Direct-Push Interim Report for the Volatile Organic Compound Investigation of the Red Pines Area

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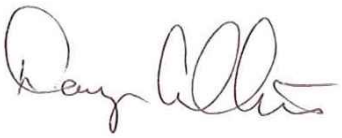
Approval for Use



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aRc Accelerated Remediation Company
A Portage-Shaw Joint Venture

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Acronyms

aRc	Accelerated Remediation Company, LLC
bgs	below ground surface
DOE	U.S. Department of Energy
KAPL	Knolls Atomic Power Laboratory
NYCRR	New York Code of Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
PID	photoionization detector
QAPjP	quality assurance project plan
RadCon	Radiological Controls
RCRA	Resource Conservation and Recovery Act
SCO	soil cleanup objective
SPRU	Separations Process Research Unit
USC	*United States Code*
VOC	volatile organic compound

1.0 Executive Summary

This report documents the completion of the Red Pines Area volatile organic compounds (VOC) investigation performed by the Accelerated Remediation Company (aRc) at the Separations Process Research Unit (SPRU) Land Areas in accordance with requirements specified in the *RCRA Work Plan for the Volatile Organic Compound Investigation of the Red Pines Area* (ARC-PLN-6121) and in accordance with the *RCRA Quality Assurance Project Plan for the Separations Process Research Unit Lower-Level Land Areas Remediation* (ARC-PLN-6402). The data quality objectives specific to this effort are provided in the "Red Pines Sampling Data Quality Objectives" (ARC-EDF-6109).

The purpose of this investigation was to characterize lateral extent of VOC contamination in the Red Pines Area. The New York State Department of Environmental Conservation (NYSDEC) has requested that characterization be performed to determine the extent of contamination (Rogers 2008).

Sampling efforts for the Red Pines Area investigation began on January 28, 2010, and concluded on February 5, 2010. Fifteen boreholes were advanced in the locations established in the Red Pines Area work plan (ARC-PLN-6121). Samples were collected at 2-ft intervals until gray till was encountered.

Evaluation of the data indicates the majority of the VOCs found in the boreholes were at depths at or near the brown till/gray till interface. Two compounds, acetone and carbon disulfide, were detected in all of the boreholes. Acetone was the only VOC with concentrations greater than its associated soil cleanup objective (SCO) (50 µg/kg). Other VOCs detected were cyclohexane, methylene chloride, 1,2,3-trichlorobenzene, trichlorofluoromethane, toluene, and xylenes, but these compounds were detected in fewer samples and fewer boreholes. Trichloroethene and tetrachloroethene, which had the highest concentrations reported in the *SPRU RCRA Facility Assessment Sampling Visit Report Addendum – Red Pines Area* (DOE/CH2M HILL 2006), were not detected in any samples collected for this investigation.

The data in this report indicate that acetone and several other VOCs are still present at or near the gray till in the Red Pines Area. Acetone was detected above SCOs in boreholes B001, B005, B009, and B014. These boreholes are situated on all sides of the Red Pines Area.

2.0 Introduction

SPRU is located on the Knolls Atomic Power Laboratory (KAPL) at 2425 River Road in Niskayuna, Schenectady County, New York. Chemical contamination in the SPRU North Field is being addressed under the Resource Conservation and Recovery Act (RCRA) (42 *United States Code* [USC] 6901 et seq.).

The U.S. Department of Energy (DOE) has considered potential future uses at the KAPL site and evaluated the residual chemical and radiological contamination to develop remedial action objectives for the Red Pines Area. The New York Code of Rules and Regulations (NYCRR) Part 375-6.8(b) SCOs have been promulgated for residual chemical contamination in soil based on a site's reasonably foreseeable future use. DOE seeks to obtain a "no further-action" determination from the NYSDEC for chemicals attributed to waste releases from SPRU in the Red Pines Area.

The North Field Area is approximately 15 acres and is southeast of the KAPL facility (see Figure 1). It includes the Former Slurry Drum Storage Area and the Red Pines Area. The Red Pines Area is located on the east side of the North Field. Radiological walk-over surveys conducted in 2002 and 2003 identified

