature]	SS	12/11/09		[signature]	12-11-09	[signature]	
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Farwest Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBE

REPORT NUMBER: 76133
REPORT DATE: 12/10/09

NW-TPHHCID
Analytes: Gasoline, Diesel and Heavy Oil range petroleum Identification

Field ID	LAB ID	Gasline (mg/Kg)	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
EPB @ 122" bgs	B0056	**ND**	**ND**	**ND**	102%	78FL91209-1	D091209-2	12/9/2009
WPB @ 122" bgs	B0057	**ND**	**ND**	**ND**	109%	78FL91209-1	D091209-2	12/9/2009
Reporting Limit:	—	**20**	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples

This report shall not be reproduced, except in full, without the written approval of WyEast Environmental Sciences, Inc.

Chemist Initials: C.Y Chan

Quality Control for NWTPH-HCID

Batch Date: 12/9/09

QC Blank Sample Number	PB	Gas Result (mg/Kg)	Diesel Result (mg/Kg)	Oil Result (mg/Kg)	Blank CONTROL	Surrogate Recovery	Surrogate Control
SBLANK1	D091209-	0	0	0	PASS	99%	PASS

CCV Gas Sample Number	Analytical Batch	Gas Result	Gasoline CCV CONTROL
GAS	78FL91209-1	Detected	PASS

CCV Diesel Sample Number	Analytical Batch	Diesel Result	Diesel CCV CONTROL
DXCCV1	78FL91209-1	Detected	PASS

CCV Oil Sample Number	Analytical Batch	Oil Result	% Difference	CCV Control Limit (%)	Oil CCV CONTROL
OILCCV1	78FL91209-1	Detected			PASS

QC LCS Sample Number	PB	Diesel Result in Extract (ug/mL)	Theoretical Spike Concentration (ug/mL)	LCS Spike Recovery (%)	LCS Spike Control Limits (ug/mL)	LCS Spike CONTROL	Surrogate Recovery	LCS Surrogate Control Limits (%)
SLCSD1	D091209-1	343.58	357.14	96%	±30%	PASS	98%	50%-150%

CHAIN OF CUSTODY

Report Number 76133

Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214
Phone(503) 231-9320 FAX(503) 231-9344

Company: Soil Solutions	Phone: 234-2118		
Project #: 1820 NE Mark St.	FAX:		
Project Name: Farwest Fibers	Purchase Order #:		
Site: Portland, OR	Report Attention: Pat	Collected By: T. Trimm	
Samples: Temperature____ On Ice? (Yes) / No	Turnaround Time: ☒ Regular ☐ 3-5 Business Days		

LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B	Comments / Analysis Requested
B56	EPB @ 12' BJ	12/9/09	355	Soil	GLASS	4oz			✓				
B57	WPB @ 12' BJ	12/9/09	350	Soil	GLASS	4oz			✓				

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
[signature]	SS	12/9/09		[signature]	12-9-09		
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time

SITE PHOTOS

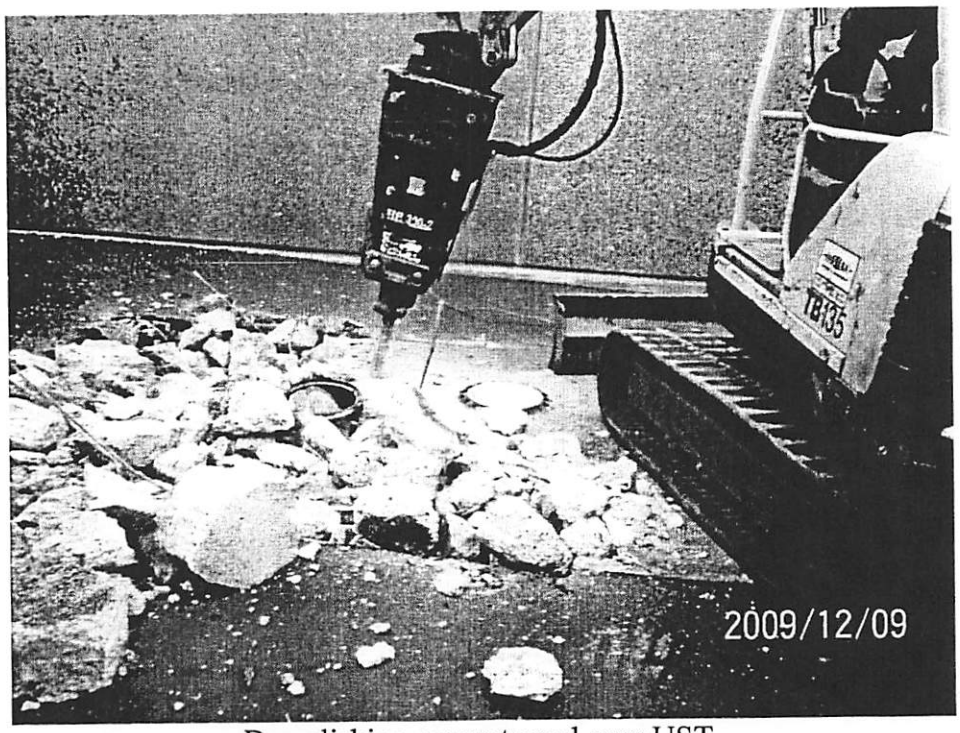


View of building.

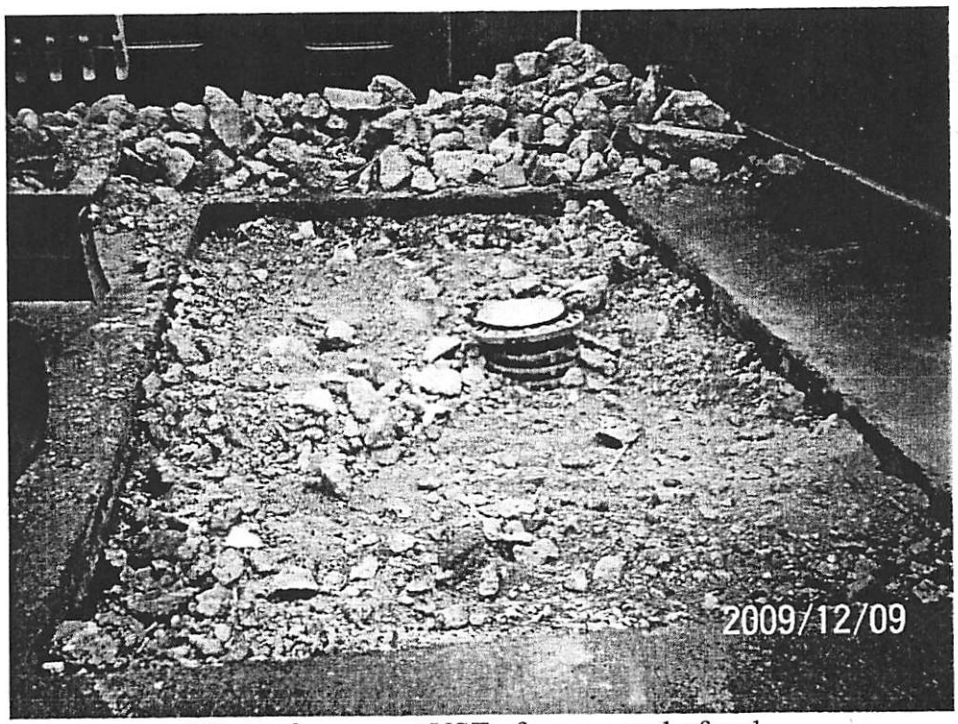


View of waste oil UST location on eastern side of building.

SITE PHOTOS



Demolishing concrete pad over UST.

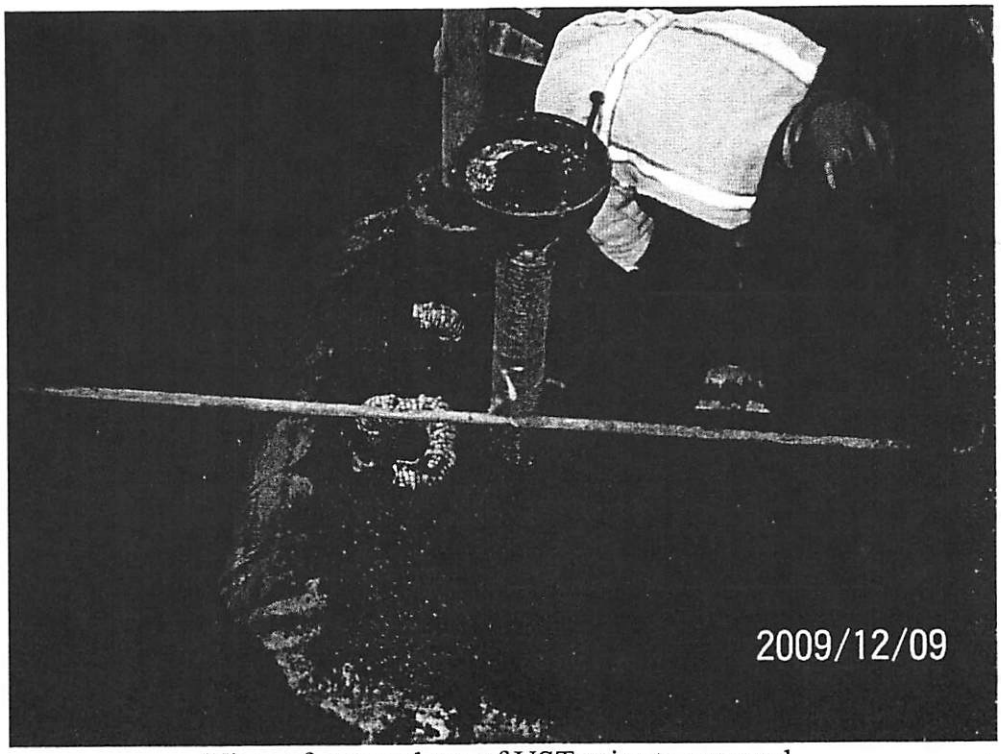


View of area over UST after removal of pad.

SITE PHOTOS

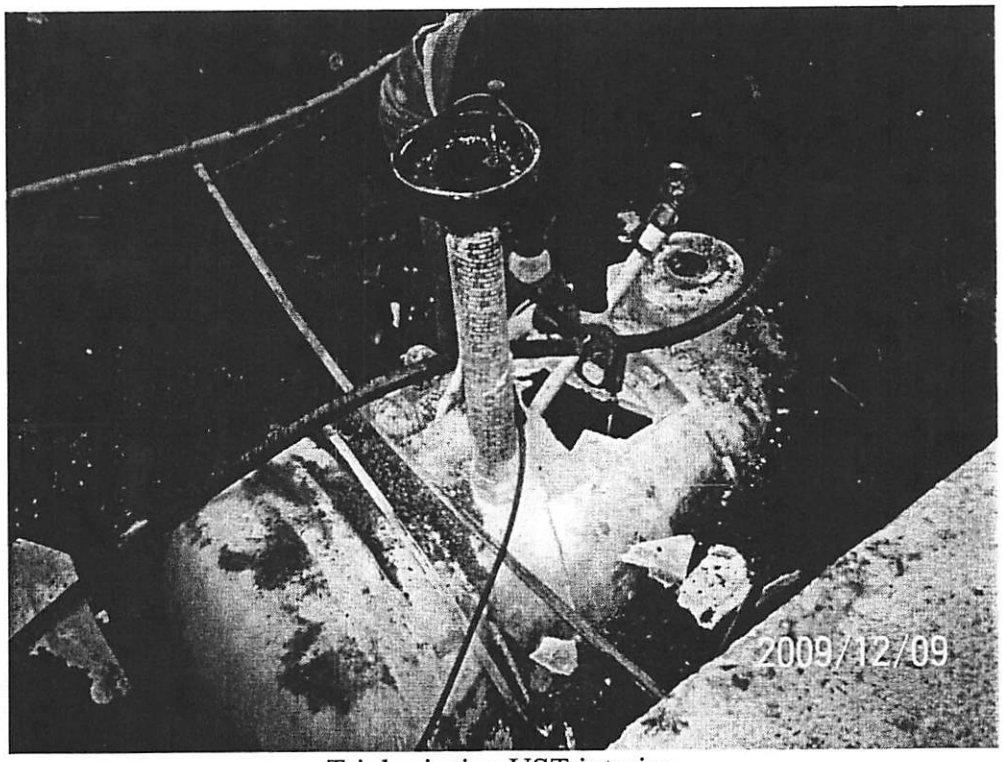


Excavating to top of UST.

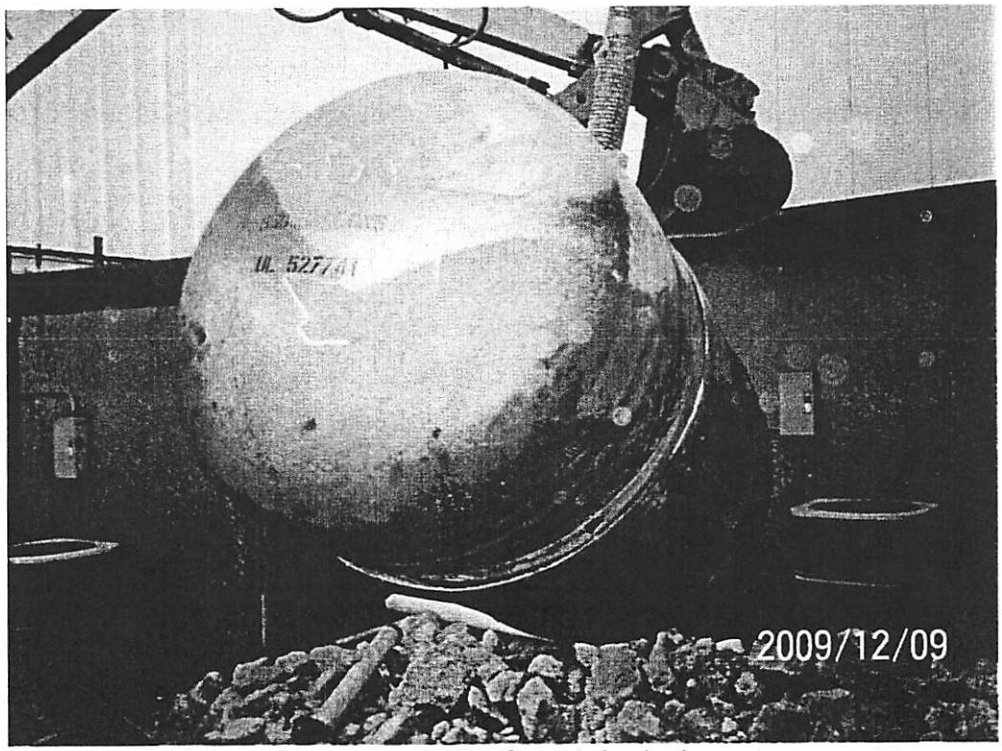


View of exposed top of UST prior to removal.

SITE PHOTOS

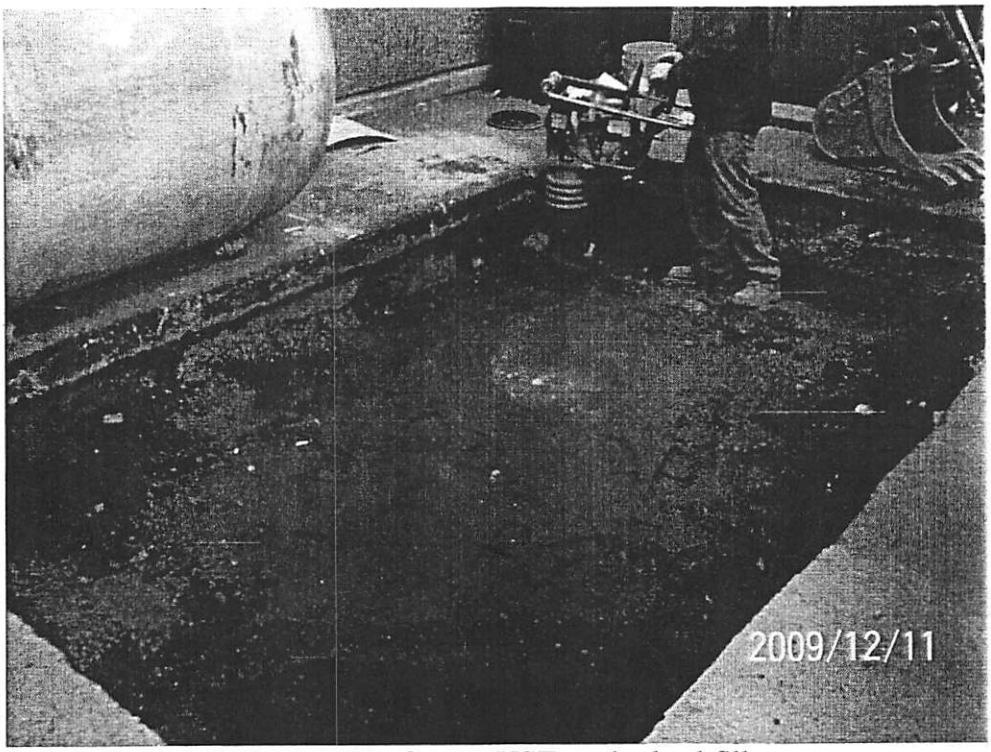


Triple rinsing UST interior.

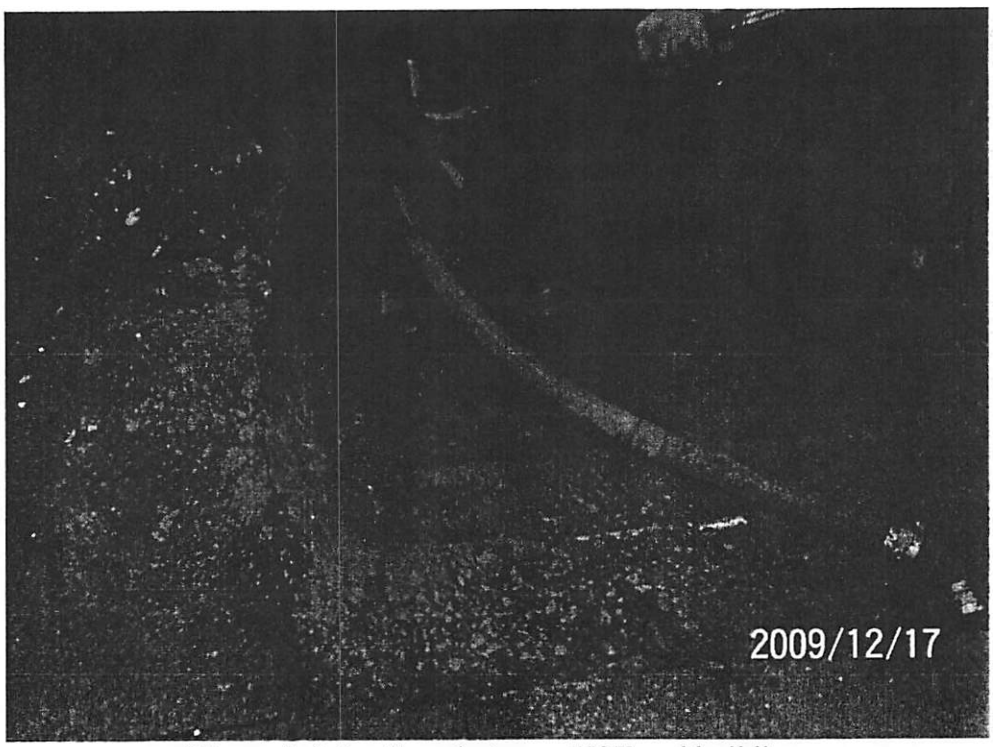


Removing UST after triple rinsing.

SITE PHOTOS



Compacting former UST cavity backfill.



View of piping lines between UST and building.

DANA Kevin

From: DANA Kevin
Sent: Monday, December 21, 2009 8:26 AM
To: 'PAT@SOILSOLUTIONSENVIRONMENTAL.COM'
Cc: DANA Kevin; KORTENHOF Mike
Subject: FW: NE Marx Post Dig sampling

Pat,

I assume this is the Oregon Paper Fiber site (12820 NE Marx Street in Portland) that you're referring to.

Our section manager is ready to assign sites right now, but all of our Project Managers are pretty booked up, so we haven't had any volunteers. Still, I would definitely expect that some sites will be assigned by early January, and since your client submitted his Cost Recovery Agreement in record time, I'm sure this site will be right at the top of the assignment list.

Thanks! Kevin

From: MCCOY Bob
Sent: Friday, December 18, 2009 12:45 PM
To: DANA Kevin
Subject: FW: NE Marx Post Dig sampling

From: Pat Gerbic [mailto:pat@soilsolutionsenvironmental.com]
Sent: Friday, December 18, 2009 11:26 AM
To: MCCOY Bob
Subject: NE Marx Post Dig sampling

Hi Bob.

As I mentioned earlier, we removed the three product lines and excavated approximately 5 tons of soil. Being the TPH-Dx levels were low to begin with, there were no visual/olfactory indications of contamination. We collected two post excavation soil samples at a depth of approximately 6 feet below the ground surface. Lab results show there were no TPH-Dx concentration detected in either sample. All of this will be documented in our closure report, but I wanted to drop you a line to let you know.

Please let me know if you have any questions.

Pat

From: MCCOY Bob [mailto:MCCOY.Bob@deq.state.or.us]
Sent: Friday, December 18, 2009 8:58 AM
To: Pat Gerbic
Cc: DANA Kevin
Subject: RE: Page 6 of 7

That would be up to Kevin, and he is not here today.

From: Pat Gerbic [mailto:pat@soilsolutionsenvironmental.com]
Sent: Friday, December 18, 2009 8:55 AM

To: MCCOY Bob
Subject: Page 6 of 7

Bob,

Here you go...

We dug out the product lines today and removed the PCS. I will keep you posted of the post excavation lab results.

I understand the client signed the cost recovery agreement and sent it to Kevin Dana. How soon can the project be assigned a DEQ PM?

Patrick Gerbic
Project Manager
Soil Solutions Environmental Services
3540 SE 28th Avenue
Portland, OR 97202

Office: 503.234.2118
Fax: 503.331.7133

DANA Kevin

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Pat

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To: Pat Gerbic
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Subject: RE: Page 6 of 7

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Patrick Gerbic
Project Manager
Soil Solutions Environmental Services
3540 SE 28th Avenue
Portland, OR 97202

Office: 503.234.2118
Fax: 503.331.7133

DANA Kevin

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Sent: Friday, December 18, 2009 8:58 AM
To: 'Pat Gerbic'
Cc: DANA Kevin
Subject: RE: Page 6 of 7

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Patrick Gerbic
Project Manager
Soil Solutions Environmental Services
3540 SE 28th Avenue
Portland, OR 97202

Office: 503.234.2118
Fax: 503.331.7133

DANA Kevin

From: MCCOY Bob
Sent: Monday, December 14, 2009 3:33 PM
To: DANA Kevin
Subject: FW: 12820 NE Marx Street
Attachments: 76159 DX.PDF

Another one for you.

From: Pat Gerbic [mailto:pat@soilsolutionsenvironmental.com]
Sent: Monday, December 14, 2009 3:30 PM
To: MCCOY Bob
Cc: 'TJ Millbrooke'
Subject: 12820 NE Marx Street

Bob,

I received the lab results from the product line sample on the Far West Fibers job. There is a heavy oil detection of 454 mg/kg. Attached you will find the analytical report. I will complete the on-line reporting so it is entered into the DEQ system. Please let me know if you have any questions.

Patrick Gerbic
Project Manager
Soil Solutions Environmental Services
3540 SE 28th Avenue
Portland, OR 97202

Office: 503.234.2118
Fax: 503.331.7133

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Far West Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBER:

REPORT NUMBER: 76159
REPORT DATE: 12/14/09

NW-TPHDx
Analytes: Total Diesel and Heavy Oil range petroleum in Soil

Field ID	LAB ID	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
Product Line Trench @ 3.5' bgs	B0152	**ND**	**454**	141%	78FL91211-1	D091211-2	12/11/2009
Reporting Limit:	--	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
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Chemist Initials: C.Y Chan

Quality Control for NWTPH-Dx

Batch Date: 12/11/2009

QC Blank Sample Number	PB	Diesel Result (mg/Kg)	Oil Result (mg/Kg)	Blank Control Limits Diesel (mg/Kg)	Blank Control Limits Oil (mg/Kg)	Surrogate Recovery	Blank Surrogate Control Limit (%)
SBLANK1	D091211-1	0	0	25	100	96%	50%-150%
SBLANK2	D091211-2	0	0	25	100	103%	50%-150%

QC LRB Sample Number	AB	Diesel Result (mg/Kg)	Oil Result (mg/Kg)	LRB Control Limit Diesel (mg/Kg)	LRB Control Limit Oil (mg/Kg)	Surrogate Recovery	LRB Surrogate Control Limit (%)

CCV Diesel Sample Number	Analytical Batch	Measured Concentration in extract (ug/mL)	Theoretical Concentration (ug/mL)	% Difference	CCV Control Limit (%)
DXCCV1	78FL91211-1	440.88	500	-11.82%	±20%
DXCCV2	78FL91211-1	444.11	500	-11.18%	±20%

CCV Oil Sample Number	Analytical Batch	Measured Concentration in Extract (ug/mL)	Theoretical Concentration in Extract (ug/mL)	% Difference	CCV Control Limit (%)
OILCCV1	78FL91211-1	366.78	400	-8.31%	±20%
OILCCV2	78FL91211-1	347.99	400	-13.00%	±20%

Diesel QC LCS Sample Number	PB	Diesel Result in Extract (ug/mL)	Theoretical Spike Concentration (ug/mL)	LCS Spike Recovery (%)	LCS Spike Control Limits (ug/mL)	Surrogate Recovery	LCS Surrogate Control Limits (%)
SLCSD1	D091211-1	379.55	357.14	106%	±30%	140%	50%-150%
SLCSD2	D091211-2	409.17	357.14	115%	±30%	121%	50%-150%

Oil QC LCS Sample Number	PB	Oil Result in Extract (ug/mL)	Theoretical Spike Concentration (ug/mL)	LCS Spike Recovery (%)	LCS Spike Control Limits (ug/mL)	Surrogate Recovery	LCS Surrogate Control Limits (%)
SLCSO1	D091211-1	348.03	357.14	97%	±30%	100%	50%-150%
SLCSO2	D091211-2	354.95	357.14	99%	±30%	103%	50%-150%

Wy'East
Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214

CHAIN OF CUSTODY

Report Number 76159

Phone(503) 231-9320 FAX(503) 231-9344

Company: Soil Solutions			Phone: 284-2118													Comments	
Project #: 2820 NE Market St.			FAX														
Project Name: Far West Fibers			Purchase Order #														
Site: Portland, OR			Report Attention: Pat		Collected By: L. Tuma												
Samples: Temperature____ On Ice? (Yes) No			Turnaround Time: ☒ Regular ☐ 3-5 Business Days													Analysis Requested	
LAB ID	Field ID		Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B				
B152	Product line Trench @ 35ft		12/11/09	330	Soil	GLAS	4oz			X							
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time										
	ES	12/11/09															
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time										
					12-11-09												

file

Oregon
Theodore R. Kulongoski, Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
Fax: (503) 229-6945
TTY: (503) 229-5471

December 14, 2009

MIKE MCCRACKEN
OREGON PAPER FIBER
12820 NE MARX ST
PORTLAND OR 97230

RE: Cleanup Needed for Petroleum Leak
Oregon Paper Fiber
12820 NE Marx Street, Portland
DEQ File No.: 26-09-1265

Dear Mr. McCracken,

The Oregon Department of Environmental Quality (DEQ) was notified on December 14, 2009 of a petroleum leak associated with an underground storage tank system at 12820 NE Marx Street in Portland, Oregon. This leak appears to have contaminated soil with petroleum products.

We understand that you have current or past ownership or operational responsibility for the property and the underground storage tank system. Oregon law considers you a responsible party for environmental cleanup, and you are required to clean up this contamination to a level that protects human health and the environment. If you believe you are not a responsible party for this petroleum leak, please contact us immediately so that we can review the ownership and facility operation records for the property.

If you choose to hire and rely upon a qualified contractor or consultant, DEQ recommends that you still become familiar with Oregon's environmental cleanup requirements. A copy of the Underground Storage Tank Cleanup Manual and other guidance documents can be obtained by calling our toll-free number at 1-800-742-7878 or by visiting the following web sites:

http://www.deq.state.or.us/lq/pubs/docs/tanks/USTCleanupManual.pdf
http://www.deq.state.or.us/pubs/reports.htm#cuguidance

We are committed to helping you achieve a cost-effective environmental cleanup of this underground storage tank system. When the cleanup of this petroleum leak meets Oregon standards, DEQ will be able to close the file by issuing a "No Further Action" letter to you.

You will need DEQ oversight for your work to help you make sure that your environmental cleanup meets minimum regulatory and technical standards. Oregon law requires DEQ to invoice responsible parties for staff time spent on oversight of cleanup projects. DEQ tracks and bills for this time monthly, beginning with the reporting of the release and continuing through project oversight and final site closure. Staff time may include reviewing reports, preparing

correspondence, answering technical questions, meeting with you or your contractor, site inspections, and enforcement actions.

Please complete, sign, and submit the enclosed Cost Recovery Agreement if you would like to expedite assignment of a DEQ project manager to your site. Even if you do not sign the agreement, you are still responsible for investigation and/or cleanup of the contamination, as well as for DEQ oversight costs. Note that DEQ staff workloads are heavy and there may be a delay in assigning your cleanup project to a project manager.

Please also complete and return the enclosed 20-day Report within twenty (20) days from the date of this letter. You also have additional reporting obligations, as listed in the attachment, including due dates for various documents that you will need to provide to DEQ.

We realize that environmental cleanups are expensive and that our requirements can be difficult to understand, so please do not hesitate to contact us with any questions you may have. Please reference the DEQ file number and site name listed above in all inquiries and reports.

Sincerely,



Michael H. Kortenhof, Manager
UST Cleanup and Compliance Section

Enclosures

DANA Kevin

To: PAT@SOILSOLUTIONSENVIRONMENTAL.COM
Subject: OLPRR Incident Report in Accepted Status. Log Number: 26-09-1265

Your on-line tank data submittal has been reviewed and accepted by the State of Oregon DEQ.
New LUST Incident Log Number: 26-09-1265

Reported by: PATRICK GERBIC
Company Name: SOIL SOLUTIONS
Phone Number: 503-234-2118

Site Name: OREGON PAPER FIBER
Site Address: 12820 NE MARX ST
Site County: MULTNOMAH
Site City: PORTLAND
Site Zip Code: 97230-1067
Site Phone: 503-257-1331
Comments: 454 MG/KG.

Date Received: 12/14/2009
Release Type: Regulated
Facility ID: 12369

RESPONSIBLE PARTY INFORMATION	INVOICE CONTACT INFORMATION
First Name:	First Name:
Mike	Mike
Last Name:	Last Name:
McCracken	McCracken
Organization:	Organization:
Oregon Paper Fiber	Oregon Paper Fiber
City:	City:
Portland	Portland
Phone:	Phone:
503-255-2299	503-255-2299
Address:	Address:
12820 NE Marx St	12820 NE Marx St
State:	State:
OR	OR
Zip:	Zip:
97230	97230

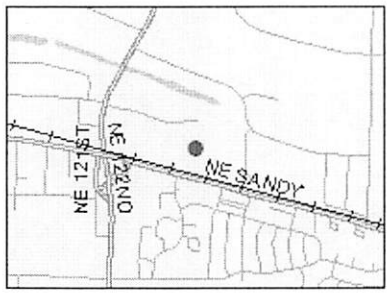
Confirmation: Lab:Other
Discovery: SiteAssessment
Cause: Unknown

MEDIA TYPE	CONTAMINANT TYPE
Soil	Waste Oil

PortlandMaps

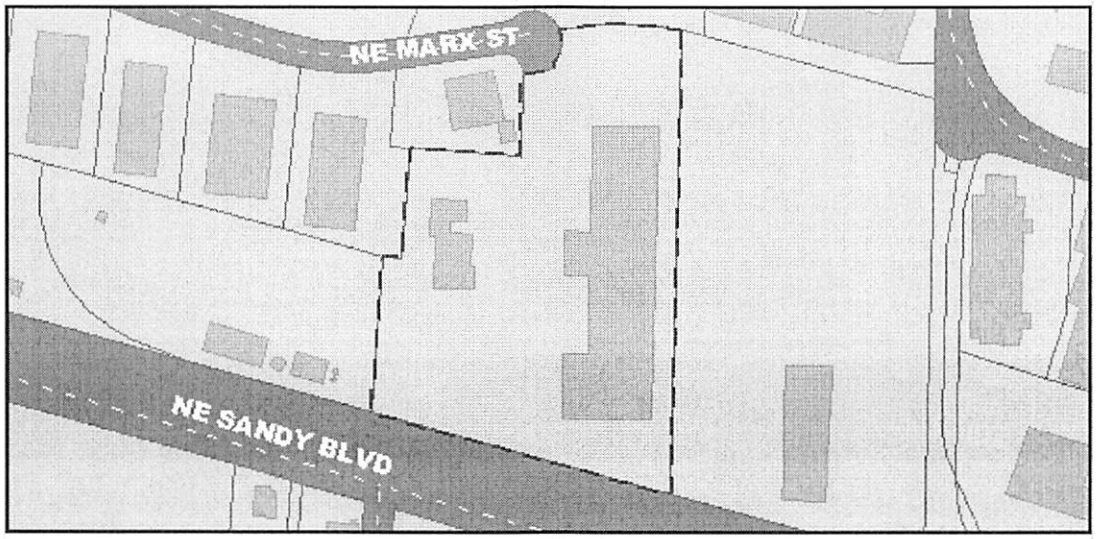
12820 NE MARX ST - ARGAY - PORTLAND

12820 NE MARX ST
PORTLAND, OR 97230



Description Office
Size 9,356 square feet
Number of Bedrooms
Bathrooms

Property Map



Property Value (2009)
Market Value $3,479,480.00
Assessed Value $2,082,110.00

Taxes (2009)
Property Taxes $44,385.79
Total Taxes $48,456.91

Misc Info
Year Built 1990
Foundation Type
Interior Finish
Roof Style
Roof Cover Type
Flooring Type
Heating/AC Type

City of Portland, Corporate GIS

Assessor Data Updated 12/7/2009

THE GIS APPLICATIONS ACCESSED THROUGH THIS WEB SITE PROVIDE A VISUAL DISPLAY OF DATA FOR YOUR CONVENIENCE. EVERY REASONABLE EFFORT HAS BEEN MADE TO ASSURE THE ACCURACY OF THE MAPS AND ASSOCIATED DATA. THE CITY OF PORTLAND MAKES NO WARRANTY, REPRESENTATION OR GUARANTEE AS TO THE CONTENT, SEQUENCE, ACCURACY, TIMELINESS OR COMPLETENESS OF ANY OF THE DATA PROVIDED HEREIN. THE USER OF THESE APPLICATIONS SHOULD NOT RELY ON THE DATA PROVIDED HEREIN FOR ANY REASON. THE CITY OF PORTLAND EXPLICITLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE CITY OF PORTLAND SHALL ASSUME NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INACCURACIES IN THE INFORMATION PROVIDED REGARDLESS OF HOW CAUSED. THE CITY OF PORTLAND SHALL ASSUME NO LIABILITY FOR ANY DECISIONS MADE OR ACTIONS TAKEN OR NOT TAKEN BY THE USER OF THE APPLICATIONS IN RELIANCE UPON ANY INFORMATION OR DATA FURNISHED HEREUNDER. FOR UPDATED INFORMATION ABOUT THE MAP DATA ON PORTLANDMAPS PLEASE REFER TO CITY'S METADATA. FOR QUESTIONS ABOUT ASSESSMENT INFORMATION PLEASE CONTACT THE COUNTY ASSESSORS OFFICE IN YOUR COUNTY.

PortlandMaps © 2009 City of Portland, Oregon

PortlandMaps

Aerial Photo

2008 / '07 / '06 / '05 / '04 / '03 / '02 / '01 6" / 2' / **4'** / 10' / 20' Streets: **Off** Lots: **Off** Dot: **On**



City of Portland, Corporate GIS 12/14/2009

THE GIS APPLICATIONS ACCESSED THROUGH THIS WEB SITE PROVIDE A VISUAL DISPLAY OF DATA FOR YOUR CONVENIENCE. EVERY REASONABLE EFFORT HAS BEEN MADE TO ASSURE THE ACCURACY OF THE MAPS AND ASSOCIATED DATA. THE CITY OF PORTLAND MAKES NO WARRANTY, REPRESENTATION OR GUARANTEE AS TO THE CONTENT, SEQUENCE, ACCURACY, TIMELINESS OR COMPLETENESS OF ANY OF THE DATA PROVIDED HEREIN. THE USER OF THESE APPLICATIONS SHOULD NOT RELY ON THE DATA PROVIDED HEREIN FOR ANY REASON. THE CITY OF PORTLAND EXPLICITLY DISCLAIMS ANY REPRESENTATIONS AND WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE CITY OF PORTLAND SHALL ASSUME NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INACCURACIES IN THE INFORMATION PROVIDED REGARDLESS OF HOW CAUSED. THE CITY OF PORTLAND SHALL ASSUME NO LIABILITY FOR ANY DECISIONS MADE OR ACTIONS TAKEN OR NOT TAKEN BY THE USER OF THE APPLICATIONS IN RELIANCE UPON ANY INFORMATION OR DATA FURNISHED HEREUNDER. FOR UPDATED INFORMATION ABOUT THE MAP DATA ON PORTLANDMAPS PLEASE REFER TO CITY'S METADATA. FOR QUESTIONS ABOUT ASSESSMENT INFORMATION PLEASE CONTACT THE COUNTY ASSESSORS OFFICE IN YOUR COUNTY.

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DANA Kevin

From: Oregon DEQ - Do not reply [OregonDEQ@deq.state.or.us]
Sent: Monday, December 14, 2009 3:33 PM
To: DEQTanksReviewNWR
Subject: OLPRR LUST Tank Start Notification for DEQ Staff

New LUST Incident information submitted to State of Oregon DEQ for review.

Contractor : SOIL SOLUTIONS
Reported by: PATRICK GERBIC
Phone Number: 503-234-2118

Site Name: OREGON PAPER FIBER
Site Address: 12820 NE MARX ST
Site City: PORTLAND
Site Zip Code: 97230-1067

Site County: Multnomah
Received by State of Oregon DEQ : 12/14/2009 3:33:15 PM.

DANA Kevin

From: Oregon DEQ - Do not reply [OregonDEQ@deq.state.or.us]
Sent: Wednesday, December 02, 2009 11:44 AM
To: BAUMGARTNER Johnny; DANA Kevin; MCCOY Bob; TORAN Greg
Subject: 3 Day Notice for Decommissioning has been approved

A 3 Day Notice for Decommissioning has been approved for:
Facility: OREGON PAPER FIBER(12369) in MULTNOMAH County.
Approved by: Greg Toran
Supervisor: Todd Irvin
Service Provider: Soil Solutions
Work scheduled for: 12/09/2009
3 Day Confirmation #: 26-3D-09-044
Comments: One by removal, to include piping run to building and tank nest observation wells. Will call to update if date should change. Bob McCoy will be available to inspect on the 9th, 12/02/2009, get.

Review Type: NEW | DEQ Office: NWR | First | Last | 2 of 2 Records | Next | Back

OLPRR Review

Incident Comments | Contractor Maintenance

OL R# 13752 **Incident Data**

Reported By: PATRICK GERBIC
RepBy Phone: 503-234-2118
Company: SOIL SOLUTIONS

Lookup LUST | Log Number: 26-09-1265 | Site Type: Regulated

Site Name: OREGON PAPER FIBER | Received Date: 12/14/2009

Site Address: 12820 NE MARX ST

Other:

City: PORTLAND | Zip Code: 97230-1067

County: Multnomah

Facility Id: 12369 | Lookup UST

Phone: 503-257-1331

Responsible Party		Mail Contacts		Invoice Contact	
First Name	Mike	First Name	Mike	First Name	Mike
Last Name	McCracken	Last Name	McCracken	Last Name	McCracken
Organization	Oregon Paper Fiber	Organization	Oregon Paper Fiber	Organization	Oregon Paper Fiber
Address	12820 NE Marx St	Address	12820 NE Marx St	Address	12820 NE Marx St
Address2		Address2		Address2	
City	Portland	City	Portland	City	Portland
State	OR	State	OR	State	OR
Zip Code	97230	Zip Code	97230	Zip Code	97230
Phone	503-255-2299	Phone	503-255-2299	Phone	503-255-2299
E-Mail		E-Mail		E-Mail	

Site Assessment

Discover Date	Discovery	Cause	Source	Confirmation
12/14/2009	SiteAssessment	Unknown	Piping	Lab:Other

Contaminants

- [ ] Heating Oil
- [x] Waste Oil
- [ ] Other Pet. Dist.
- [ ] Leaded Gasoline
- [ ] Unleaded Gasoline
- [ ] Chemical
- [ ] Misc. Gasoline
- [ ] Lubricant
- [ ] MTBE
- [ ] Diesel (Motor Fuel)
- [ ] Solvent
- [ ] Unknown

Impacted Media

- [ ] Groundwater
- [ ] Surface Water
- [ ] Drinking Water
- [ ] Free Product
- [ ] Vapor
- [x] Soil

Accept | Hold | Decline | Close

Q-Time #41473

CRA 12/15/09 KD

~~FIR: 10/11/2013~~

FIR: 10/11/2013

closed: 10/11/2013

State of Oregon Department of Environmental Quality

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK PROGRAM

Cost Recovery Agreement

This document serves as an agreement between the undersigned (hereinafter "you") and the Department of Environmental Quality (DEQ) regarding DEQ review and oversight of the investigation and/or cleanup of petroleum (hazardous substances) at the property located at:

RECEIVED
DEC 15 2009
DEPT. OF ENVIRONMENTAL QUALITY
NORTHWEST REGION

Facility Name: Far West Fibers/Oregon Paper Fiber

Address: 12820 NE Marx St.
Portland, Or 97211

USTC No.: 12369 26-09-1265

DEQ agrees to review environmental documents submitted by you or on your behalf regarding the investigation and/or cleanup of the above-referenced site. Additional details regarding DEQ oversight will be established upon review of the initial site data.

DEQ requires that persons requesting DEQ review and oversight of investigation and cleanup activities agree to the terms of this cost recovery agreement and pay project oversight costs.

DEQ project oversight costs will include direct costs and indirect costs. Direct costs include site-specific expenses and legal costs. Indirect costs are those general management and support costs of the DEQ, including the Land Quality Division (LQ), allocable to DEQ oversight of this agreement and not charged as direct, site-specific costs. Indirect charges are based on a percentage of direct personal services costs. Review and oversight costs shall not include any unreasonable costs or costs not otherwise recoverable by DEQ under ORS 465.255.

DEQ costs are due within thirty (30) days of issuance of the monthly statement, by a check made payable to the "Department of Environmental Quality". Nine percent interest shall be charged on past due accounts.

Electing not to enter into this agreement does not release you from any responsibility that you might have for any reporting requirements, investigation and/or cleanup of petroleum (hazardous substances) at the above referenced facility. This does not preclude the DEQ from conducting audits or inspections of all or portions of the investigation and cleanup activities associated with this facility. Enforcement action may be initiated if any violation of Oregon Administrative Rules (OARs) or Oregon Revised Statutes (ORSs) is found.

Either DEQ or you may terminate this agreement by giving 15 days advance written notice to the other. Only those costs incurred or obligated by DEQ prior to the effective date of any termination of the agreement shall be recoverable under this agreement. Termination of this agreement will not affect any other right DEQ may have for recovery of costs under any applicable law.

You will hold DEQ harmless for any claims (including but not limited to claims of property damage or personal injury) arising from DEQ review and/or oversight activities under this agreement.

This agreement is not and shall not be construed to be an admission by you of any liability under ORS 465.255 or any other law or as a waiver by you of any defense to such liability. This agreement is not and shall not be construed to be a waiver, release, or settlement of claims that DEQ may have against you or any other responsible person nor is this agreement a waiver of any enforcement authority that DEQ may have.

The DEQ Tanks Program will be responsible for the review and oversight of the investigation and cleanup activities associated with the property. Please refer all site-specific inquiries to the UST Regional Offices in Northwest Region – Portland, Western Region – Salem and Eugene and Eastern Region – The Dalles. For locations and phone numbers of the regional offices, please see the UST Regional Office list at http://www.deq.state.or.us/about/locations.htm

All inquiries regarding cost recovery and/or invoices should be directed to Dawn Ismerio at 503-229-5812.

If the terms of this agreement are acceptable, please have it executed by an authorized officer in the space provided below. In order to more effectively schedule your project, please return this agreement within 30 days of receipt to the regional office responsible for your site.

Accepted and agreed to this 15th day of December, 2009

By: TJ Millbrooke

Title: Operations Manager

Please provide the following information as to where the invoices should be sent.

Individual Name: Mike McCracken

Title: CFO

Company Name: Far West Fibers

Mail Address: 12820 NE Marx St.