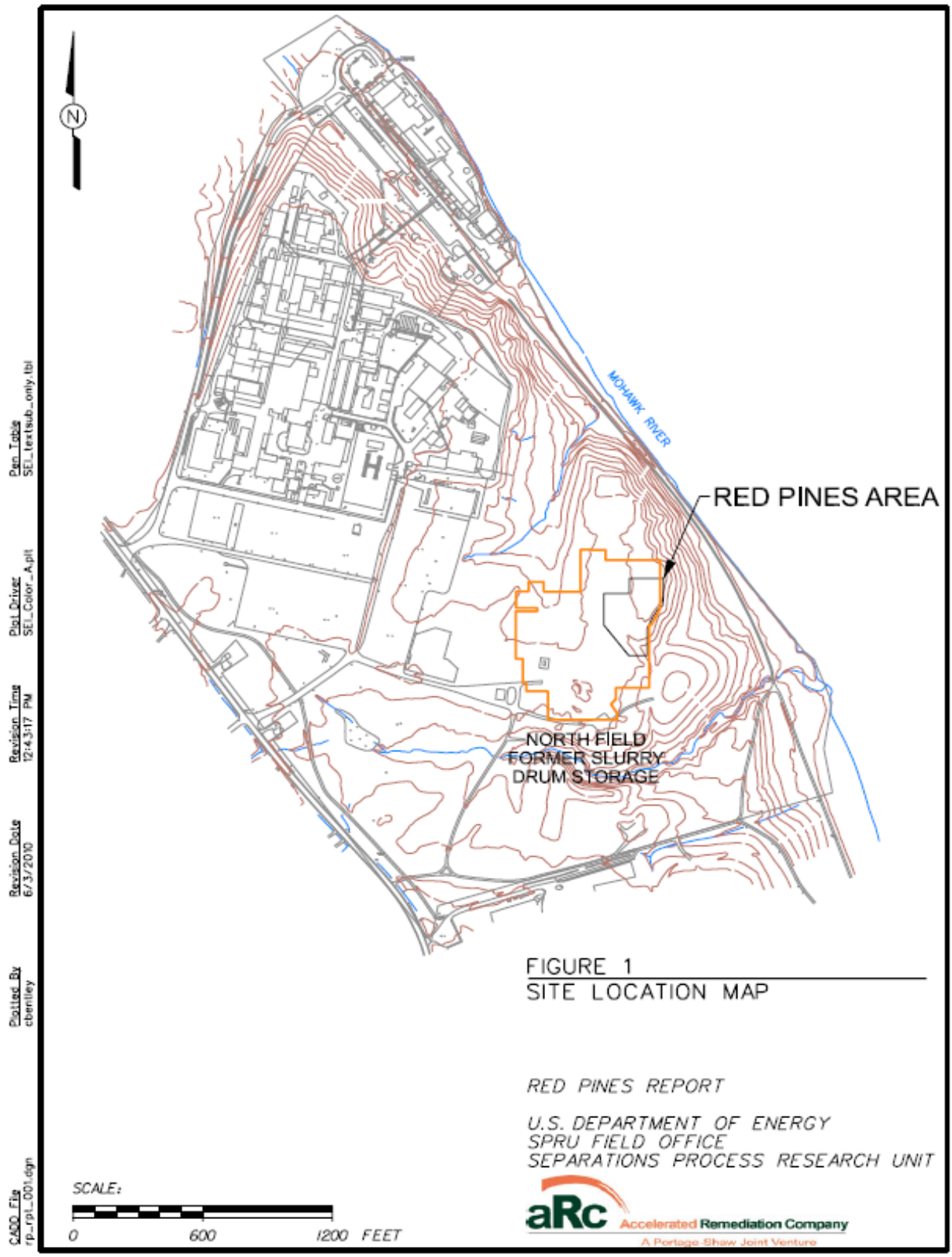


Figure 1 Site location map

radiological contamination in the Red Pines Area. Based on the *RCRA Facility Assessment Sampling Visit Report* (DOE/CH2M HILL 2002), additional soil boring and groundwater monitoring wells were installed and sampled in the Red Pines Area. Based on the soil borings, subsurface contamination for VOCs was identified.

3.0 Sampling Activities

3.1 Sample Location

Fifteen boreholes were advanced in the locations established in the Red Pines Area work plan (ARC-PLN-6121) (see Figure 2). Samples were collected at 2-ft intervals down to gray till. No surface samples were collected.