City, State, Zip: Portland, Or 97211

Phone Number: 503.200.5008 * new phone #



EVERGREEN ENVIRONMENTAL MANAGEMENT, LLC

Post Office Box 1604 / Beaverton, Oregon 97075 -1604 / Telephone (503) 985-1717 / Fax (503) 985-1718
evergreenenvmgmt@mac.com

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED
APR 18 2013
NORTHWEST REGION

NORTHWEST REGION
APR 18 2013
DEPT OF ENVIRONMENTAL QUALITY
RECEIVED

April 17, 2013

Mr. Mike McCracken
Far West Fibers
12820 NE Marx Street
Portland OR 97230

Re: Site Characterization Soil and Groundwater Sampling, Oregon Paper Fibers Facility, 12820 NE Marx Street, Portland, OR 97214
LUST Site # 26-09-1265

Dear Mr. McCracken:

At your request, Evergreen Environmental Management, LLC (EEM) has completed site characterization sub-surface soil and groundwater sampling work at the Oregon Paper Fiber facility located at 12820 NE Marx Street in Portland, Oregon. This report summarizes the findings of the fieldwork and final laboratory analytical results.

The goal of the sampling work was provide the Oregon Department of Environmental Quality (DEQ) with soil and groundwater sampling laboratory analytical data needed to close the Leaking Underground Storage Tank (LUST) file for the site. The LUST file number is 26-09-1265 and it was opened as the result of waste oil tank decommissioning work completed by Soil Solutions in November and December of 2009. Soil Solutions did not provide the agency with the entire laboratory analytical data required for a waste oil tank decommissioning, thus the agency would not issue a No Further Action (NFA) until this work was completed.

Background

On November 24, 2009, Soil Solutions removed a 500 gallon waste oil tank from an enclave on the east side of the Oregon Paper Fiber office/truck shop building at 12820 NE Marx Street in Portland, OR. Soil samples were collected from below the east and west ends of the tank bed at 122 inches (10.1 feet) below ground surface (bgs) and analyzed for the presence of gasoline, diesel and oil range petroleum hydrocarbons by TPH-HCID scans. No petroleum was detected in either sample and the tank pit was backfilled with the original tank bed material and clean imported fill. Groundwater was not detected in the tank bed excavation during their work.

On December 11, 2009, Soil Solutions used a hand augur to collect a soil sample at 3.5 feet bgs from beneath product piping between the tank bed and the shop building. The sample was analyzed for the presence of gasoline, diesel and oil range petroleum hydrocarbons by a TPH-HCID scan. Oil was detected and the sample was subsequently analyzed for diesel and oil by a TPH-Dx scan which indicated 454 parts per million (ppm) of oil. This exceeded DEQ's Level Two Soil Matrix Cleanup Level of 500 ppm for diesel and oil.

On December 17, 2009, Soil Solutions removed approximately 4.64 tons of oil impacted soil from the piping run area and disposed of it at Hillsboro Landfill. Two confirmation samples were then collected at 4.5 feet bgs from the excavated area and analyzed for THP-Dx. No diesel or oil were detected in either sample and the piping run excavation was backfilled with imported material.

Soil Solutions submitted their summary report to DEQ on December 29, 2009. A copy of their report is attached.

On February 4, 2010, DEQ notified Far West Fibers that because there was a release from the waste oil tank system additional soil sampling laboratory analyses was required, such as Volatile Organic Compounds (VOCs) and leachable metals, and that a groundwater sample would be required as well. Far West Fibers declined to do the additional work and DEQ notified them that an NFA letter would not be issued for the site until the additional soil and water sampling work was done.

EEM's Site Investigation Activities

On March 26, 2013, EEM utilized a Pacific Soil & Water push-probe rig to complete a total of three push-probe borings (GP-1 to GP-3) at the site to collect soil and groundwater samples. During the completion of the borings, the drilling crew used a continuous sampler that allowed retrieval of five feet sections of soil in clear acrylic tubes that permitted an undisturbed view of the soil profile. The soil was removed from the tubes and inspected for obvious indications of petroleum and other types of contamination, such as discoloration and odors, and a sheen when placed in a small pan of fresh water. Representative soil samples were collected from each sampling interval and labeled accordingly (GP-1 5 - 10', etc.). The soil samples were stored in a cooler until delivery to the laboratory.

The locations of the boring are shown in Figure 3. The former tank pit was 12.5 by 8' based on the asphalt patch.

GP-1 to GP-2 is 8.0'
GP-1 to GP-3 is 11'
GP-2 to GP-3, both drilled in the tank pit, is 10'

GP-1 was drilled in the former piping run where Soil Solutions had removed soil down to 4.5 feet bgs. The boring was drilled to 16 feet where the basalt halted further progress. From surface to approximately 7.0 feet the soil was brown silty clay with occasional basalt rock fragments. From 7.0 to 16 feet the material was predominantly basalt rock gravel or fragments with occasional lenses or a matrix of brown silty clay. The soil was damp to moist to 16 feet where it became wet. No obvious indications of the presence of petroleum hydrocarbons or chemicals were observed in the soil. Temporary sampling tubing was left in the boring while work proceeded on the two other borings. Sufficient water was later retrieved from GP-1 to fill four 40 milliliter VOA bottles.

GP-2 and GP-3 were drilled to 17.1 and 20 feet in the west and east ends of the former tank pit, respectively. From surface to approximately 9.75 feet the material was clean imported fill. Below 9.75 feet basalt with the brown silty clay matrix was encountered to refusal depths. No obvious indications of the presence of petroleum hydrocarbons or chemicals were observed in the soil from either boring. The basalt became wet at approximately 16 feet bgs in both borings and water rose to approximately 14 feet in both borings. Sufficient water was retrieved from both borings to fill four 40 milliliter VOA bottles and three one liter amber glass bottles.

Discussion of Sampling Laboratory Analytical Results

All of the soil and water samples were submitted to Apex Laboratory in Tigard, Oregon. The subsequent laboratory analytical results are summarized in Table 1. Copies of the analytical reports and the Chains-of-Custody are attached.

Soil

Laboratory analyses for the soil samples from each boring was based on field screening observations (odors, etc.) and the placement of the borings relevant to their location at the site.

In GP-1, in the former piping run, the soil sample from the 5 to 10 feet interval was submitted for analyses for the presence of diesel and oil by a TPH-Dx scan. Only 79.5 ppm of oil was found. This value is well below DEQ's Soil Matrix Level Two Cleanup goal of 500 ppm for diesel and oil.

This sample was also analyzed for Volatile Organic Compounds (VOCs), PCBs and Total Cadmium, Chromium and Lead. No VOCs and PCBs were detected in the sample. Total Cadmium, Chromium and Lead were detected at 1.23, 16 and 4.94 ppm, respectively.

In GP-3, the sample from 10-15 feet from the east side of the former tank pit was analyzed for presence of diesel and oil by a TPH-Dx scan and for VOCs. No diesel or oil or VOCs were detected in the sample.

Water

Because of poor recovery, the water sample from GP-1 was not tested for the presence of diesel and oil, but was tested for VOCs and Total Cadmium, Chromium and Lead. Tetrachloroethene at 0.670 parts per billion (ppb) was the only VOC detected. Total Cadmium, Chromium and Lead were detected at 2.8, 90.6 and 22.8 ppb, respectively.

The water sample from GP-3 from the east side of the former tank pit was analyzed for presence of diesel and oil by a TPH-Dx scan, VOCs and Total Cadmium, Chromium and Lead. Tetrachloroethene at 0.770 ppb was the only VOC detected. Total Cadmium and Lead were not detected. Total Chromium was detected at 3.34 ppb.

Examination of DEQ's Soil Matrix and Risk Based Corrective Action Guidelines

Soil

The only petroleum detected in any of the soil samples from GP-1 and GP-3 was 79.5 ppm of oil from the 5 to 10 feet sampling interval in GP-1. This sample was collected in the former piping run in the area where Soil Solutions completed minor soil removal work in 2009. This value is well below DEQ's Soil Matrix Level Two Cleanup goal of 500 ppm for diesel and oil.

DEQ has four exposure categories in their Risk Based Corrective Action (RBCA) guidelines for soil in Residential, Urban Residential and Occupational settings. Because this site will always be used for commercial purposes, only the values for the Occupational settings are used. The four categories are:

Surface Soil Ingestion, Dermal Contact, and Inhalation
Volatilization to Outdoor Air
Vapor Intrusion into Buildings
Leaching to Groundwater

The 79.5 ppm of oil from the 5 to 10 feet sampling interval in GP-1 does not exceed any of the exposure categories. No VOCs were detected in the soil samples from GP-1 and GP-3. The minor concentrations of Cadmium, Chromium and Lead in the 5 to 10 feet sampling interval in GP-1 are below all applicable exposure categories.

Groundwater

DEQ has four exposure categories in their RBCA guidelines for groundwater in an Occupational setting. These are:

Ingestion & Inhalation from Tap Water
Volatilization to Outdoor Air
Vapor Intrusion into Buildings
Groundwater in Excavations

City drinking water is used at the site and there are no irrigation, process or drinking water wells there, so the first category is not applicable to this site.

No diesel, oil or PCBs were detected in the groundwater sample from GP-3.

The 0.670 and 0.770 parts per billon of Tetrachloroethene in GP-1 and GP-3, respectively, do not exceed any of the four exposure categories.

The minor concentrations of Cadmium, Chromium and Lead GP-1 and GP-3 are below all applicable exposure categories.

Conclusions

On March 26, 2013, EEM completed three push-probe borings in the former piping run and in the former waste oil tank pit at the Oregon Paper Fiber facility located at 12820 NE Marx Street in Portland, Oregon. The goal of the work was to accumulate DEQ required soil and groundwater sampling data in order to close the site and acquire a No Further Action letter.

EEM's 2013 data combined with Soil Solutions 2009 data indicates that their localized cleanup work in the piping run was successful and that no release had occurred from the tank body. The vey low concentrations of oil, Tetrachloroethene and Cadmium, Chromium and Lead detected in soil and groundwater samples from borings GP-1 and GP-3 do not present a realistic hazard to human health or the environment.

The vey low concentrations of Tetrachloroethene detected in the two groundwater samples are not likely from the waste oil tank system, but rather indicative of the status of the groundwater in the area as a whole. Tetrachloroethene is a very common solvent used by consumer and commercial users for engine cleaning, by dry cleaning shops and a multitude of other applications. As shown in Figure 4, the Oregon Paper Fiber facility is located down gradient of a large area of residential and commercial properties.

EEM does not believe that any additional site investigation work is warranted.

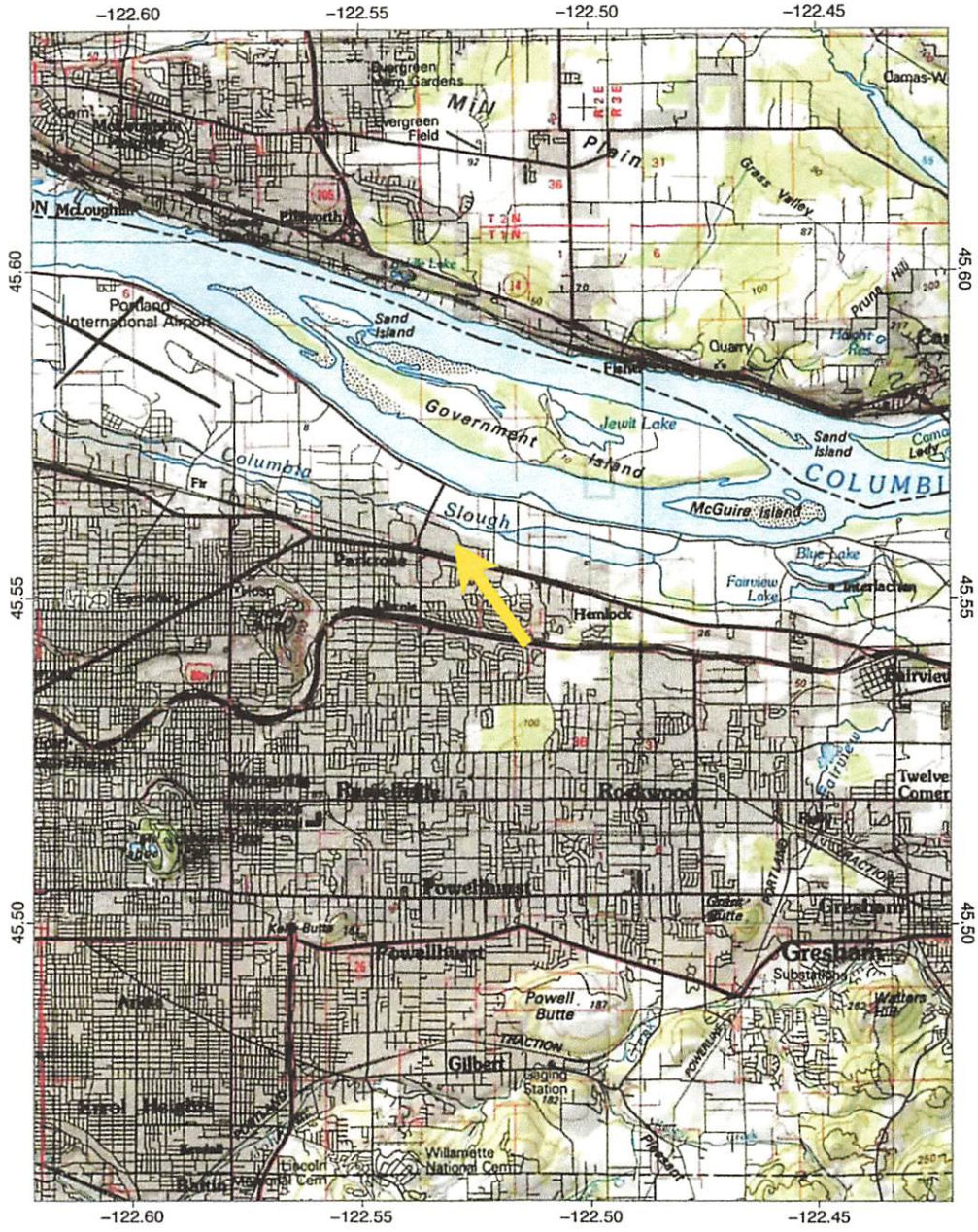
If after your review of this report, you have any questions or comments regarding the site investigation work please call me at 503 985-1717.

Sincerely,

David L. Samples R.G.
OR & WA Registered Geologist

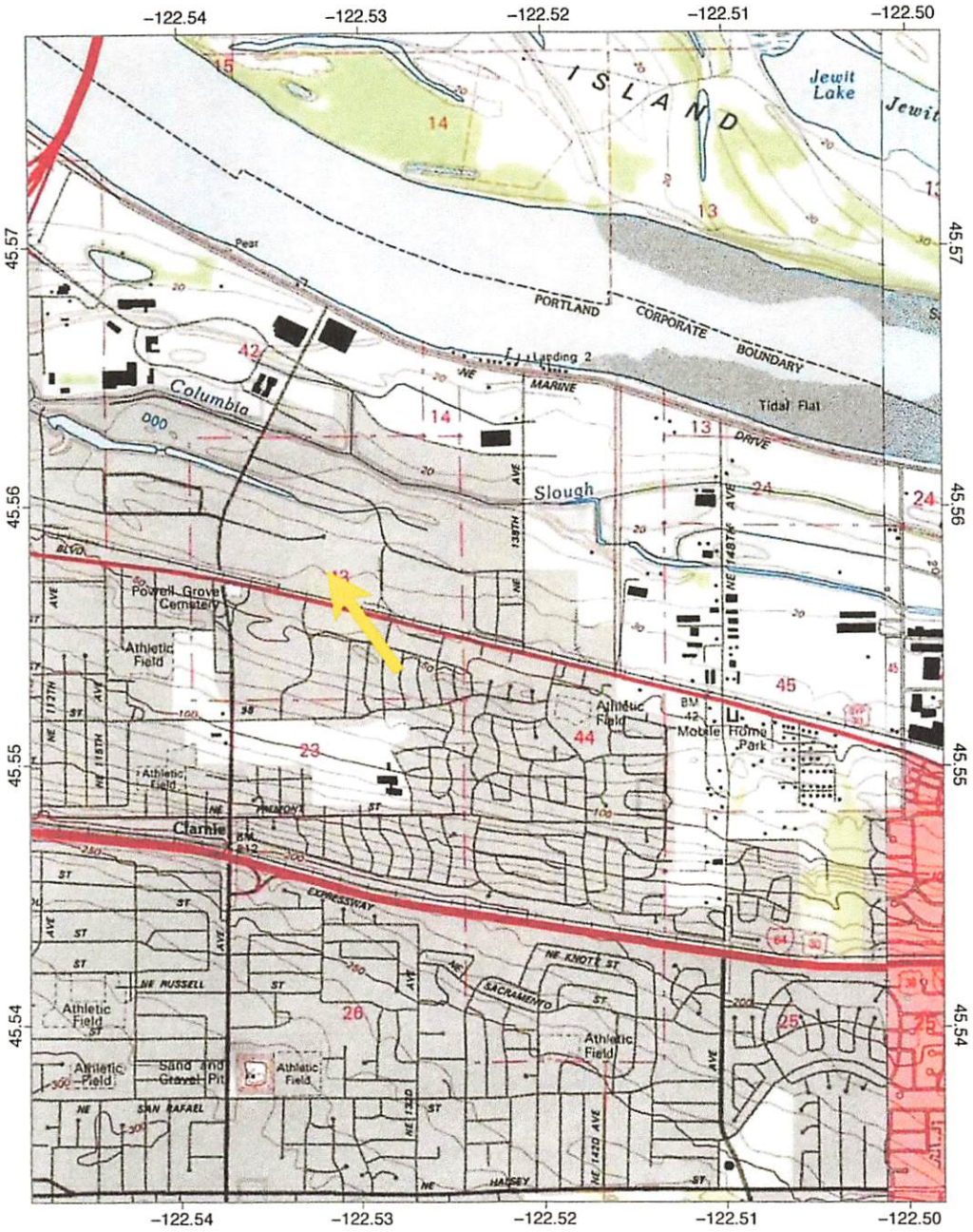


Attachments: Figures 1, 2, 3 and 4
Table 1
Site Photos
Boring Logs
Chain-of-Custody and Laboratory Analytical Results
2009 Soil Solutions Tank Removal and Cleanup Report



EVERGREEN ENVIRONMENTAL MANAGEMENT, LLC
P.O. BOX 1604
Beaverton, OR 97075-1604

FIGURE NO. 1 PROJECT# 13-11
Project Location Map
Oregon Paper Fiber Facility
12820 NE Marx Street
Portland, OR 97230



EVERGREEN ENVIRONMENTAL MANAGEMENT, LLC
P.O. BOX 1604
Beaverton, OR 97075-1604

FIGURE NO. 2 PROJECT# 13-11
Project Location Map
Oregon Paper Fiber Facility
12820 NE Marx Street
Portland, OR 97230



FIGURE 3



FIGURE 4

TABLE 1
Soil and Groundwater Sampling Laboratory Analytical Data
Far West Fibers Property
12820 NE Marx Street, Portland, OR

Sample ID#	**Date**	**TPH-Dx** parts per million	**Voltile Orgnic Compounds** parts per billion	PCBs	Total Metals Cadmium, Cr & PB
GP-1 0-5'	3/26/13				parts per million
GP-1 5-10'	3/26/13	D – ND Oil – 79.5	ND	ND	Cadmium – 1.23 Chromium – 16.0 Lead – 4.94
GP-1 10-15'	3/26/13				
GP-1 15-16'	3/26/13				
GP-2 0-5'	3/26/13				
GP-2 5-10'	3/26/13				
GP-2 10-15'	3/26/13				
GP-2 15-17'	3/26/13				
GP-3 0-5'	3/26/13				
GP-3 5-10'	3/26/13				
GP-3 10-15'	3/26/13	ND	ND		
GP-3 15-20'	3/26/13				
					parts per billion
GP-1 GW	3/26/13		Tetrachlorethene (PCE) – 0.670		Cadmium –2.8 Chromium – 90.6 Lead – 22.8
GP-2 GW	3/26/13				
GP-3 GW	3/26/13	ND	Tetrachlorethene (PCE) – 0.770	**ND**	Cadmium –ND Chromium – 3.34 Lead – ND

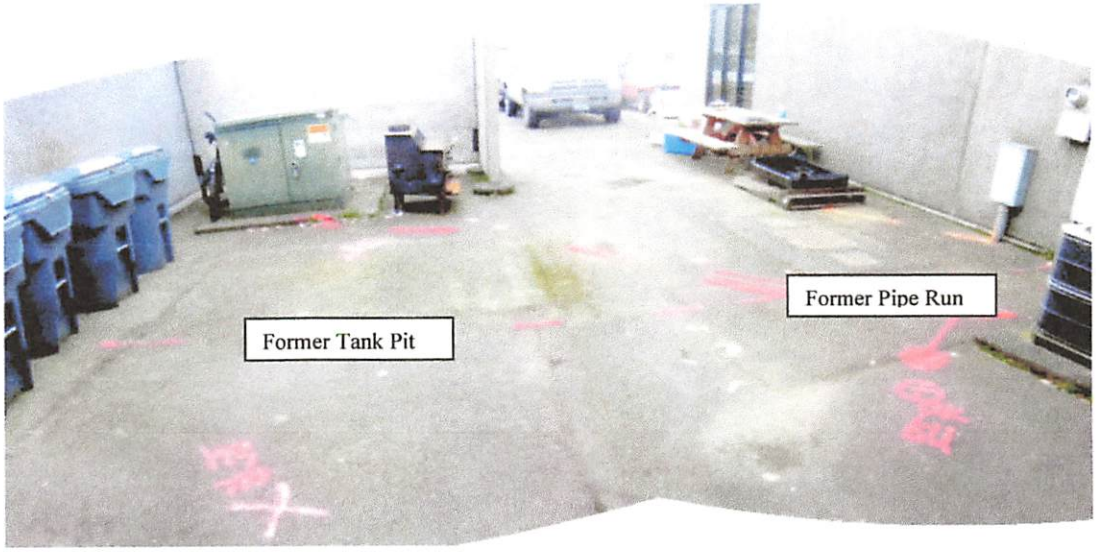


PHOTO 1: View to the east of the former used oil tank bed area on 3/26/13.



PHOTO 2 View to the west of the former used oil tank bed area on 3/26/13.



PHOTO 3: View to the south of the former used oil pipe run from inside the shop to the former tank pit in the foreground. The patched area of asphalt is where Soil Solutions removed a minor amount of soil in 2009.



PHOTO 4 Drilling of GP-1 in the former used oil pipe run area on 3/26/13.



PHOTO 5: Drilling of GP-3 at the east end of the former used oil tank pit on 3/26/13.

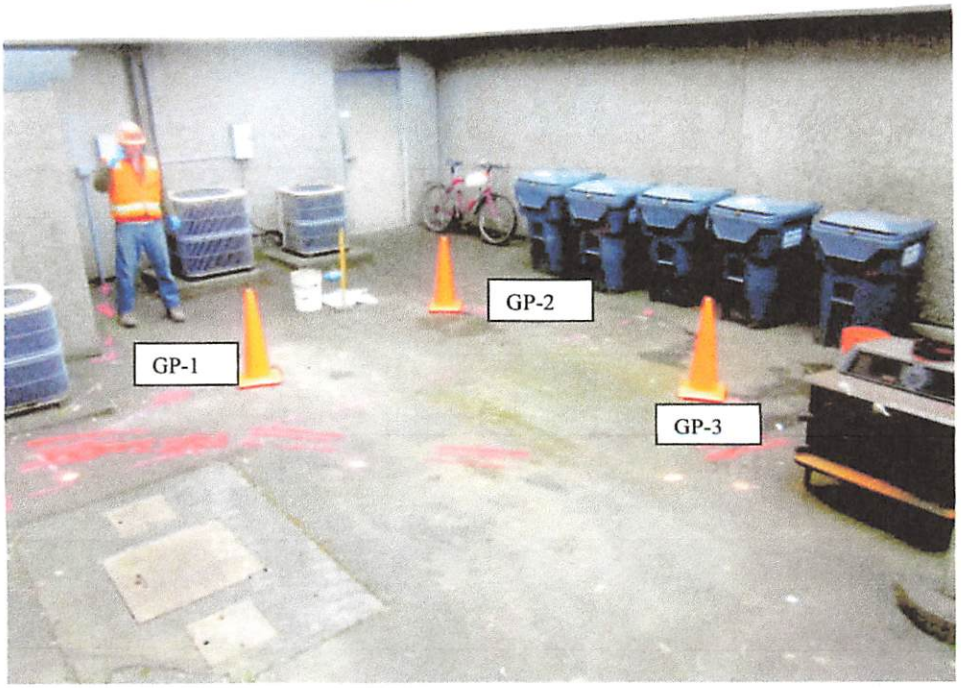
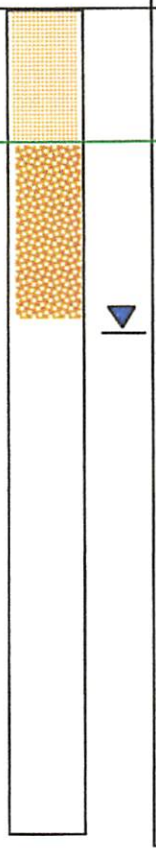


PHOTO 6: View to the west of the locations of borings GP-1, 2 and 3 on 3/26/13.

Logged by: David Samples R. G..	Started: 3/26/13 Finished: 3/26/13	Surface Elevation: 50' ASL
Driller: Cascade Drilling	Equipment: GeoProbe Rig	Top of Casing Elevation: NA
		Monitoring Device:

GeoProbe Boring GP-1



SHEEN	HEAD SPACE (ppm)	DEPTH In Feet	LITHOLOGIC DESCRIPTION	SAMPLE INTERVAL	LAB RESULTS
NS		2, 4, 6	0-7' Brown silty clay with occasional basalt fragments, dry-moist. No staining or odors.	0-5'	TPH-Dx - Oil - 79.5 ppm VOCs - ND PCBs - ND Cd - 1.23 ppm Cr - 16 ppm Lead - 4.94 ppm
NS		8, 10, 12, 14	7-16 ' Basalt rock fragments with silty clay matrix, moist then wet at 15.75'. No staining or odors.	5-10'	
NS		16, 18, 20, 22, 24, 25	Drilling ceased at 16 feet because of refusal.	10-15' 15-16'	Water Sample TPH-Dx - NA PCE - 0.670 ppb Cd - 2.8 ppb Cr - 90.6 ppb Lead - 22.8 ppb

Clayey Silt & Silt
Clay
Fragmented Basalt & Sand Matrix
Sand
Groundwater Level
Static Water Level

NS - No Sheen
SS - Slight Sheen
MS - Moderate Sheen
HS - Heavy Sheen

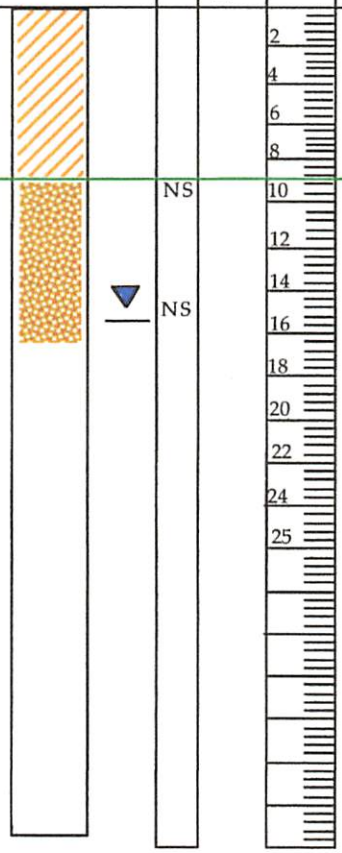
NA - Not Analyzed
ND - None Detected
ppm - Parts Per Million
ppb - Parts Per Billion

EVERGREEN ENVIRONMENTAL MANAGEMENT, LLC
P. O. Box 1604
Beaverton, OR 97075-1604

Oregon Paper Fiber Facility
12820 NE Mark Street
Portland, OR 97230

GeoProbe Boring GP-1

Logged by: David Samples R. G.. Driller: Cascade Drilling	Started: 3/26/13 Finished: 3/26/13 Equipment: GeoProbe Rig	Surface Elevation: 50' ASL Top of Casing Elevation: NA Monitoring Device:



Clayey Silt & Silt
Clay
Groundwater Level
Fragmented Basalt & Sand Matrix
Sand
Static Water Level

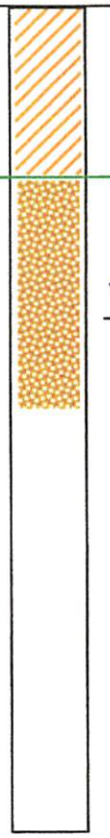
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SS - Slight Sheen
MS - Moderate Sheen
HS - Heavy Sheen

NA - Not Analyzed
ND - None Detected
ppm - Parts Per Million
ppb - Parts Per Billion

EVERGREEN ENVIRONMENTAL MANAGEMENT, LLC P. O. Box 1604 Beaverton, OR 97075-1604	Oregon Paper Fiber Facility 12820 NE Mark Street Portland, OR 97230	**GeoProbe Boring GP-2**

Logged by: David Samples R. G..	Started: 3/26/13 Finished: 3/26/13	Surface Elevation: 50' ASL
Driller: Cascade Drilling	Equipment: GeoProbe Rig	Top of Casing Elevation: NA
		Monitoring Device:

GeoProbe Boring GP-3



DEPTH In Feet	SHEEN	HEAD SPACE (ppm)	LITHOLOGIC DESCRIPTION	SAMPLE INTERVAL	LAB RESULTS
2, 4, 6, 8			0-9.75' Tank backfill gravel	0-5'	
				5-10'	
10	NS		9.75-20 ' Basalt rock fragments with silty clay matrix, moist then wet at 15.75'. No staining or odors.		
12, 14				10-15'	TPH-Dx - ND VOCs - ND
16	NS		Drilling ceased at 20 feet because of refusal.		
18, 20				15-20'	
22, 24, 25					Water Sample TPH-Dx - ND PCE - 0.770 ppb Cd - ND Cr - 3.34 ppb Lead - ND

Clayey Silt & Silt
Clay
Fragmented Basalt & Sand Matrix
Sand
Groundwater Level
Static Water Level

NS - No Sheen
SS - Slight Sheen
MS - Moderate Sheen
HS - Heavy Sheen

NA - Not Analyzed
ND - None Detected
ppm - Parts Per Million
ppb - Parts Per Billion

EVERGREEN ENVIRONMENTAL MANAGEMENT, LLC
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Oregon Paper Fiber Facility
12820 NE Mark Street
Portland, OR 97230

GeoProbe Boring GP-3

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Wednesday, April 10, 2013

Dave Samples
Evergreen Environmental
PO Box 1604
Beaverton, OR 97075

RE: Farwest Fibers / 13-11

Enclosed are the results of analyses for work order A13C614, which was received by the laboratory on 3/26/2013 at 1:23:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Apex Labs

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP-1 5-10'	A13C614-02	Soil	03/26/13 00:00	03/26/13 13:23
GP-3 10-15'	A13C614-11	Soil	03/26/13 00:00	03/26/13 13:23
GP-1 GW	A13C614-13	Water	03/26/13 00:00	03/26/13 13:23
GP-3 GW	A13C614-15	Water	03/26/13 00:00	03/26/13 13:23

DRAFT REPORT

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Apex Labs

12232 S.W. Garden Place
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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Diesel and Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 5-10' (A13C614-02)			**Matrix: Soil**		**Batch: 3040003**			
Diesel	ND	---	25.0	mg/kg dry	1	04/01/13 18:56	NWTPH-Dx	
Oil	**79.5**	---	50.0	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 92 %*	*Limits: 50-150 %*	"	"	"	
GP-3 10-15' (A13C614-11)			**Matrix: Soil**		**Batch: 3040194**			
Diesel	ND	---	25.0	mg/kg dry	1	04/09/13 20:08	NWTPH-Dx	
Oil	ND	---	50.0	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 101 %*	*Limits: 50-150 %*	"	"	"	
GP-3 GW (A13C614-15)			**Matrix: Water**		**Batch: 1303732**			
Diesel	ND	---	0.211	mg/L	1	03/30/13 12:41	NWTPH-Dx	
Oil	ND	---	0.421	"	"	"	"	
Surrogate: o-Terphenyl (Surr)			*Recovery: 91 %*	*Limits: 50-150 %*	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 5-10' (A13C614-02)			**Matrix: Soil**		**Batch: 1303660**			**V-15**
Acetone	ND	---	1040	ug/kg dry	50	03/27/13 19:19	5035/8260B	
Benzene	ND	---	13.0	"	"	"	"	
Bromobenzene	ND	---	26.0	"	"	"	"	
Bromochloromethane	ND	---	51.9	"	"	"	"	
Bromodichloromethane	ND	---	51.9	"	"	"	"	
Bromoform	ND	---	51.9	"	"	"	"	
Bromomethane	ND	---	519	"	"	"	"	
2-Butanone (MEK)	ND	---	519	"	"	"	"	
n-Butylbenzene	ND	---	51.9	"	"	"	"	
sec-Butylbenzene	ND	---	51.9	"	"	"	"	
tert-Butylbenzene	ND	---	51.9	"	"	"	"	
Carbon tetrachloride	ND	---	51.9	"	"	"	"	
Chlorobenzene	ND	---	26.0	"	"	"	"	
Chloroethane	ND	---	519	"	"	"	"	
Chloroform	ND	---	51.9	"	"	"	"	
Chloromethane	ND	---	260	"	"	"	"	
2-Chlorotoluene	ND	---	51.9	"	"	"	"	
4-Chlorotoluene	ND	---	51.9	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	260	"	"	"	"	
Dibromochloromethane	ND	---	104	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	26.0	"	"	"	"	
Dibromomethane	ND	---	51.9	"	"	"	"	
1,2-Dichlorobenzene	ND	---	26.0	"	"	"	"	
1,3-Dichlorobenzene	ND	---	26.0	"	"	"	"	
1,4-Dichlorobenzene	ND	---	26.0	"	"	"	"	
Dichlorodifluoromethane	ND	---	104	"	"	"	"	
1,1-Dichloroethane	ND	---	26.0	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	26.0	"	"	"	"	
1,1-Dichloroethene	ND	---	26.0	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	26.0	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	26.0	"	"	"	"	
1,2-Dichloropropane	ND	---	26.0	"	"	"	"	
1,3-Dichloropropane	ND	---	26.0	"	"	"	"	
2,2-Dichloropropane	ND	---	51.9	"	"	"	"	
1,1-Dichloropropene	ND	---	51.9	"	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 5-10' (A13C614-02)			**Matrix: Soil**		**Batch: 1303660**			**V-15**
cis-1,3-Dichloropropene	ND	---	51.9	ug/kg dry	50	"	5035/8260B	
trans-1,3-Dichloropropene	ND	---	51.9	"	"	"	"	
Ethylbenzene	ND	---	26.0	"	"	"	"	
Hexachlorobutadiene	ND	---	104	"	"	"	"	
2-Hexanone	ND	---	519	"	"	"	"	
Isopropylbenzene	ND	---	51.9	"	"	"	"	
4-Isopropyltoluene	ND	---	51.9	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	519	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	51.9	"	"	"	"	
Methylene chloride	ND	---	260	"	"	"	"	
Naphthalene	ND	---	104	"	"	"	"	
n-Propylbenzene	ND	---	26.0	"	"	"	"	
Styrene	ND	---	51.9	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	26.0	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	26.0	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	26.0	"	"	"	"	
Toluene	ND	---	51.9	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	260	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	260	"	"	"	"	
1,1,1-Trichloroethane	ND	---	26.0	"	"	"	"	
1,1,2-Trichloroethane	ND	---	26.0	"	"	"	"	
Trichloroethene (TCE)	ND	---	26.0	"	"	"	"	
Trichlorofluoromethane	ND	---	104	"	"	"	"	
1,2,3-Trichloropropane	ND	---	51.9	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	51.9	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	51.9	"	"	"	"	
Vinyl chloride	ND	---	26.0	"	"	"	"	
m,p-Xylene	ND	---	51.9	"	"	"	"	
o-Xylene	ND	---	26.0	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 104 %*	*Limits: 70-130 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*101 %*	*Limits: 70-130 %*	"	"	"	
Toluene-d8 (Surr)			*103 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*99 %*	*Limits: 70-130 %*	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-3 10-15' (A13C614-11)			**Matrix: Soil**		**Batch: 3040150**			**V-16**
Acetone	ND	---	972	ug/kg dry	50	04/08/13 15:26	5035/8260B	
Benzene	ND	---	12.2	"	"	"	"	
Bromobenzene	ND	---	24.3	"	"	"	"	
Bromochloromethane	ND	---	48.6	"	"	"	"	
Bromodichloromethane	ND	---	48.6	"	"	"	"	
Bromoform	ND	---	48.6	"	"	"	"	
Bromomethane	ND	---	486	"	"	"	"	
2-Butanone (MEK)	ND	---	486	"	"	"	"	
n-Butylbenzene	ND	---	48.6	"	"	"	"	
sec-Butylbenzene	ND	---	48.6	"	"	"	"	
tert-Butylbenzene	ND	---	48.6	"	"	"	"	
Carbon tetrachloride	ND	---	24.3	"	"	"	"	
Chlorobenzene	ND	---	24.3	"	"	"	"	
Chloroethane	ND	---	486	"	"	"	"	
Chloroform	ND	---	48.6	"	"	"	"	
Chloromethane	ND	---	243	"	"	"	"	
2-Chlorotoluene	ND	---	48.6	"	"	"	"	
4-Chlorotoluene	ND	---	48.6	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	243	"	"	"	"	
Dibromochloromethane	ND	---	97.2	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	24.3	"	"	"	"	
Dibromomethane	ND	---	48.6	"	"	"	"	
1,2-Dichlorobenzene	ND	---	24.3	"	"	"	"	
1,3-Dichlorobenzene	ND	---	24.3	"	"	"	"	
1,4-Dichlorobenzene	ND	---	24.3	"	"	"	"	
Dichlorodifluoromethane	ND	---	97.2	"	"	"	"	
1,1-Dichloroethane	ND	---	24.3	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	24.3	"	"	"	"	
1,1-Dichloroethene	ND	---	24.3	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	24.3	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	24.3	"	"	"	"	
1,2-Dichloropropane	ND	---	24.3	"	"	"	"	
1,3-Dichloropropane	ND	---	24.3	"	"	"	"	
2,2-Dichloropropane	ND	---	48.6	"	"	"	"	
1,1-Dichloropropene	ND	---	48.6	"	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-3 10-15' (A13C614-11)			**Matrix: Soil**		**Batch: 3040150**			**V-16**
cis-1,3-Dichloropropene	ND	---	48.6	ug/kg dry	50	"	5035/8260B	
trans-1,3-Dichloropropene	ND	---	48.6	"	"	"	"	
Ethylbenzene	ND	---	24.3	"	"	"	"	
Hexachlorobutadiene	ND	---	97.2	"	"	"	"	
2-Hexanone	ND	---	486	"	"	"	"	
Isopropylbenzene	ND	---	48.6	"	"	"	"	
4-Isopropyltoluene	ND	---	48.6	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	486	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	48.6	"	"	"	"	
Methylene chloride	ND	---	243	"	"	"	"	
Naphthalene	ND	---	97.2	"	"	"	"	
n-Propylbenzene	ND	---	24.3	"	"	"	"	
Styrene	ND	---	48.6	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	24.3	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	24.3	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	24.3	"	"	"	"	
Toluene	ND	---	48.6	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	243	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	243	"	"	"	"	
1,1,1-Trichloroethane	ND	---	24.3	"	"	"	"	
1,1,2-Trichloroethane	ND	---	24.3	"	"	"	"	
Trichloroethene (TCE)	ND	---	24.3	"	"	"	"	
Trichlorofluoromethane	ND	---	97.2	"	"	"	"	
1,2,3-Trichloropropane	ND	---	48.6	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	48.6	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	48.6	"	"	"	"	
Vinyl chloride	ND	---	24.3	"	"	"	"	
m,p-Xylene	ND	---	48.6	"	"	"	"	
o-Xylene	ND	---	24.3	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 95 %*	*Limits: 70-130 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 70-130 %*	"	"	"	
Toluene-d8 (Surr)			*95 %*	*Limits: 70-130 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 70-130 %*	"	"	"	

DRAFT REPORT

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Apex Labs

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Tigard, OR 97223
503-718-2323 Phone
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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 GW (A13C614-13)			**Matrix: Water**		**Batch: 1303687**			
Acetone	**20.5**	---	20.0	ug/L	1	03/27/13 17:01	EPA 8260B	EST
Benzene	ND	---	0.250	"	"	"	"	
Bromobenzene	ND	---	0.500	"	"	"	"	
Bromochloromethane	ND	---	1.00	"	"	"	"	
Bromodichloromethane	ND	---	1.00	"	"	"	"	
Bromoform	ND	---	1.00	"	"	"	"	
Bromomethane	ND	---	5.00	"	"	"	"	
2-Butanone (MEK)	ND	---	10.0	"	"	"	"	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	1.00	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
Chloroethane	ND	---	5.00	"	"	"	"	
Chloroform	ND	---	1.00	"	"	"	"	
Chloromethane	ND	---	5.00	"	"	"	"	
2-Chlorotoluene	ND	---	1.00	"	"	"	"	
4-Chlorotoluene	ND	---	1.00	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	"	"	
Dibromochloromethane	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
Dibromomethane	ND	---	1.00	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.500	"	"	"	"	
Dichlorodifluoromethane	ND	---	1.00	"	"	"	"	
1,1-Dichloroethane	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
1,1-Dichloroethene	ND	---	0.500	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
1,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,3-Dichloropropane	ND	---	1.00	"	"	"	"	
2,2-Dichloropropane	ND	---	1.00	"	"	"	"	
1,1-Dichloropropene	ND	---	1.00	"	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 GW (A13C614-13)			**Matrix: Water**		**Batch: 1303687**			
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	"	EPA 8260B	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	5.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
Isopropylbenzene	ND	---	1.00	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Styrene	ND	---	1.00	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
Tetrachloroethene (PCE)	**0.670**	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.500	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.500	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.500	"	"	"	"	
Trichlorofluoromethane	ND	---	2.00	"	"	"	"	
1,2,3-Trichloropropane	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
Vinyl chloride	ND	---	0.500	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*109 %*	*Limits: 80-120 %*	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-3 GW (A13C614-15)			**Matrix: Water**		**Batch: 1303687**			
Acetone	ND	---	20.0	ug/L	1	03/27/13 17:29	EPA 8260B	EST
Benzene	ND	---	0.250	"	"	"	"	
Bromobenzene	ND	---	0.500	"	"	"	"	
Bromochloromethane	ND	---	1.00	"	"	"	"	
Bromodichloromethane	ND	---	1.00	"	"	"	"	
Bromoform	ND	---	1.00	"	"	"	"	
Bromomethane	ND	---	5.00	"	"	"	"	
2-Butanone (MEK)	ND	---	10.0	"	"	"	"	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	1.00	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
Chloroethane	ND	---	5.00	"	"	"	"	
Chloroform	ND	---	1.00	"	"	"	"	
Chloromethane	ND	---	5.00	"	"	"	"	
2-Chlorotoluene	ND	---	1.00	"	"	"	"	
4-Chlorotoluene	ND	---	1.00	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	"	"	
Dibromochloromethane	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
Dibromomethane	ND	---	1.00	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.500	"	"	"	"	
Dichlorodifluoromethane	ND	---	1.00	"	"	"	"	
1,1-Dichloroethane	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
1,1-Dichloroethene	ND	---	0.500	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
1,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,3-Dichloropropane	ND	---	1.00	"	"	"	"	
2,2-Dichloropropane	ND	---	1.00	"	"	"	"	
1,1-Dichloropropene	ND	---	1.00	"	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-3 GW (A13C614-15)			**Matrix: Water**		**Batch: 1303687**			
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	"	EPA 8260B	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	5.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
Isopropylbenzene	ND	---	1.00	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Styrene	ND	---	1.00	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
Tetrachloroethene (PCE)	**0.770**	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.500	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.500	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.500	"	"	"	"	
Trichlorofluoromethane	ND	---	2.00	"	"	"	"	
1,2,3-Trichloropropane	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
Vinyl chloride	ND	---	0.500	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*109 %*	*Limits: 80-120 %*	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 5-10' (A13C614-02)			**Matrix: Soil**		**Batch: 1303718**			**C-07**
Aroclor 1016	ND	---	8.24	ug/kg dry	1	03/29/13 15:32	EPA 8082A	
Aroclor 1221	ND	---	8.24	"	"	"	"	
Aroclor 1232	ND	---	8.24	"	"	"	"	
Aroclor 1242	ND	---	8.24	"	"	"	"	
Aroclor 1248	ND	---	8.24	"	"	"	"	
Aroclor 1254	ND	---	8.24	"	"	"	"	
Aroclor 1260	ND	---	8.24	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 81 %*	*Limits: 60-125 %*	"	"	"	
GP-3 GW (A13C614-15)			**Matrix: Water**		**Batch: 3040029**			**C-07**
Aroclor 1016	ND	---	0.102	ug/L	1	04/02/13 17:00	EPA 8082A	
Aroclor 1221	ND	---	0.102	"	"	"	"	
Aroclor 1232	ND	---	0.102	"	"	"	"	
Aroclor 1242	ND	---	0.102	"	"	"	"	
Aroclor 1248	ND	---	0.102	"	"	"	"	
Aroclor 1254	ND	---	0.102	"	"	"	"	
Aroclor 1260	ND	---	0.102	"	"	"	"	
Surrogate: Decachlorobiphenyl (Surr)			*Recovery: 87 %*	*Limits: 40-135 %*	"	"	"	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 5-10' (A13C614-02)			**Matrix: Soil**					
Batch: 3040045								
Cadmium	ND	---	1.23	mg/kg dry	10	04/03/13 13:41	EPA 6020A	
Chromium	**16.0**	---	2.47	"	"	"	"	
Lead	**4.94**	---	1.23	"	"	"	"	
GP-1 GW (A13C614-13)			**Matrix: Water**					
Batch: 3040063								
Cadmium	**2.80**	---	1.12	ug/L	1	04/03/13 17:23	EPA 6020A	ME-2
Chromium	**90.6**	---	2.25	"	"	"	"	ME-2
Lead	**22.8**	---	1.12	"	"	"	"	ME-2
GP-3 GW (A13C614-15)			**Matrix: Water**					
Batch: 3040063								
Cadmium	ND	---	1.00	ug/L	1	04/03/13 17:29	EPA 6020A	
Chromium	**3.34**	---	2.00	"	"	"	"	
Lead	ND	---	1.00	"	"	"	"	

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Evergreen Environmental PO Box 1604 Beaverton, OR 97075	Project: **Farwest Fibers** Project Number: 13-11 Project Manager: Dave Samples	**Reported:** 04/10/13 12:10

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
GP-1 5-10' (A13C614-02)			**Matrix: Soil**		**Batch: 1303728**			
% Solids	**88.1**	---	1.00	% by Weight	1	03/29/13 09:56	Apex SOP	
GP-3 10-15' (A13C614-11)			**Matrix: Soil**		**Batch: 3040183**			
% Solids	**91.1**	---	1.00	% by Weight	1	04/10/13 10:56	Apex SOP	

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Diesel and Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303732 - EPA 3510C (Acid Extraction)							**Water**					
Blank (1303732-BLK1)					Prepared: 03/29/13 07:53 Analyzed: 03/30/13 10:20							
NWTPH-Dx												
Diesel	ND	---	0.182	mg/L	1	---	---	---	---	---	---	
Oil	ND	---	0.364	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 91 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS (1303732-BS1)					Prepared: 03/29/13 07:53 Analyzed: 03/30/13 10:48							
NWTPH-Dx												
Diesel	1.04	---	0.200	mg/L	1	1.25	---	83	70-130%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 97 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS Dup (1303732-BSD1)					Prepared: 03/29/13 07:53 Analyzed: 03/30/13 11:16							Q-19
NWTPH-Dx												
Diesel	1.06	---	0.200	mg/L	1	1.25	---	85	70-130%	2	20%	
Surr: o-Terphenyl (Surr)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Batch 3040003 - EPA 3546 (Fuels)							**Soil**					
Blank (3040003-BLK1)					Prepared: 04/01/13 10:43 Analyzed: 04/01/13 17:59							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 95 %*	*Limits: 50-150 %*			*Dilution: 1x*					
LCS (3040003-BS1)					Prepared: 04/01/13 10:43 Analyzed: 04/01/13 18:28							
NWTPH-Dx												
Diesel	124	---	25.0	mg/kg wet	1	125	---	99	70-130%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 97 %*	*Limits: 50-150 %*			*Dilution: 1x*					
Duplicate (3040003-DUP1)					Prepared: 04/01/13 10:43 Analyzed: 04/01/13 19:55							
QC Source Sample: GP-1 5-10' (A13C614-02)												
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	**63.4**	---	50.0	"	"	---	79.5	---	---	23	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 90 %*	*Limits: 50-150 %*			*Dilution: 1x*					

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Diesel and Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040194 - EPA 3546 (Fuels)							**Soil**					
Blank (3040194-BLK1)					Prepared: 04/09/13 12:03 Analyzed: 04/09/13 20:41							
NWTPH-Dx												
Diesel	ND	---	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 101 %*		*Limits: 50-150 %*		*Dilution: 1x*						
LCS (3040194-BS1)					Prepared: 04/09/13 12:03 Analyzed: 04/09/13 20:12							
NWTPH-Dx												
Diesel	131	---	25.0	mg/kg wet	1	125	---	105	70-130%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 99 %*		*Limits: 50-150 %*		*Dilution: 1x*						

DRAFT REPORT

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Apex Labs

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303660 - EPA 5035A							**Soil**					
Blank (1303660-BLK1)					Prepared: 03/27/13 09:00 Analyzed: 03/27/13 11:33							
5035/8260B												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	8.33	"	"	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	"	"	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	"	"	---	---	---	---	---	---	
Bromoform	ND	---	33.3	"	"	---	---	---	---	---	---	
Bromomethane	ND	---	333	"	"	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	"	"	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	33.3	"	"	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Chloroethane	ND	---	333	"	"	---	---	---	---	---	---	
Chloroform	ND	---	33.3	"	"	---	---	---	---	---	---	
Chloromethane	ND	---	167	"	"	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	"	"	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	16.7	"	"	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	"	"	---	---	---	---	---	---	

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303660 - EPA 5035A							**Soil**					
Blank (1303660-BLK1)					Prepared: 03/27/13 09:00 Analyzed: 03/27/13 11:33							
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	16.7	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	"	"	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	333	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	167	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Styrene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	33.3	"	"	---	---	---	---	---	---	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303660 - EPA 5035A							**Soil**					
Blank (1303660-BLK1)					Prepared: 03/27/13 09:00 Analyzed: 03/27/13 11:33							
1,2,4-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 108 %*	*Limits: 70-130 %*		*Dilution: 1x*						
1,4-Difluorobenzene (Surr)			*105 %*	*70-130 %*		"						
Toluene-d8 (Surr)			*105 %*	*70-130 %*		"						
4-Bromofluorobenzene (Surr)			*106 %*	*70-130 %*		"						
LCS (1303660-BS1)					Prepared: 03/27/13 09:00 Analyzed: 03/27/13 10:42							
5035/8260B												
Acetone	1670	---	1000	ug/kg wet	50	2000	---	83	65-135%	---	---	ESTa
Benzene	1100	---	12.5	"	"	1000	---	110	"	---	---	
Bromobenzene	1050	---	25.0	"	"	"	---	105	"	---	---	
Bromochloromethane	994	---	50.0	"	"	"	---	99	"	---	---	
Bromodichloromethane	1010	---	50.0	"	"	"	---	101	"	---	---	
Bromoform	774	---	50.0	"	"	"	---	77	"	---	---	
Bromomethane	872	---	500	"	"	"	---	87	"	---	---	
2-Butanone (MEK)	1780	---	500	"	"	2000	---	89	"	---	---	ESTa
n-Butylbenzene	1270	---	50.0	"	"	1000	---	127	"	---	---	
sec-Butylbenzene	1280	---	50.0	"	"	"	---	128	"	---	---	
tert-Butylbenzene	1410	---	50.0	"	"	"	---	141	"	---	---	EST
Carbon tetrachloride	1200	---	50.0	"	"	"	---	120	"	---	---	
Chlorobenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
Chloroethane	1370	---	500	"	"	"	---	137	"	---	---	Q-29
Chloroform	1090	---	50.0	"	"	"	---	109	"	---	---	
Chloromethane	982	---	250	"	"	"	---	98	"	---	---	
2-Chlorotoluene	1280	---	50.0	"	"	"	---	128	"	---	---	
4-Chlorotoluene	1340	---	50.0	"	"	"	---	134	"	---	---	
1,2-Dibromo-3-chloropropane	726	---	250	"	"	"	---	73	"	---	---	

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Evergreen Environmental PO Box 1604 Beaverton, OR 97075	Project: **Farwest Fibers** Project Number: 13-11 Project Manager: Dave Samples	**Reported:** 04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303660 - EPA 5035A							**Soil**					
LCS (1303660-BS1)					Prepared: 03/27/13 09:00 Analyzed: 03/27/13 10:42							
Dibromochloromethane	897	---	100	ug/kg wet	"	"	---	90	"	---	---	
1,2-Dibromoethane (EDB)	875	---	25.0	"	"	"	---	88	"	---	---	
Dibromomethane	838	---	50.0	"	"	"	---	84	"	---	---	
1,2-Dichlorobenzene	1030	---	25.0	"	"	"	---	103	"	---	---	
1,3-Dichlorobenzene	1100	---	25.0	"	"	"	---	110	"	---	---	
1,4-Dichlorobenzene	999	---	25.0	"	"	"	---	100	"	---	---	
Dichlorodifluoromethane	962	---	100	"	"	"	---	96	"	---	---	
1,1-Dichloroethane	1200	---	25.0	"	"	"	---	120	"	---	---	
1,2-Dichloroethane (EDC)	973	---	25.0	"	"	"	---	97	"	---	---	
1,1-Dichloroethene	1220	---	25.0	"	"	"	---	122	"	---	---	
cis-1,2-Dichloroethene	1210	---	25.0	"	"	"	---	121	"	---	---	
trans-1,2-Dichloroethene	1200	---	25.0	"	"	"	---	120	"	---	---	
1,2-Dichloropropane	1170	---	25.0	"	"	"	---	117	"	---	---	
1,3-Dichloropropane	936	---	25.0	"	"	"	---	94	"	---	---	
2,2-Dichloropropane	1230	---	50.0	"	"	"	---	123	"	---	---	
1,1-Dichloropropene	1230	---	50.0	"	"	"	---	123	"	---	---	
cis-1,3-Dichloropropene	1120	---	50.0	"	"	"	---	112	"	---	---	
trans-1,3-Dichloropropene	1100	---	50.0	"	"	"	---	110	"	---	---	
Ethylbenzene	1180	---	25.0	"	"	"	---	118	"	---	---	
Hexachlorobutadiene	1070	---	100	"	"	"	---	107	"	---	---	
2-Hexanone	1680	---	500	"	"	2000	---	84	"	---	---	ESTa
Isopropylbenzene	1120	---	50.0	"	"	1000	---	112	"	---	---	
4-Isopropyltoluene	1290	---	50.0	"	"	"	---	129	"	---	---	
4-Methyl-2-pentanone (MiBK)	1700	---	500	"	"	2000	---	85	"	---	---	ESTa
Methyl tert-butyl ether (MTBE)	887	---	50.0	"	"	1000	---	89	"	---	---	
Methylene chloride	920	---	250	"	"	"	---	92	"	---	---	
Naphthalene	895	---	100	"	"	"	---	90	"	---	---	
n-Propylbenzene	1390	---	25.0	"	"	"	---	139	"	---	---	Q-29
Styrene	1090	---	50.0	"	"	"	---	109	"	---	---	
1,1,1,2-Tetrachloroethane	982	---	25.0	"	"	"	---	98	"	---	---	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303660 - EPA 5035A							**Soil**					
LCS (1303660-BS1)					Prepared: 03/27/13 09:00 Analyzed: 03/27/13 10:42							
1,1,2,2-Tetrachloroethane	836	---	25.0	"	"	"	---	84	"	---	---	
Tetrachloroethene (PCE)	1070	---	25.0	"	"	"	---	107	"	---	---	
Toluene	1060	---	50.0	"	"	"	---	106	"	---	---	
1,2,3-Trichlorobenzene	932	---	250	"	"	"	---	93	"	---	---	
1,2,4-Trichlorobenzene	1110	---	250	"	"	"	---	111	"	---	---	
1,1,1-Trichloroethane	1160	---	25.0	"	"	"	---	116	"	---	---	
1,1,2-Trichloroethane	830	---	25.0	"	"	"	---	83	"	---	---	
Trichloroethene (TCE)	1060	---	25.0	"	"	"	---	106	"	---	---	
Trichlorofluoromethane	1760	---	100	"	"	"	---	176	"	---	---	EST
1,2,3-Trichloropropane	888	---	50.0	"	"	"	---	89	"	---	---	
1,2,4-Trimethylbenzene	1300	---	50.0	"	"	"	---	130	"	---	---	
1,3,5-Trimethylbenzene	1300	---	50.0	"	"	"	---	130	"	---	---	
Vinyl chloride	1110	---	25.0	"	"	"	---	111	"	---	---	
m,p-Xylene	2350	---	50.0	"	"	2000	---	118	"	---	---	
o-Xylene	1160	---	25.0	"	"	1000	---	116	"	---	---	
Surr: Dibromofluoromethane (Surr)		*Recovery:*	*100 %*	*Limits:*	*70-130 %*	*Dilution:*	*1x*					
1,4-Difluorobenzene (Surr)			*103 %*		*70-130 %*		*"*					
Toluene-d8 (Surr)			*104 %*		*70-130 %*		*"*					
4-Bromofluorobenzene (Surr)			*100 %*		*70-130 %*		*"*					

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
Blank (1303687-BLK1)					Prepared: 03/27/13 14:14 Analyzed: 03/27/13 16:33							
EPA 8260B												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	"	"	---	---	---	---	---	---	
Chloroform	ND	---	1.00	"	"	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
Blank (1303687-BLK1)					Prepared: 03/27/13 14:14 Analyzed: 03/27/13 16:33							
cis-1,2-Dichloroethene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	

DRAFT REPORT

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Apex Labs

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
Blank (1303687-BLK1)					Prepared: 03/27/13 14:14 Analyzed: 03/27/13 16:33							
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*92 %*		*80-120 %*		"					
Toluene-d8 (Surr)			*103 %*		*80-120 %*		"					
4-Bromofluorobenzene (Surr)			*104 %*		*80-120 %*		"					
LCS (1303687-BS1)					Prepared: 03/27/13 14:14 Analyzed: 03/27/13 15:38							
EPA 8260B												
Acetone	80.6	---	20.0	ug/L	1	40.0	---	202	70-130%	---	---	EST
Benzene	19.4	---	0.250	"	"	20.0	---	97	"	---	---	
Bromobenzene	21.6	---	0.500	"	"	"	---	108	"	---	---	
Bromochloromethane	22.7	---	1.00	"	"	"	---	113	"	---	---	
Bromodichloromethane	22.5	---	1.00	"	"	"	---	112	"	---	---	
Bromoform	27.8	---	1.00	"	"	"	---	139	"	---	---	Q-29
Bromomethane	29.9	---	5.00	"	"	"	---	149	"	---	---	EST
2-Butanone (MEK)	66.2	---	10.0	"	"	40.0	---	166	"	---	---	EST
n-Butylbenzene	21.3	---	1.00	"	"	20.0	---	106	"	---	---	
sec-Butylbenzene	19.1	---	1.00	"	"	"	---	95	"	---	---	
tert-Butylbenzene	20.7	---	1.00	"	"	"	---	103	"	---	---	
Carbon tetrachloride	22.2	---	0.500	"	"	"	---	111	"	---	---	
Chlorobenzene	20.7	---	0.500	"	"	"	---	103	"	---	---	
Chloroethane	53.3	---	5.00	"	"	"	---	267	"	---	---	EST
Chloroform	21.6	---	1.00	"	"	"	---	108	"	---	---	
Chloromethane	20.5	---	5.00	"	"	"	---	103	"	---	---	
2-Chlorotoluene	18.6	---	1.00	"	"	"	---	93	"	---	---	
4-Chlorotoluene	19.9	---	1.00	"	"	"	---	100	"	---	---	
1,2-Dibromo-3-chloropropane	29.6	---	5.00	"	"	"	---	148	"	---	---	EST

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
LCS (1303687-BS1)					Prepared: 03/27/13 14:14 Analyzed: 03/27/13 15:38							
Dibromochloromethane	24.8	---	1.00	ug/L	"	"	---	124	"	---	---	
1,2-Dibromoethane (EDB)	23.9	---	0.500	"	"	"	---	119	"	---	---	
Dibromomethane	22.7	---	1.00	"	"	"	---	113	"	---	---	
1,2-Dichlorobenzene	21.4	---	0.500	"	"	"	---	107	"	---	---	
1,3-Dichlorobenzene	20.0	---	0.500	"	"	"	---	100	"	---	---	
1,4-Dichlorobenzene	19.8	---	0.500	"	"	"	---	99	"	---	---	
Dichlorodifluoromethane	24.0	---	1.00	"	"	"	---	120	"	---	---	
1,1-Dichloroethane	20.2	---	0.500	"	"	"	---	101	"	---	---	
1,2-Dichloroethane (EDC)	25.7	---	0.500	"	"	"	---	129	"	---	---	
1,1-Dichloroethene	20.6	---	0.500	"	"	"	---	103	"	---	---	
cis-1,2-Dichloroethene	19.5	---	0.500	"	"	"	---	97	"	---	---	
trans-1,2-Dichloroethene	19.3	---	0.500	"	"	"	---	96	"	---	---	
1,2-Dichloropropane	18.7	---	0.500	"	"	"	---	93	"	---	---	
1,3-Dichloropropane	22.7	---	1.00	"	"	"	---	113	"	---	---	
2,2-Dichloropropane	22.3	---	1.00	"	"	"	---	112	"	---	---	
1,1-Dichloropropene	19.2	---	1.00	"	"	"	---	96	"	---	---	
cis-1,3-Dichloropropene	20.2	---	1.00	"	"	"	---	101	"	---	---	
trans-1,3-Dichloropropene	23.7	---	1.00	"	"	"	---	119	"	---	---	
Ethylbenzene	21.4	---	0.500	"	"	"	---	107	"	---	---	
Hexachlorobutadiene	23.0	---	5.00	"	"	"	---	115	"	---	---	
2-Hexanone	72.6	---	10.0	"	"	40.0	---	181	"	---	---	EST
Isopropylbenzene	20.6	---	1.00	"	"	20.0	---	103	"	---	---	
4-Isopropyltoluene	19.4	---	1.00	"	"	"	---	97	"	---	---	
4-Methyl-2-pentanone (MiBK)	57.4	---	10.0	"	"	40.0	---	144	"	---	---	EST
Methyl tert-butyl ether (MTBE)	22.0	---	1.00	"	"	20.0	---	110	"	---	---	
Methylene chloride	19.2	---	5.00	"	"	"	---	96	"	---	---	
Naphthalene	25.4	---	2.00	"	"	"	---	127	"	---	---	
n-Propylbenzene	19.6	---	0.500	"	"	"	---	98	"	---	---	
Styrene	20.7	---	1.00	"	"	"	---	104	"	---	---	
1,1,1,2-Tetrachloroethane	22.1	---	0.500	"	"	"	---	110	"	---	---	

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
LCS (1303687-BS1)					Prepared: 03/27/13 14:14 Analyzed: 03/27/13 15:38							
1,1,2,2-Tetrachloroethane	21.9	---	0.500	"	"	"	---	110	"	---	---	
Tetrachloroethene (PCE)	21.9	---	0.500	"	"	"	---	110	"	---	---	
Toluene	21.0	---	1.00	"	"	"	---	105	"	---	---	
1,2,3-Trichlorobenzene	23.7	---	5.00	"	"	"	---	118	"	---	---	
1,2,4-Trichlorobenzene	24.2	---	5.00	"	"	"	---	121	"	---	---	
1,1,1-Trichloroethane	23.0	---	0.500	"	"	"	---	115	"	---	---	
1,1,2-Trichloroethane	22.0	---	0.500	"	"	"	---	110	"	---	---	
Trichloroethene (TCE)	19.3	---	0.500	"	"	"	---	97	"	---	---	
Trichlorofluoromethane	104	---	2.00	"	"	"	---	520	"	---	---	EST
1,2,3-Trichloropropane	25.4	---	1.00	"	"	"	---	127	"	---	---	
1,2,4-Trimethylbenzene	19.7	---	1.00	"	"	"	---	99	"	---	---	
1,3,5-Trimethylbenzene	20.0	---	1.00	"	"	"	---	100	"	---	---	
Vinyl chloride	22.5	---	0.500	"	"	"	---	112	"	---	---	
m,p-Xylene	43.0	---	1.00	"	"	40.0	---	108	"	---	---	
o-Xylene	21.5	---	0.500	"	"	20.0	---	107	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 100 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*94 %*		*80-120 %*			"				
Toluene-d8 (Surr)			*103 %*		*80-120 %*			"				
4-Bromofluorobenzene (Surr)			*96 %*		*80-120 %*			"				
Duplicate (1303687-DUP1)					Prepared: 03/27/13 16:14 Analyzed: 03/27/13 17:57							
QC Source Sample: GP-3 GW (A13C614-15)												
EPA 8260B												
Acetone	ND	---	20.0	ug/L	1	---	12.7	---	---	***	30%	EST
Benzene	ND	---	0.250	"	"	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
Duplicate (1303687-DUP1)					Prepared: 03/27/13 16:14 Analyzed: 03/27/13 17:57							
QC Source Sample: GP-3 GW (A13C614-15)												
sec-Butylbenzene	ND	---	1.00	ug/L	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	"	"	---	0.730	---	---	***	30%	
Chloromethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloroprop ane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
Duplicate (1303687-DUP1)					Prepared: 03/27/13 16:14 Analyzed: 03/27/13 17:57							
QC Source Sample: GP-3 GW (A13C614-15)												
Hexachlorobutadiene	ND	---	5.00	ug/L	"	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Styrene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	**0.720**	---	0.500	"	"	---	0.770	---	---	7	30%	
Toluene	ND	---	1.00	"	"	---	0.660	---	---	***	30%	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr)	*Recovery: 98 %*	*Limits: 80-120 %*	*Dilution: 1x*
1,4-Difluorobenzene (Surr)	*95 %*	*80-120 %*	"
Toluene-d8 (Surr)	*103 %*	*80-120 %*	"

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303687 - EPA 5030B							**Water**					
Duplicate (1303687-DUP1)					Prepared: 03/27/13 16:14 Analyzed: 03/27/13 17:57							
QC Source Sample: GP-3 GW (A13C614-15)												
Surr: 4-Bromofluorobenzene (Surr)			*Recovery: 105 %*		*Limits: 80-120 %*		*Dilution: 1x*					

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PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040150 - EPA 5035A							**Soil**					
Blank (3040150-BLK1)					Prepared: 04/08/13 09:00 Analyzed: 04/08/13 11:52							
5035/8260B												
Acetone	ND	---	667	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	---	8.33	"	"	---	---	---	---	---	---	
Bromobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Bromochloromethane	ND	---	33.3	"	"	---	---	---	---	---	---	
Bromodichloromethane	ND	---	33.3	"	"	---	---	---	---	---	---	
Bromoform	ND	---	33.3	"	"	---	---	---	---	---	---	
Bromomethane	ND	---	333	"	"	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	333	"	"	---	---	---	---	---	---	
n-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	16.7	"	"	---	---	---	---	---	---	
Chlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Chloroethane	ND	---	333	"	"	---	---	---	---	---	---	
Chloroform	ND	---	33.3	"	"	---	---	---	---	---	---	
Chloromethane	ND	---	167	"	"	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	167	"	"	---	---	---	---	---	---	
Dibromochloromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	16.7	"	"	---	---	---	---	---	---	
Dibromomethane	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	16.7	"	"	---	---	---	---	---	---	

DRAFT REPORT

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Apex Labs

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040150 - EPA 5035A							**Soil**					
Blank (3040150-BLK1)					Prepared: 04/08/13 09:00 Analyzed: 04/08/13 11:52							
cis-1,2-Dichloroethene	ND	---	16.7	ug/kg wet	"	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloropropane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	16.7	"	"	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	33.3	"	"	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	66.7	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	333	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	33.3	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	333	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	167	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Styrene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	16.7	"	"	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	167	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	167	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	16.7	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	16.7	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	66.7	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	33.3	"	"	---	---	---	---	---	---	

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040150 - EPA 5035A							**Soil**					
Blank (3040150-BLK1)					Prepared: 04/08/13 09:00 Analyzed: 04/08/13 11:52							
1,2,4-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 95 %*		*Limits: 70-130 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*96 %*		*70-130 %*		"					
Toluene-d8 (Surr)			*98 %*		*70-130 %*		"					
4-Bromofluorobenzene (Surr)			*104 %*		*70-130 %*		"					
LCS (3040150-BS1)					Prepared: 04/08/13 09:00 Analyzed: 04/08/13 10:59							
5035/8260B												
Acetone	1740	---	1000	ug/kg wet	50	2000	---	87	65-135%	---	---	
Benzene	1000	---	12.5	"	"	1000	---	100	"	---	---	
Bromobenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
Bromochloromethane	916	---	50.0	"	"	"	---	92	"	---	---	
Bromodichloromethane	972	---	50.0	"	"	"	---	97	"	---	---	
Bromoform	1070	---	50.0	"	"	"	---	107	"	---	---	
Bromomethane	738	---	500	"	"	"	---	74	"	---	---	
2-Butanone (MEK)	1500	---	500	"	"	2000	---	75	"	---	---	
n-Butylbenzene	1090	---	50.0	"	"	1000	---	109	"	---	---	
sec-Butylbenzene	1080	---	50.0	"	"	"	---	108	"	---	---	
tert-Butylbenzene	1030	---	50.0	"	"	"	---	103	"	---	---	
Carbon tetrachloride	996	---	25.0	"	"	"	---	100	"	---	---	
Chlorobenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
Chloroethane	912	---	500	"	"	"	---	91	"	---	---	
Chloroform	1010	---	50.0	"	"	"	---	101	"	---	---	
Chloromethane	853	---	250	"	"	"	---	85	"	---	---	
2-Chlorotoluene	1090	---	50.0	"	"	"	---	109	"	---	---	
4-Chlorotoluene	1090	---	50.0	"	"	"	---	109	"	---	---	
1,2-Dibromo-3-chloropropane	834	---	250	"	"	"	---	83	"	---	---	

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040150 - EPA 5035A							**Soil**					
LCS (3040150-BS1)					Prepared: 04/08/13 09:00 Analyzed: 04/08/13 10:59							
Dibromochloromethane	1000	---	100	ug/kg wet	"	"	---	100	"	---	---	
1,2-Dibromoethane (EDB)	964	---	25.0	"	"	"	---	96	"	---	---	
Dibromomethane	914	---	50.0	"	"	"	---	91	"	---	---	
1,2-Dichlorobenzene	1050	---	25.0	"	"	"	---	105	"	---	---	
1,3-Dichlorobenzene	1060	---	25.0	"	"	"	---	106	"	---	---	
1,4-Dichlorobenzene	1050	---	25.0	"	"	"	---	105	"	---	---	
Dichlorodifluoromethane	896	---	100	"	"	"	---	90	"	---	---	
1,1-Dichloroethane	966	---	25.0	"	"	"	---	97	"	---	---	
1,2-Dichloroethane (EDC)	976	---	25.0	"	"	"	---	98	"	---	---	
1,1-Dichloroethene	1050	---	25.0	"	"	"	---	105	"	---	---	
cis-1,2-Dichloroethene	998	---	25.0	"	"	"	---	100	"	---	---	
trans-1,2-Dichloroethene	997	---	25.0	"	"	"	---	100	"	---	---	
1,2-Dichloropropane	942	---	25.0	"	"	"	---	94	"	---	---	
1,3-Dichloropropane	984	---	25.0	"	"	"	---	98	"	---	---	
2,2-Dichloropropane	1020	---	50.0	"	"	"	---	102	"	---	---	
1,1-Dichloropropene	982	---	50.0	"	"	"	---	98	"	---	---	
cis-1,3-Dichloropropene	942	---	50.0	"	"	"	---	94	"	---	---	
trans-1,3-Dichloropropene	982	---	50.0	"	"	"	---	98	"	---	---	
Ethylbenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
Hexachlorobutadiene	1040	---	100	"	"	"	---	104	"	---	---	
2-Hexanone	1420	---	500	"	"	2000	---	71	"	---	---	
Isopropylbenzene	1100	---	50.0	"	"	1000	---	110	"	---	---	
4-Isopropyltoluene	1110	---	50.0	"	"	"	---	111	"	---	---	
4-Methyl-2-pentanone (MiBK)	1660	---	500	"	"	2000	---	83	"	---	---	
Methyl tert-butyl ether (MTBE)	862	---	50.0	"	"	1000	---	86	"	---	---	
Methylene chloride	1010	---	250	"	"	"	---	101	"	---	---	
Naphthalene	1180	---	100	"	"	"	---	118	"	---	---	
n-Propylbenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
Styrene	1130	---	50.0	"	"	"	---	113	"	---	---	
1,1,1,2-Tetrachloroethane	1050	---	25.0	"	"	"	---	105	"	---	---	

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040150 - EPA 5035A							**Soil**					
LCS (3040150-BS1)					Prepared: 04/08/13 09:00 Analyzed: 04/08/13 10:59							
1,1,2,2-Tetrachloroethane	927	---	25.0	"	"	"	---	93	"	---	---	
Tetrachloroethene (PCE)	1080	---	25.0	"	"	"	---	108	"	---	---	
Toluene	1050	---	50.0	"	"	"	---	105	"	---	---	
1,2,3-Trichlorobenzene	1110	---	250	"	"	"	---	111	"	---	---	
1,2,4-Trichlorobenzene	1260	---	250	"	"	"	---	126	"	---	---	
1,1,1-Trichloroethane	990	---	25.0	"	"	"	---	99	"	---	---	
1,1,2-Trichloroethane	1000	---	25.0	"	"	"	---	100	"	---	---	
Trichloroethene (TCE)	1020	---	25.0	"	"	"	---	102	"	---	---	
Trichlorofluoromethane	926	---	100	"	"	"	---	93	"	---	---	
1,2,3-Trichloropropane	833	---	50.0	"	"	"	---	83	"	---	---	
1,2,4-Trimethylbenzene	1070	---	50.0	"	"	"	---	107	"	---	---	
1,3,5-Trimethylbenzene	1080	---	50.0	"	"	"	---	108	"	---	---	
Vinyl chloride	926	---	25.0	"	"	"	---	93	"	---	---	
m,p-Xylene	2180	---	50.0	"	"	2000	---	109	"	---	---	
o-Xylene	1080	---	25.0	"	"	1000	---	108	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 95 %*		*Limits: 70-130 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*96 %*		*70-130 %*		*"*					
Toluene-d8 (Surr)			*98 %*		*70-130 %*		*"*					
4-Bromofluorobenzene (Surr)			*100 %*		*70-130 %*		*"*					

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303718 - EPA 3546							**Soil**					
Blank (1303718-BLK1)					Prepared: 03/28/13 13:07 Analyzed: 03/29/13 11:49							C-07
EPA 8082A												
Aroclor 1016	ND	---	7.14	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	7.14	"	"	---	---	---	---	---	---	
Aroclor 1232	ND	---	7.14	"	"	---	---	---	---	---	---	
Aroclor 1242	ND	---	7.14	"	"	---	---	---	---	---	---	
Aroclor 1248	ND	---	7.14	"	"	---	---	---	---	---	---	
Aroclor 1254	ND	---	7.14	"	"	---	---	---	---	---	---	
Aroclor 1260	ND	---	7.14	"	"	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 107 %*	*Limits: 60-125 %*			*Dilution: 1x*					
LCS (1303718-BS1)					Prepared: 03/28/13 13:07 Analyzed: 03/29/13 12:08							C-07
EPA 8082A												
Aroclor 1016	234	---	10.0	ug/kg wet	1	250	---	94	40-140%	---	---	
Aroclor 1260	209	---	10.0	"	"	"	---	84	60-130%	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 105 %*	*Limits: 60-125 %*			*Dilution: 1x*					
Matrix Spike (1303718-MS1)					Prepared: 03/28/13 13:07 Analyzed: 03/29/13 15:50							C-07
QC Source Sample: GP-1 5-10' (A13C614-02)												
EPA 8082A												
Aroclor 1016	180	---	9.10	ug/kg dry	1	227	ND	79	40-140%	---	---	
Aroclor 1260	154	---	9.10	"	"	"	ND	68	60-130%	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 88 %*	*Limits: 60-125 %*			*Dilution: 1x*					

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040029 - EPA 3510C (Neutral pH)							**Water**					
Blank (3040029-BLK1)					Prepared: 04/02/13 08:09 Analyzed: 04/02/13 16:06							C-07
EPA 8082A												
Aroclor 1016	ND	---	0.0909	ug/L	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	0.0909	"	"	---	---	---	---	---	---	
Aroclor 1232	ND	---	0.0909	"	"	---	---	---	---	---	---	
Aroclor 1242	ND	---	0.0909	"	"	---	---	---	---	---	---	
Aroclor 1248	ND	---	0.0909	"	"	---	---	---	---	---	---	
Aroclor 1254	ND	---	0.0909	"	"	---	---	---	---	---	---	
Aroclor 1260	ND	---	0.0909	"	"	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 89 %*	*Limits: 40-135 %*			*Dilution: 1x*					
LCS (3040029-BS1)					Prepared: 04/02/13 08:09 Analyzed: 04/02/13 16:24							C-07
EPA 8082A												
Aroclor 1016	2.25	---	0.100	ug/L	1	2.50	---	90	40-140%	---	---	
Aroclor 1260	1.96	---	0.100	"	"	"	---	79	"	---	---	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 88 %*	*Limits: 40-135 %*			*Dilution: 1x*					
LCS Dup (3040029-BSD1)					Prepared: 04/02/13 08:09 Analyzed: 04/02/13 16:41							C-07, Q-19
EPA 8082A												
Aroclor 1016	2.33	---	0.100	ug/L	1	2.50	---	93	40-140%	3	30%	
Aroclor 1260	2.05	---	0.100	"	"	"	---	82	"	4	30%	
Surr: Decachlorobiphenyl (Surr)			*Recovery: 97 %*	*Limits: 40-135 %*			*Dilution: 1x*					

DRAFT REPORT

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040045 - EPA 3051A							**Soil**					
Blank (3040045-BLK1)					Prepared: 04/02/13 12:38 Analyzed: 04/03/13 11:40							
EPA 6020A												
Cadmium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	2.00	"	"	---	---	---	---	---	---	
Lead	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (3040045-BS1)					Prepared: 04/02/13 12:38 Analyzed: 04/03/13 11:43							
EPA 6020A												
Cadmium	50.1	---	1.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Chromium	49.2	---	2.00	"	"	"	---	98	"	---	---	
Lead	48.4	---	1.00	"	"	"	---	97	"	---	---	

DRAFT REPORT

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Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3040063 - EPA 3015A							**Water**					
Blank (3040063-BLK1)					Prepared: 04/03/13 08:22 Analyzed: 04/03/13 15:38							
EPA 6020A												
Cadmium	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chromium	ND	---	2.00	"	"	---	---	---	---	---	---	
Lead	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (3040063-BS1)					Prepared: 04/03/13 08:22 Analyzed: 04/03/13 15:42							
EPA 6020A												
Cadmium	55.5	---	1.00	ug/L	1	55.6	---	100	80-120%	---	---	
Chromium	57.2	---	2.00	"	"	"	---	103	"	---	---	
Lead	55.9	---	1.00	"	"	"	---	101	"	---	---	

DRAFT REPORT

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PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1303728 - Total Solids (Dry Weight)							**Soil**					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Batch 3040183 - Total Solids (Dry Weight)							**Soil**					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

SAMPLE PREPARATION INFORMATION

Diesel and Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Acid Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1303732							
A13C614-15	Water	NWTPH-Dx	03/26/13 00:00	03/29/13 07:53	950mL/5mL	1000mL/5mL	1.05

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 3040003							
A13C614-02	Soil	NWTPH-Dx	03/26/13 00:00	04/01/13 10:43	10.92g/5mL	10g/5mL	0.92
Batch: 3040194							
A13C614-11	Soil	NWTPH-Dx	03/26/13 00:00	04/09/13 12:03	11.02g/5mL	10g/5mL	0.91

Volatile Organic Compounds by EPA 8260B

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1303687							
A13C614-13	Water	EPA 8260B	03/26/13 00:00	03/27/13 16:14	5mL/5mL	5mL/5mL	1.00
A13C614-15	Water	EPA 8260B	03/26/13 00:00	03/27/13 16:14	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1303660							
A13C614-02	Soil	5035/8260B	03/26/13 00:00	03/27/13 15:00	12.562g/10mL	10g/10mL	0.80
Batch: 3040150							
A13C614-11	Soil	5035/8260B	03/26/13 00:00	04/08/13 11:25	12.425g/10mL	10g/10mL	0.81

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3510C (Neutral pH)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 3040029							
A13C614-15	Water	EPA 8082A	03/26/13 00:00	04/02/13 08:09	980mL/5mL	1000mL/5mL	1.02

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1303718							
A13C614-02	Soil	EPA 8082A	03/26/13 00:00	03/28/13 13:07	13.77g/5mL	10g/5mL	0.73

DRAFT REPORT

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503-718-0333 Fax

Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020 (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 3040063							
A13C614-13	Water	EPA 6020A	03/26/13 00:00	04/03/13 08:22	40mL/50mL	45mL/50mL	1.13
A13C614-15	Water	EPA 6020A	03/26/13 00:00	04/03/13 08:22	45mL/50mL	45mL/50mL	1.00

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 3040045							
A13C614-02	Soil	EPA 6020A	03/26/13 00:00	04/02/13 12:38	0.46g/50mL	0.5g/50mL	1.09

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

Notes and Definitions

Qualifiers:

C-07	Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
EST	Result reported as an Estimated Value. Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
ESTa	Result reported as an Estimated Value. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Data is likely biased high.
ME-2	Nitric acid preserved sample volume not available. Analysis performed on a sample aliquot taken from an HCl preserved container.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
Q-29	Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
V-15	Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.
V-16	Sample aliquot was subsampled from the sample container in the laboratory . The subsampled aliquot was not preserved within 48 hours of sampling.

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10

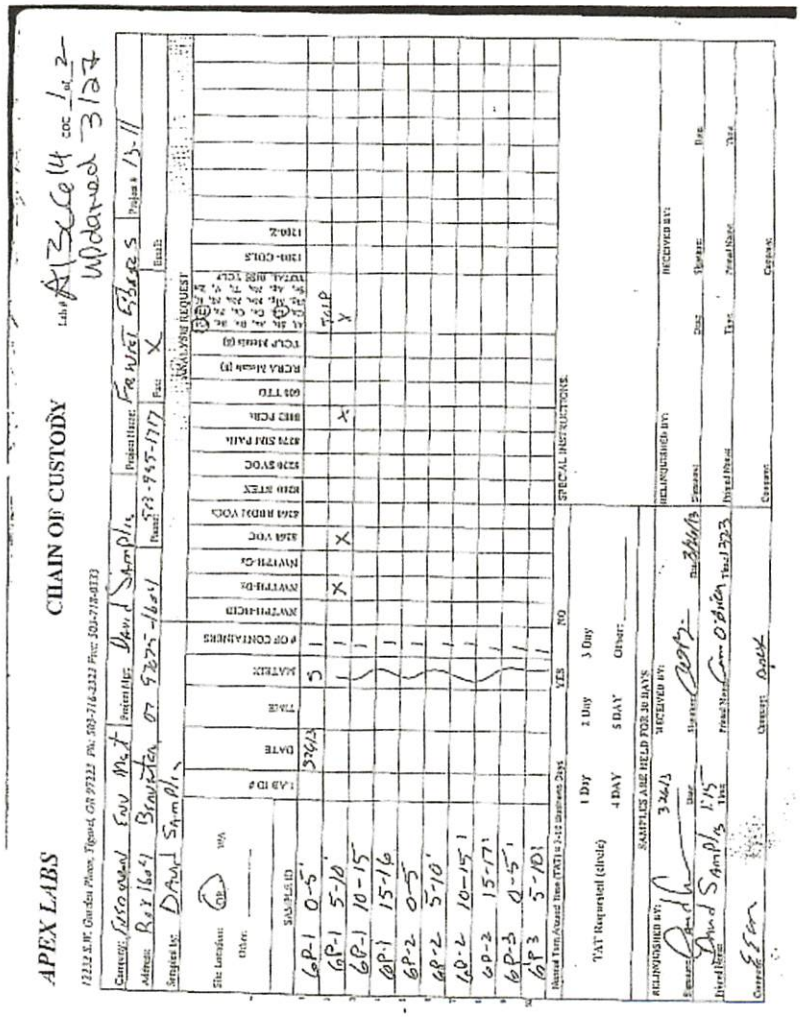
--- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

*** Used to indicate a possible discrepency with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10



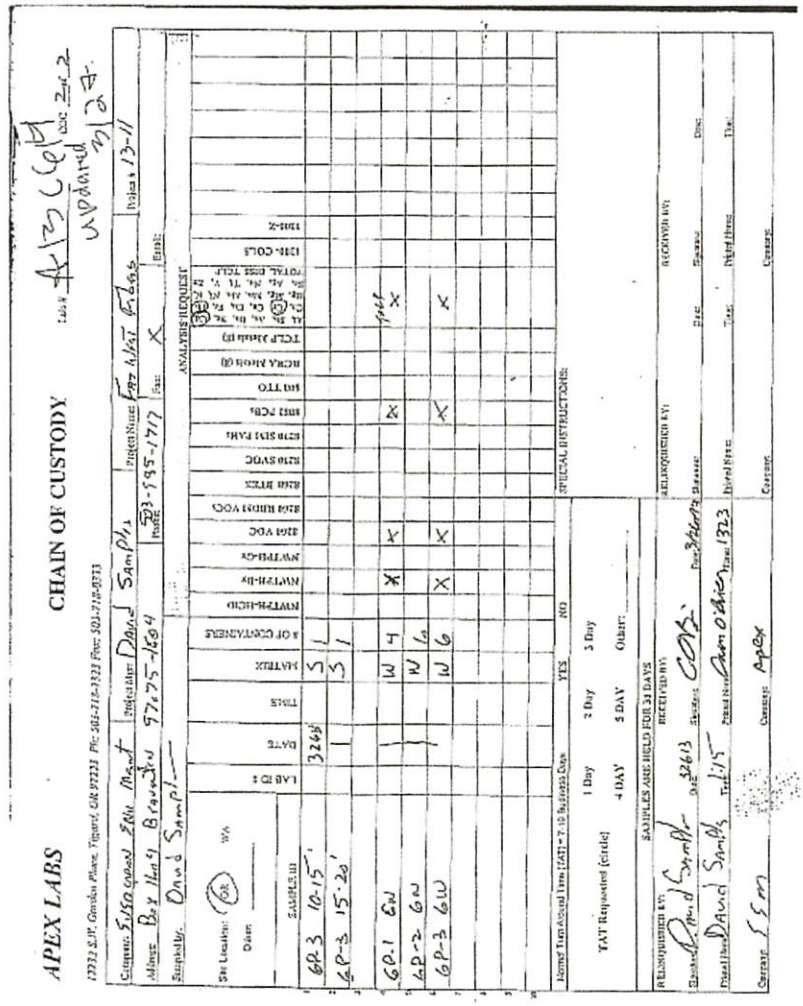
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PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10



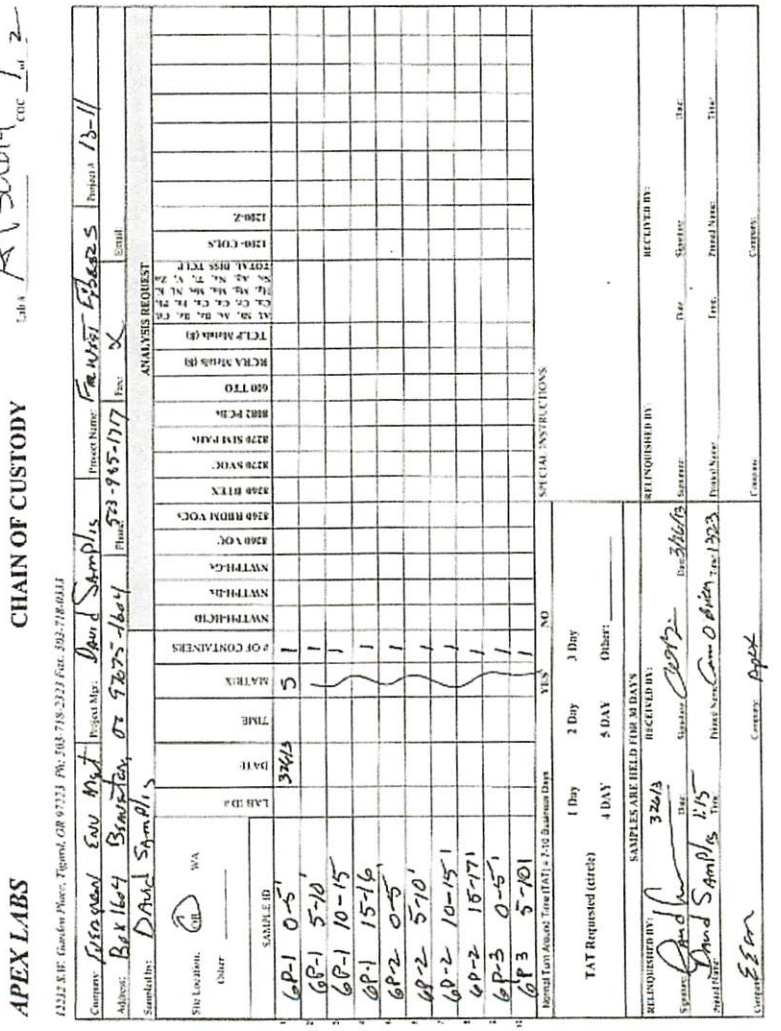
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Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10



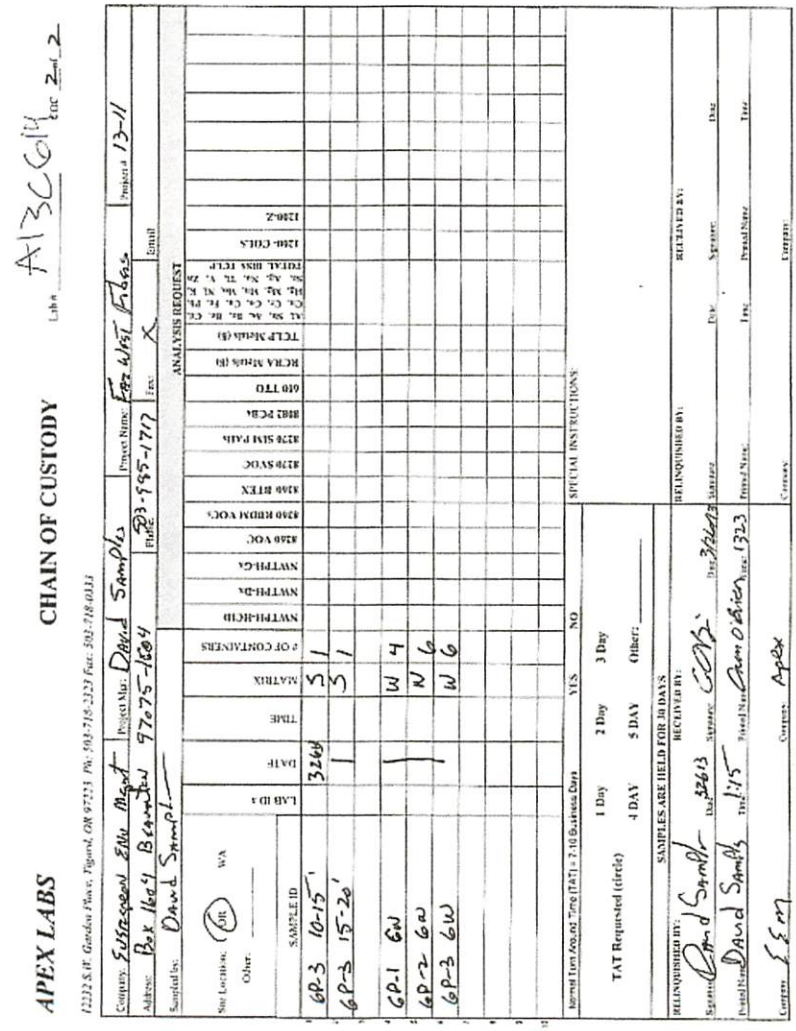
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Evergreen Environmental	Project: **Farwest Fibers**	
PO Box 1604	Project Number: 13-11	**Reported:**
Beaverton, OR 97075	Project Manager: Dave Samples	04/10/13 12:10



APEX LABS

CHAIN OF CUSTODY

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Lab # A13C611 Loc 2nd_2

Company: Sustainable Env Mgmt | Project Mgr: David Samples | Project Name: Farwest Fibers | Project # 13-11

Address: Box 1604 Beaverton 97075-1604 | Phone: 503-595-1772 | Fax: X | Email

Sampled by: David Samples

Site Location: (OR) WA Other: _____

ANALYSIS REQUEST

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 VOC	8260 RBDM VOCs	8260 BTEX	8270 SVOC	8270 SIM PAHs	8082 PCBs	610 TTO	RCRA Metals (8)	TCLP Metals (8)	TOTAL SIX TCLP (Cd, Cr, Cu, Ni, Pb, Zn)	TOTAL METALS (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, V, Zn)	1200-COLS	1200-Z
GP-3 10-15'		3269		S	1																
GP-3 15-20'				S	1																
GP-1 GW				W	4																
GP-2 GW				W	6																
GP-3 GW				W	6																

Turnaround Time (TAT) - 7-10 Business Days | YES | NO | SPECIAL INSTRUCTIONS:

TAT Requested (circle): 1 Day | 2 Day | 3 Day | 4 DAY | 5 DAY | Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY:

Signature: David Samples | Date: 3/26/13 | Signature: COPY | Date: 3/26/13 | Signature: _____ | Date: _____

Printed Name: David Samples | Time: 1:15 | Printed Name: Sam O'Brien | Time: 1323 | Printed Name: _____ | Time: _____

Company: EEM | Company: Apex | Company: _____

DRAFT REPORT

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SOIL SOLUTIONS
ENVIRONMENTAL SERVICES

3540 SE 28th Avenue . Portland, Oregon 97202

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www.soilsolutionsenvironmental.com

December 29, 2009

Mr. Bob McCoy
Oregon Department of Environmental Quality
Northwest Region
2020 S.W. Fourth Avenue, Suite 400
Portland, Oregon 97201

RE: Waste Oil Tank Decommissioning by Removal, Oregon Paper Fiber Facility,
12820 N.E. Marx Street, Portland, Oregon 97230
DEQ File # 26-09-1265

INTRODUCTION

This report documents the decommissioning by removal of a 500-gallon waste oil Underground Storage Tank (UST) by Soil Solutions Environmental Services, Inc. (SS) at the above referenced commercial facility (see Figure 1). Soil samples collected during the UST decommissioning activities were transported to Wy' East Environmental Sciences, Inc. (Wy'East) under Chain-of-Custody documentation for subsequent laboratory analyses. Site map, sample location map, disposal receipts for the UST and the contents of the UST, Chain-of-Custody documents and laboratory analytical reports are included as appendices with this report. UST decommissioning activities conducted by SS are discussed below in chronological order. SS was retained by Far West Fibers, Inc. on November 25, 2009 to decommission by removal a fiberglass waste oil UST system located on the eastern side of the Oregon Paper Fiber facility building at the above referenced address.

UST DECOMMISSIONING BY REMOVAL

Prior to commencing the decommissioning activities a 30-Day Notice of Intent to Decommission USTS was submitted to the Oregon Department of Environmental Quality (DEQ) on November 24, 2009. SS personnel then removed a concrete pad that was positioned over the UST along with two observation wells on December 9, 2009 and excavated to the top of the tank where an access hole was cut into the top of the UST. Residual waste oil and sludge was then removed and the tank interior was triple rinsed. The UST and associated bedding material were then removed from the UST cavity. The bedding material was stockpiled on the site and the UST was transported to Environmentally Conscious Recycling located in Portland, Oregon for disposal. Groundwater was not encountered during the excavation activities. The disposal receipts for the UST and UST rinsate are located in the appendix.

Following removal of the UST and bedding material two soil samples were collected for analysis from native soil on opposite bottom ends of the former UST cavity. The soil samples were placed in sample jars within a cooler and transported following chain-of-custody documentation to Wy'East for analyses following Oregon DEQ Method Northwest-Total Petroleum

Hydrocarbon Identification (NW-TPHHCID). These two soil samples laboratory analytical results are summarized in the following table.

Former UST Cavity Soil Sample Analytical Results 12/9/09				
Sample	Depth (inches bgs)	NW-TPHHCID		
		Gasoline (ppm)	Diesel (ppm)	Heavy Oil (ppm)
EPB @ 122" bgs	122	ND	ND	ND
WPB @ 122" bgs	122	ND	ND	ND

NW-TPHHCID = Northwest-Total Petroleum Hydrocarbon Identification
inches bgs = inches below ground surface
ppm = parts per million
ND = Not Detected at method detection limit

After receiving verbal approval from the Oregon DEQ the former UST cavity was backfilled with the stockpiled bedding material and clean soil to ground surface on December 11, 2009 and site restoration activities were then completed.

UST PIPING LINES TRENCH SOIL INVESTIGATION

SS conducted a soil investigation beneath three piping lines positioned within a 15-feet long trench between the former UST and the adjacent warehouse/office building to determine if the piping lines had released waste oil. The activities completed during this investigation are discussed below.

Utilizing hand auger equipment SS personnel collected one soil sample for analysis on December 11, 2009 from one hand auger boring positioned and drilled to approximately 3.5-feet below ground surface (bgs) at the approximate mid point of the piping trench run. This soil sample was placed in a glass jar within a cooler and transported under chain-of-custody documentation to Wy'East and analyzed following Oregon DEQ Methods NW-TPHHCID and Northwest Total Petroleum Hydrocarbon-Diesel Extended (NWTPH-Dx). This soil sample analytical result is summarized below.

Piping Lines Soil Investigation Soil Sample Analytical Results 12/11/09				
Sample	Depth (feet bgs)	NW-TPHHCID		
		Gasoline (ppm)	Diesel (ppm)	Heavy Oil (ppm)
Product Line Trench @ 3.5' bgs	3.5	ND	ND	D

NW-TPHHCID = Northwest-Total Petroleum Hydrocarbon Identification
feet bgs = feet below ground surface
D = Detected ND = Not Detected at method reporting limit

Piping Lines Soil Investigation Soil Sample Analytical Results 12/11/09			
Sample	Depth (feet bgs)	NWTPH-Dx	
		Diesel (ppm)	Heavy Oil (ppm)
Product Line Trench @ 3.5' bgs	3.5	ND	454

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon-Diesel Extended
ppm = parts per million
feet bgs = feet below ground surface
ND = Not Detected at method reporting limit

Following receipt of the soil sample analytical results SS reported a release of heavy oil from the UST piping lines to the Oregon DEQ.

SOIL MATRIX CLEANUP LEVEL

As required under Oregon Administrative Rule 340-122-325 (OAR 340-122-325), SS completed a Soil Matrix Cleanup evaluation for the site. Based on site specific parameters a Soil Matrix Score of 34 was calculated by SS designating an Oregon DEQ Soil Matrix Level 2 cleanup standard of 500 parts per million (ppm) heavy oil concentrations in soil for the site. The Soil Matrix Score Sheet is located in the Appendix.

PIPING LINES TRENCH EXCAVATION

On December 17, 2009 SS excavated and removed the three piping lines. Approximately 4.64-tons of gravel fill and waste oil impacted soil was then excavated from the piping line trench and transported to the Waste Management landfill in Hillsboro, Oregon for disposal. The disposal receipt for the gravel fill and impacted soil is located in the appendix. Two confirmation soil samples were then collected from the bottom of the overexcavated former piping line trench in the two locations illustrated on Figure 3. The two samples were placed in glass jars within a cooler and transported under chain-of-custody documentation to Wy'East and analyzed following Oregon DEQ Method NWTPH-Dx. The two confirmation soil sample analytical results are summarized below.

Piping Lines Trench Confirmation Soil Samples Analytical Results 12/17/09			
Sample	Depth (feet bgs)	NWTPH-Dx	
		Diesel (ppm)	Heavy Oil (ppm)
NPB @ 4.5' bgs	4.5	ND	ND
SPB @ 4.5' bgs	4.5	ND	ND

NWTPH-Dx = Northwest Total Petroleum Hydrocarbon-Diesel Extended
ppm = parts per million
feet bgs = feet below ground surface
ND = Not Detected at method reporting limit

The overexcavated former piping line trench was backfilled on December 18, 2009 and site restoration activities were then completed.

SUMMARY AND CONCLUSIONS

SS decommissioned by removal a 500-gallon waste oil UST system located on the eastern side of a combination warehouse and office building on the above referenced property. Groundwater was not encountered during the decommissioning activities. Two analyzed soil samples collected from native soil on the bottom of the former UST cavity did not contain detectable petroleum hydrocarbon concentrations indicating the UST had not released waste oil. One analyzed soil sample collected from native soil on the bottom of a 15-feet long piping line trench between the UST and building contained a measureable waste oil concentration of 454 ppm indicating waste oil had been released from the UST system piping lines.

Approximately 4.64-tons of waste oil impacted soil was excavated from the former piping line trench and disposed of along with the UST and piping lines at licensed disposal facilities. Two analyzed confirmation soil samples collected from the bottom of the overexcavated former piping line trench upon completion of the excavation activities did not contain detectable waste oil concentrations. Therefore the site appears to be in compliance with the Oregon DEQ Soil Matrix Level II cleanup standard established for the site.

The former UST cavity and piping line trench were backfilled to ground surface with clean backfill material and site restoration activities were completed.

Please contact Kevin Kelty if you have any questions related to the activities conducted on this site.

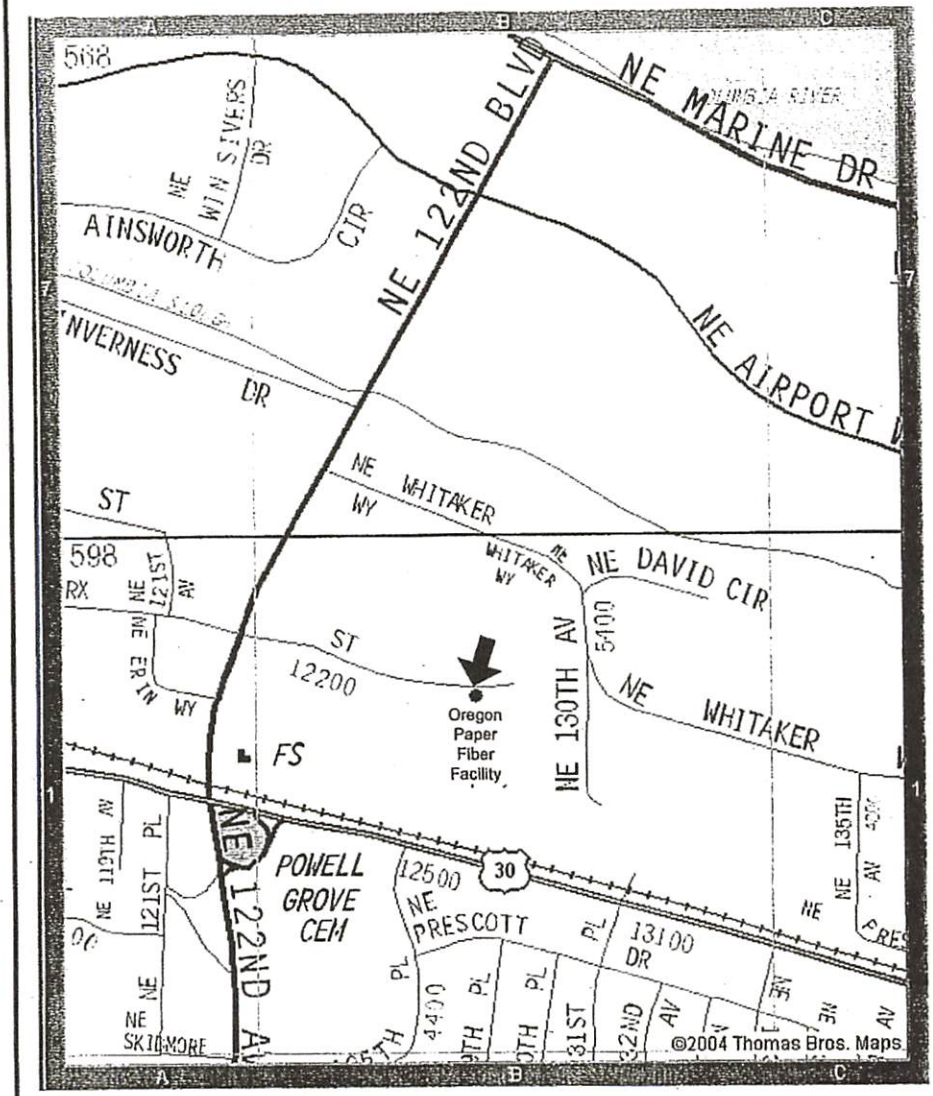
Sincerely,

SOIL SOLUTIONS ENVIRONMENTAL SERVICES, INC.

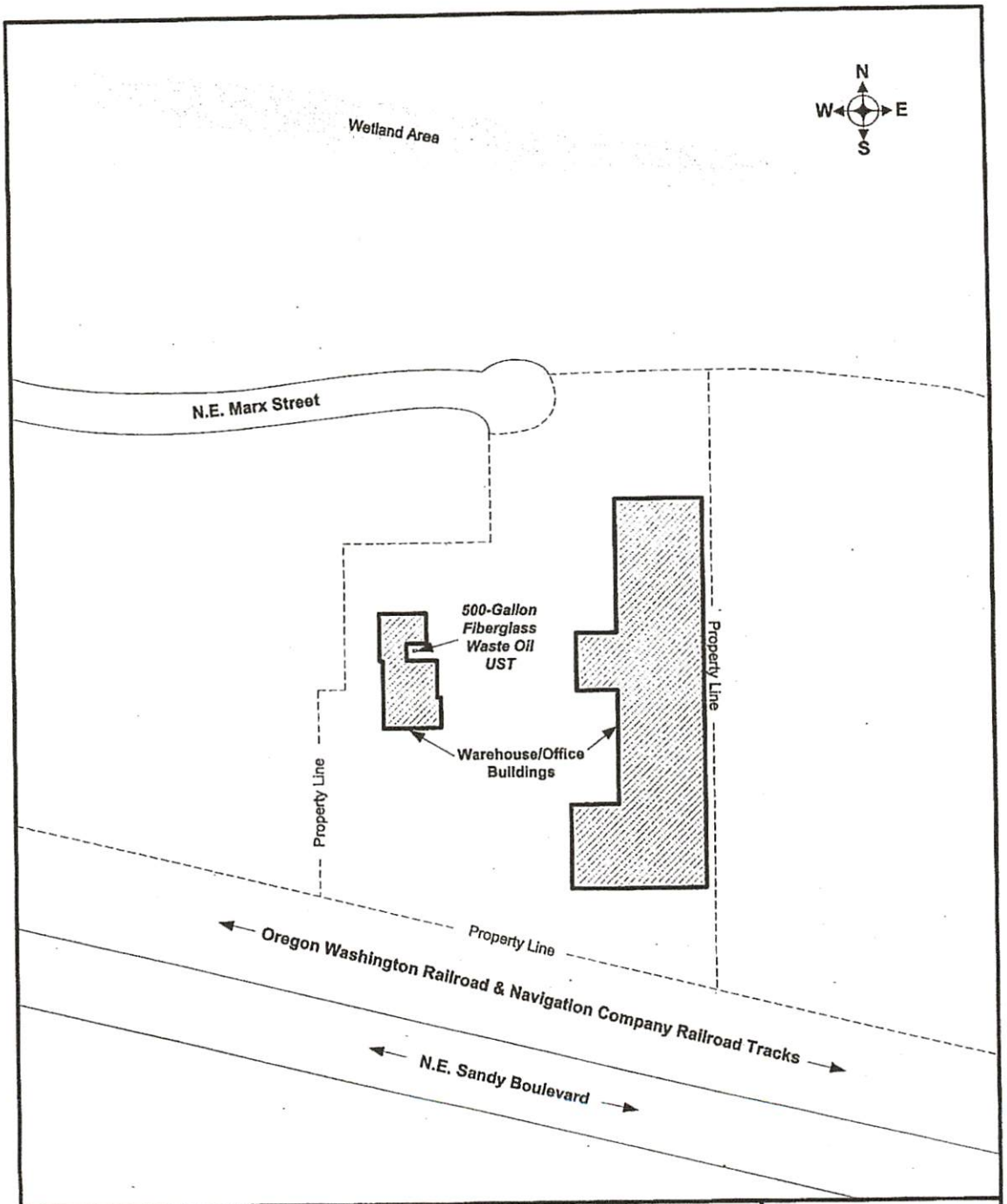
Kevin B. Kelty

Kevin B. Kelty, R.G.
Soil Matrix Cleanup License # 14258

cc: T.J. Millbrooke, Far West Fibers, Inc.
File



SOIL SOLUTIONS ENVIRONMENTAL SERVICES	**FIGURE 1** Site Location Map 12820 N.E. Marx Street Portland, Oregon 97230 DEQ File # 26-09-1265 Scale: 1-inch = 850-feet	PROJECT: Far West Fibers Inc. DATE: 12/21/09



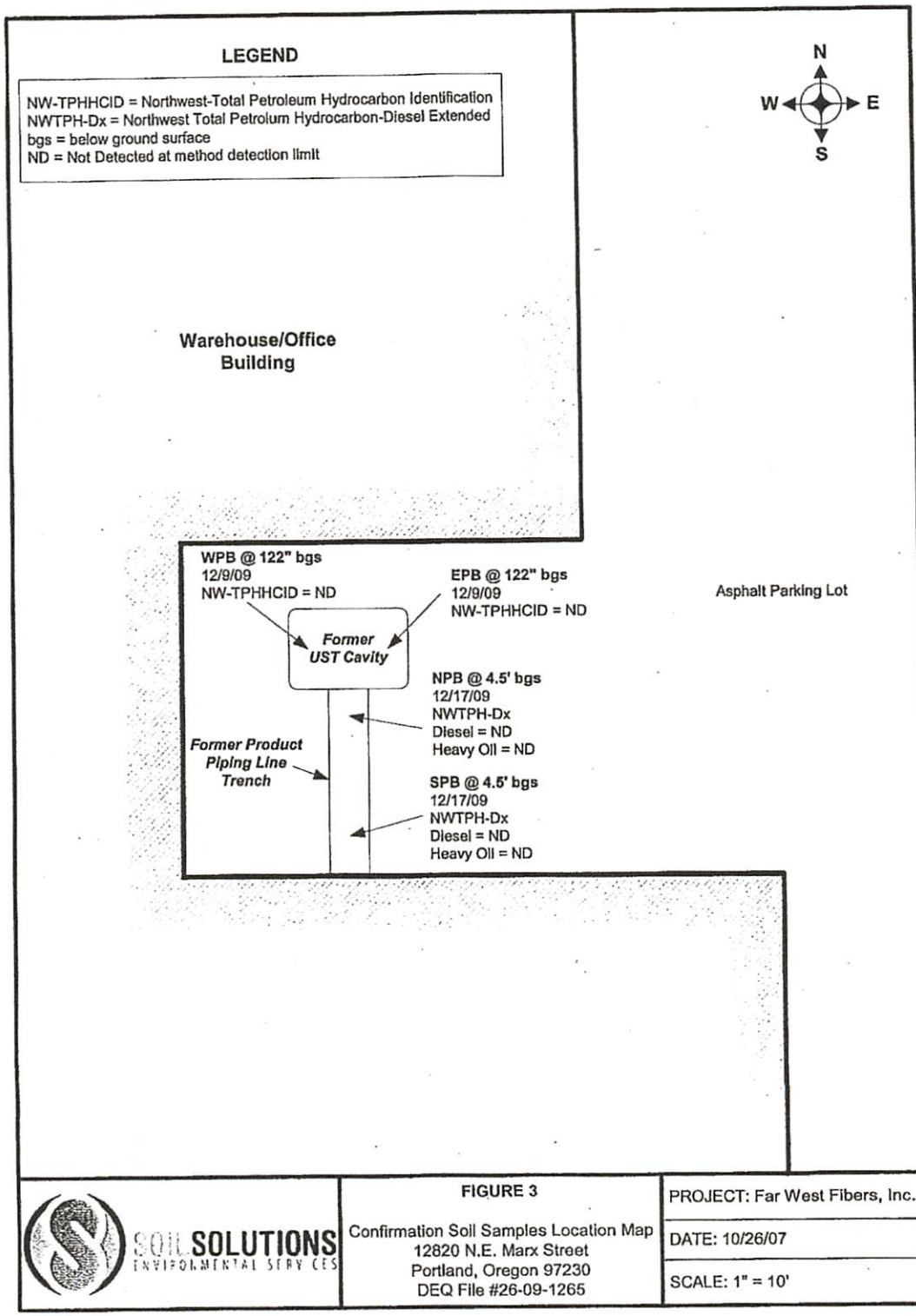
SOIL SOLUTIONS
ENVIRONMENTAL SERVICES

FIGURE 2
Site Map
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File # 26-09-1265

PROJECT: Far West Fibers, Inc.

DATE: 12/21/09

SCALE 1" = 150'



SOIL SOLUTIONS ENVIRONMENTAL SERVICES

FIGURE 3

Confirmation Soil Samples Location Map
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File #26-09-1265

PROJECT: Far West Fibers, Inc.

DATE: 10/26/07

SCALE: 1" = 10'

Oregon Paper Fiber
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ File # 26-09-1265

Matrix Checklist

☑ **1.** The release of petroleum has been reported to the DEQ (220).

☑ **2.** The Matrix Score Sheet has been completed for this site, unless the site is cleaned up to the most stringent cleanup level (320).

☑ **3.** The required hydrocarbon identification test (TPH-HCID) has been performed (335(3)), and, if detectable levels were found, the appropriate analytical method or methods have been used to measure the levels of contamination (350).

☑ **4.** A sketch has been made of this site (345(1)) which clearly shows:

- ☑ **a.** The location of all buildings and other key features, both man-made and natural;
- ☑ **b.** The names of adjacent streets and properties;
- ☑ **c.** The location of all excavations including those that were for the removal of tanks and associated piping as well as those that were strictly for the removal of contaminated soils.
- ☑ **d.** The location of all product storage tanks, lines and dispensers, including those that were decommissioned as well as those that remain on site; and
- ☑ **e.** All soil and water sample locations.

☑ **5.** If any contaminated soil exceeding matrix limits has been left on site, the reason for leaving this soil has been explained and the requirements of 355 (4) have been met.

☐ **6.** If water was present in the tank pit, the Department was notified, the water was pumped from the pit, and the requirements of 340 (4) have been met.

☑ **7.** All soil and/or water samples have been collected, coded, stored and shipped as specified in the rules, and proper chain-of-custody forms have been filled out (345).

☐ **8.** If a release from a waste oil tank was discovered, at least one sample has been analyzed by the methods specified in 350(5).

☑ **9.** If a tank was decommissioned in place, the department gave prior approval for a site-specific sampling plan (340(5)).

☑ **10.** A report has been prepared which includes a detailed description of everything that was observed and performed at the site, contains all of the information required by the rules (360), and presents findings and recommendations which are consistent with departmental regulations.

Oregon Paper Fiber
12820 N.E. Marx Street
Portland, Oregon 97230
DEQ # 26-09-1265

MATRIX SCORE SHEET

1.	Depth to Groundwater < 25 feet 25 – 50 feet 51 – 100 feet > 100 feet	 (10) (7) (4) (1)	10
2.	Mean Annual Precipitation >45 inches 20 – 45 inches <20 inches	 (10) (5) (1)	10
3.	Native Soil Type Coarse sands, gravels Silts, fine sands Clays	 (10) (5) (1)	5
4.	Sensitivity of Uppermost Aquifer Sole Source Current Potable Future Potable Non-potable	 (10) (7) (4) (1)	4
5.	Potential Receptors Many, Near Medium Few, Far	 (10) (5) (1)	5
	TOTAL SCORE	=	34

Matrix Score		Cleanup Level in ppm TPH	
		Gasoline	Diesel
Level 1:	> 40 pts.	40	100
Level 2:	25 – 40 pts.	80	500
Level 3:	< 25 pts.	130	1000

Environmentally Conscious Recycling
Thank You for Recycling
(503)253-0867

Ticket: 239276
Date: 12/11/2009
Time: 14:24:07 - 14:33:34

			Scale
Gross:	15660 lb	In	Scale 1
Tare:	14860 lb	Out	Scale 2
Net:	800 lb		

Truck: 3408
Customer: 3408/SOIL SOLUTIONS

Comment:

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
1/PORTLAND	100% of 01/DRY COMMINGLED	0.40	ton	$74.50/Ton	$29.80
1/PORTLAND	EN/ENVIRONMENTAL FEE	1.00	each	$9.50/Each	$9.50
				Transaction Fee:	$7.50
				Total Amount:	$46.80

Driver: Todd Irwin

Deputy Weighmaster: STEPHANIE

From:

WASTE MANAGEMENT

[illegible] Landfill, Inc.
3205 SE Minter Bridge
Hillsboro, OR, 97123
Ph: (503)-640-9427

Original
Ticket# 12[illegible]377

Customer Name SOILSOLUTION SOIL SOLUTIONS C
Ticket Date 12/18/2009
Payment Type Credit Account
Manual Ticket# —
Hauling Ticket#
Route
State Waste Code
Manifest na
Destination
PO MCCRACKEN
Profile 105136OR (PCS-HEATING OIL)
Generator OR-MIKE MCCRACKEN MIKE MCCRACKEN

Carrier SELFHLD SELF HAULED
Vehicle# 26
Container
Driver nathan
Check#
Billing # 0004[illegible]
Gen EPA ID N/A
Grid

Volume

	Time	Scale	Operator	Inbound	Gross	40240 lb*
In	12/18/2009 11:33:23	Inbound 1	jdb		Tare	30960 lb
Out	12/18/2009 11:49:09	Outbound	jdb		Net	9280 lb
			* Manual Weight		Tons	4.64

Comments

Consumer Comments? We want to know. Please call.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Cont Soil Pet-RGC-	100	4.64	Tons				MULT-IN
2	EVL-Env Fee Lg. -	100	1	Load				MULT-IN
3	AF1-Approval Fee S	100	1	Each				MULT-IN

Total Tax
Total Ticket

Driver's Signature

03WM

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Far West Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBER:

REPORT NUMBER: 76221
REPORT DATE: 12/18/09

NW-TPHDx
Analytes: Total Diesel and Heavy Oil range petroleum in Soil

Field ID	LAB ID	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
NPB @ 4.5' bgs	B0752	ND	ND	109%	78FL912-17-1	D091217-2	12/17/2009
SPB @ 4.5' bgs	B0753	ND	ND	115%	78FL912-17-1	D091217-2	12/17/2009
Reporting Limit:	--	50	100				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
This report shall not be reproduced, except in full, without the written approval of WyEast Environmental Sciences, Inc.

Chemist Initials: RWK, RPark

Wy'East
Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214

CHAIN OF CUSTODY

Report Number 76221

Phone(503) 231-9320 FAX(503) 231-9344

Company: Soil Solutions	Phone: 234-2118		
Project #: 12520 NE Mark St.	FAX:		
Project Name: Far West Fibers	Purchase Order #:		
Site: Portland, OR	Report Attention: Pat	Collected By: T. Ind	
Samples: Temperature____ On Ice? (Yes) / No	Turnaround Time: [X] Regular [ ] 3-5 Business Days		

LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B	Comments / Analysis Requested
B752	NPBC 4.5' Bgs	12/7/09	350	Soil	GLASS	4oz	Y						
B753	SPBC 4.5' Bgs	12/7/09	345	Soil	GLASS	4oz	Y						

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
[signature]	S/S	12/7/09		[signature]	12-17-09	[signature]	
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Far West Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBE

REPORT NUMBER: 76159
REPORT DATE: 12/13/09

NW-TPHHCID
Analytes: Gasoline, Diesel and Heavy Oil range petroleum Identification

Field ID	LAB ID	Gasline (mg/Kg)	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
Product Line Trench @ 3.5' bgs	B0152	**ND**	**ND**	**Detected**	141%	78FL91211-1	D091211-1	12/11/2009
Reporting Limit:	--	**20**	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
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Chemist Initials: C.Y Chan

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Far West Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBER:

REPORT NUMBER: 76159
REPORT DATE: 12/14/09

NW-TPHDx
Analytes: Total Diesel and Heavy Oil range petroleum in Soil

Field ID	LAB ID	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
Product Line Trench @ 3.5' bgs	B0152	**ND**	**454**	141%	78FL91211-1	D091211-2	12/11/2009
Reporting Limit:	--	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
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Chemist Initials: C.Y Chan

76159

CHAIN OF CUSTODY

Report Number_____

Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214
Phone(503) 231-9320 FAX(503) 231-9344

Company: Soil Solutions	Phone: 234-2118
Project #: 12820 NE Mark St.	FAX:
Project Name: Far West Fibers	Purchase Order #:
Site: Portland, OR	Report Attention: Pat / Collected By: T. Trimble
Samples: Temperature_____ On Ice? (Yes) No	Turnaround Time: [X] Regular [ ] 3-5 Business Days

LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B	Comments / Analysis Requested
B152	Product Line Trench @ 35ft	12/11/09	330	Soil	(1x4)	4oz			X				

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
[signature]	SES	12/11/09		[signature]	12-11-09		
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time

LABORATORY REPORT

Soil Solutions
3540 SE 28th Ave.
Portland, OR 97202

SITE NAME: Farwest Fibers
SITE LOCATION: 12820 NE Marx St
PROJECT NUMBE

REPORT NUMBER: 76133
REPORT DATE: 12/10/09

NW-TPHHCID
Analytes: Gasoline, Diesel and Heavy Oil range petroleum Identification

Field ID	LAB ID	Gasline (mg/Kg)	Diesel (mg/Kg)	Heavy Oil (mg/Kg)	Surrogate Recovery (%)	AB	PB	Sampling Date
EPB @ 122" bgs	B0056	**ND**	**ND**	**ND**	102%	78FL91209-1	D091209-2	12/9/2009
WPB @ 122" bgs	B0057	**ND**	**ND**	**ND**	109%	78FL91209-1	D091209-2	12/9/2009
Reporting Limit:	--	**20**	**50**	**100**				

Surrogate is 1-ChloroOctadecane

Results relate only to samples
This report shall not be reproduced, except in full, without the written approval of WyEast Environmental Sciences, Inc.

Chemist Initials: C.Y Chan

Quality Control for NWTPH-HCID

Batch Date: 12/9/09

QC Blank Sample Number	PB	Gas Result (mg/Kg)	Diesel Result (mg/Kg)	Oil Result (mg/Kg)	Blank CONTROL	Surrogate Recovery	Surrogate Control
SBLANK1	D091209-	0	0	0	PASS	99%	PASS

CCV Gas Sample Number	Analytical Batch	Gas Result	Gasoline CCV CONTROL
GAS	78FL91209-1	Detected	PASS

CCV Diesel Sample Number	Analytical Batch	Diesel Result	Diesel CCV CONTROL
DXCCV1	78FL91209-1	Detected	PASS

CCV Oil Sample Number	Analytical Batch	Oil Result	% Difference	CCV Control Limit (%)	Oil CCV CONTROL
OILCCV1	78FL91209-1	Detected			PASS

QC LCS Sample Number	PB	Diesel Result in Extract (ug/mL)	Theoretical Spike Concentration (ug/mL)	LCS Spike Recovery (%)	LCS Spike Control Limits (ug/mL)	LCS Spike CONTROL	Surrogate Recovery	LCS Surrogate Control Limits (%)
SLCSD1	D091209-1	343.58	357.14	96%	±30%	PASS	98%	50%-150%

CHAIN OF CUSTODY

Report Number 76133

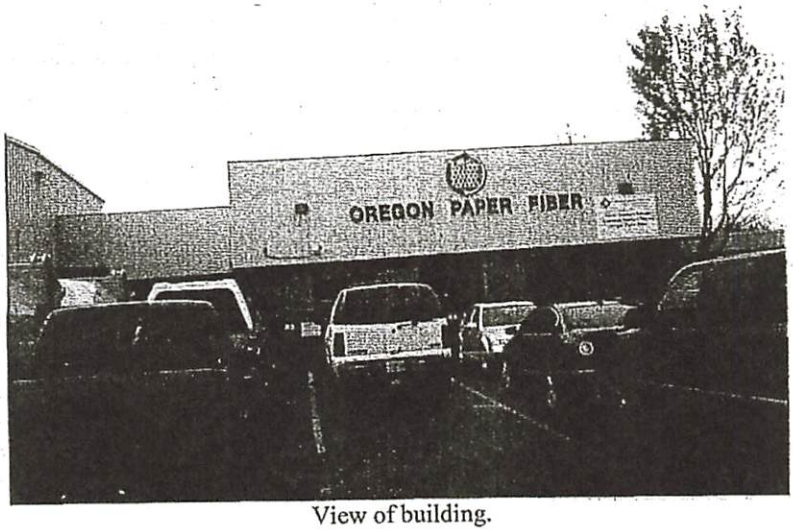
Environmental Sciences, Inc.
2415 SE 11th Ave. Portland Oregon 97214
Phone(503) 231-9320 FAX(503) 231-9344

Company: Soil Solutions	Phone: 234-2118
Project #: 1820 NE Mark St.	FAX:
Project Name: Far West Fibers	Purchase Order #:
Site: Portland, OR	Report Attention: Pat / Collected By: T. Trumbo
Samples: Temperature____ On Ice? (Yes) / No	Turnaround Time: [X] Regular [ ] 3-5 Business Days

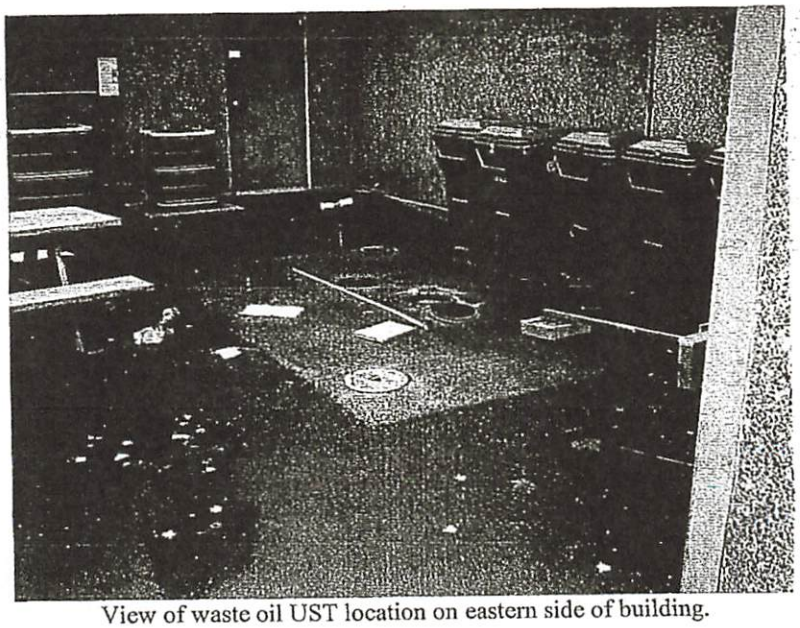
LAB ID	Field ID	Sampling Date	Sampling Time	Matrix	Container	Volume	NW-TPH-Dx	NW-TPH-GX	NW-TPH-HCID	EPA 8021B (BTEX)	EPA 8270 SIM (PAH)	EPA 8260B	Comments / Analysis Requested
B56	EPB @ 12.2' BJ	12/9/09	355	Soil	Glass	4oz			✓				
B57	WPB @ 12.2' BJS	12/9/09	350	Soil	Glass	4oz			✓				

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
[signature]	SS	12/9/09		[signature]	12-9-09		
Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time

SITE PHOTOS

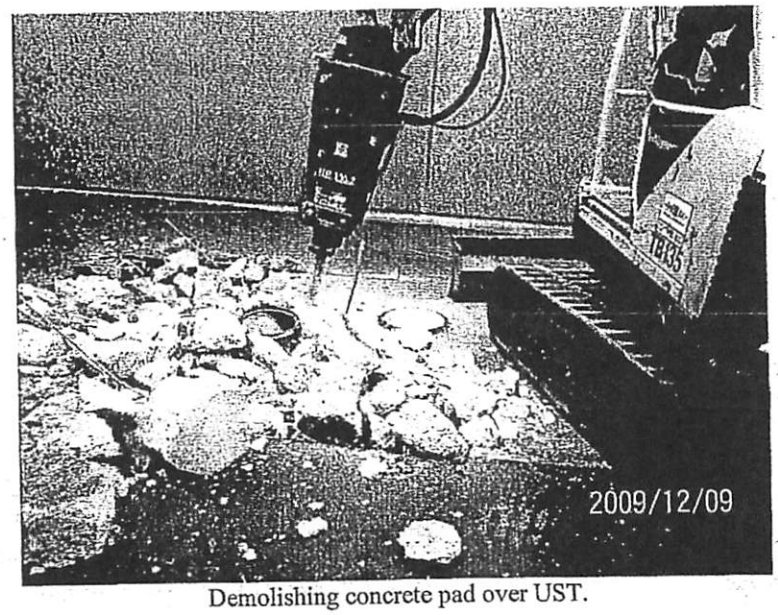


View of building.

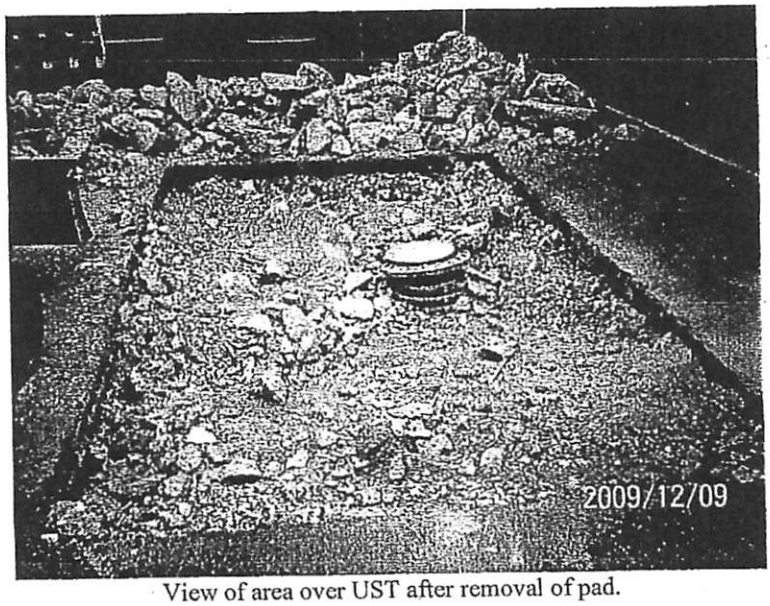


View of waste oil UST location on eastern side of building.

SITE PHOTOS



Demolishing concrete pad over UST.

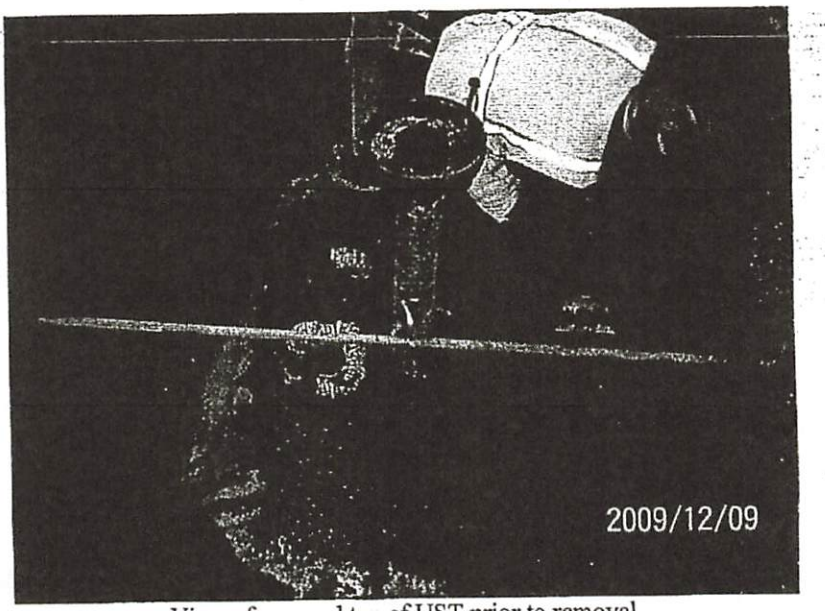


View of area over UST after removal of pad.

SITE PHOTOS

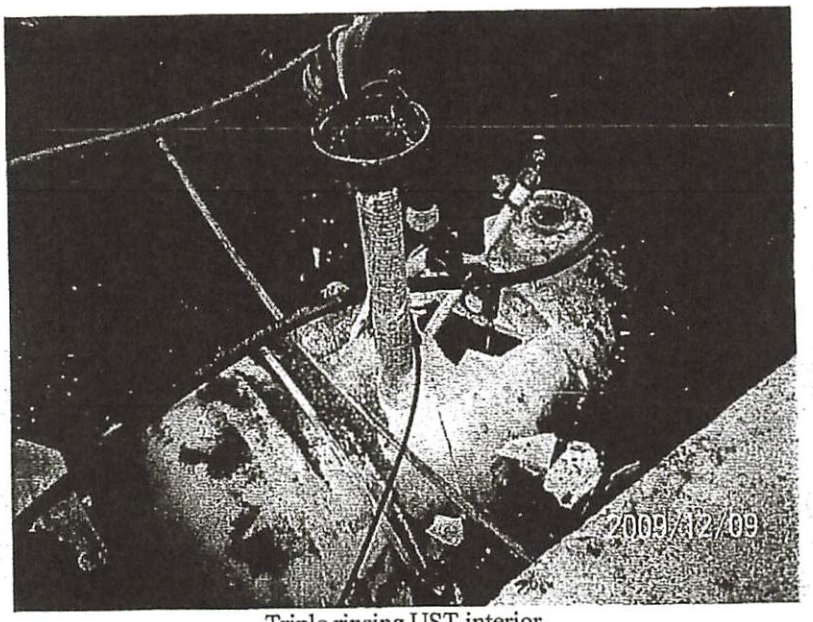


Excavating to top of UST.

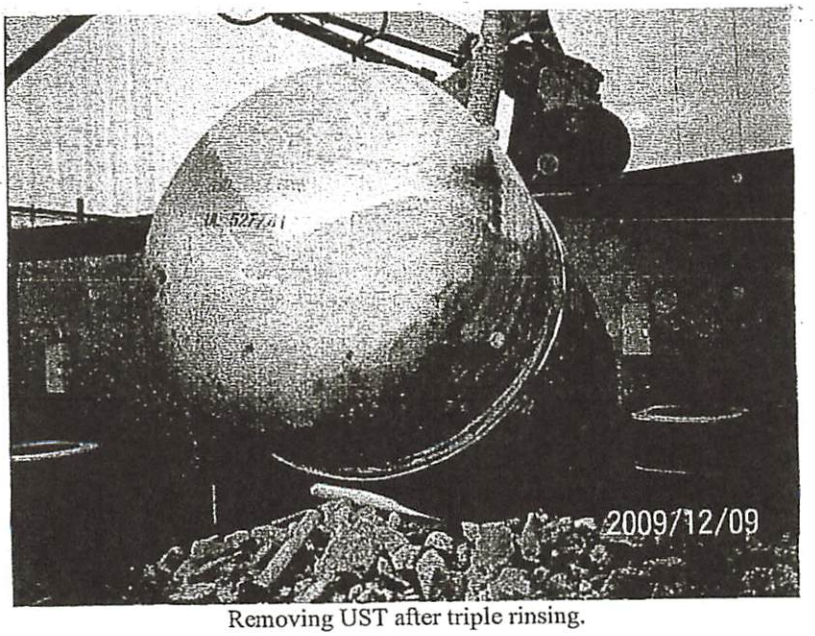


View of exposed top of UST prior to removal.

SITE PHOTOS



Triple rinsing UST interior.



Removing UST after triple rinsing.

SITE PHOTOS



Compacting former UST cavity backfill.



View of piping lines between UST and building.