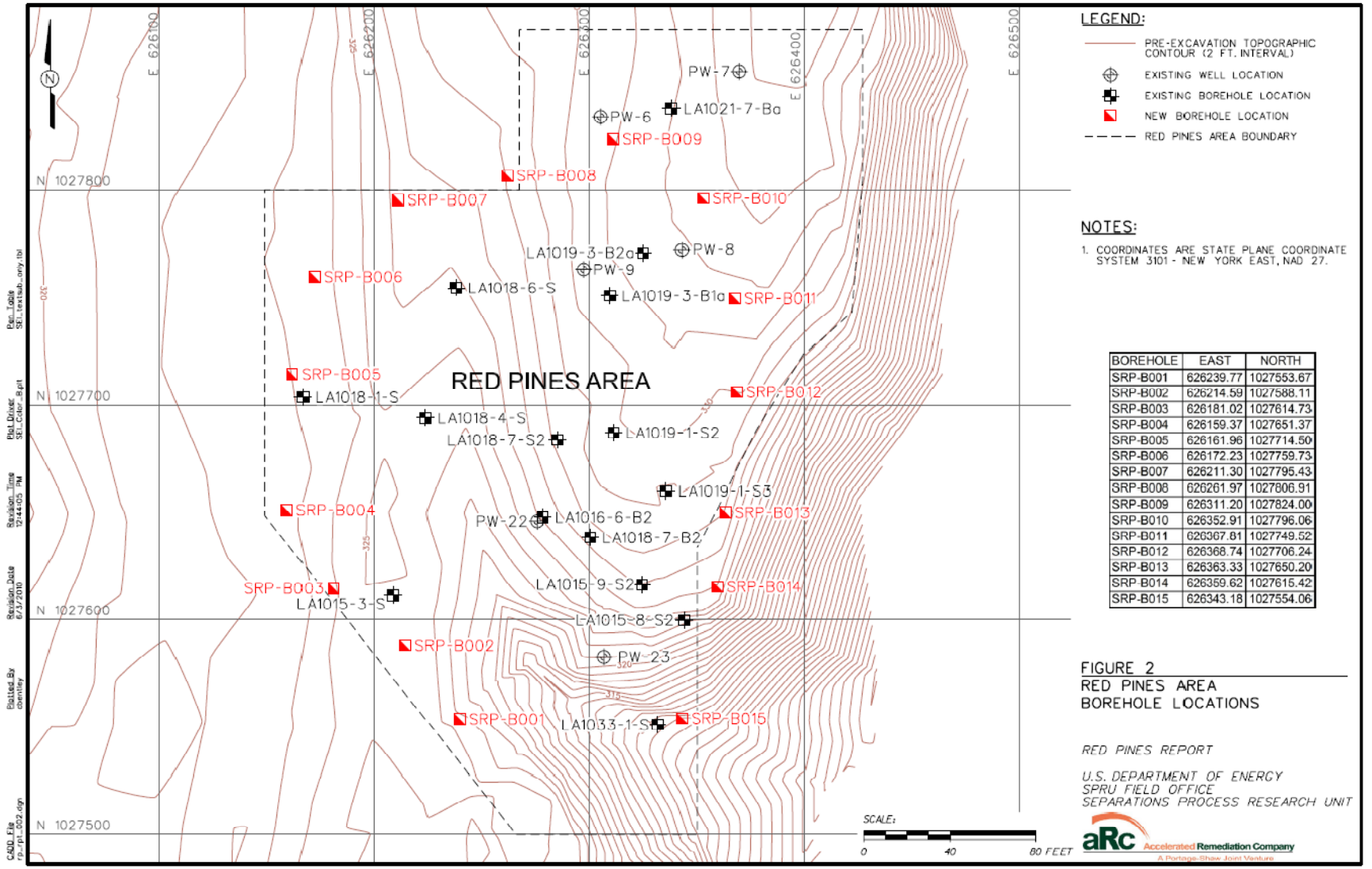
3.2 Sample Collection

C.T. Male and Associates were retained to field locate and survey in the exact location of the 15 soil borings. All boring locations, as well as the general topographic conditions and gradient across the Red Pines Area, were surveyed by C.T. Male. One borehole (SRP-B013) was moved in the field from a steep slope to accommodate access of the direct-push equipment.

Soil samples were collected from the 15 boreholes (see Figure 2) by direct-push drilling methodology using the Geoprobe® Model 6220DT unit equipped with a 4-ft Macrocore®. The Red Pines Area investigation began on January 28, 2010, and was completed on February 5, 2010. All field instruments and equipment were calibrated, managed, and decontaminated in accordance with the quality assurance project plan (QAPjP) (ARC-PLN-6402).

Soil boring locations were clearly identified/labeled with a survey marker by C.T. Male. Once the direct-push drill rig arrived at each location, an acetate liner was placed within the macrocore and secured in place with the drive shoe of the macrocore. The first sample run was collected from the 0- to 4-ft interval. Once at 4 ft, the macrocore was removed and scanned by the Radiological Controls (RadCon) field technician. When given the "clear-to-proceed" from RadCon, the driller unscrewed the drive shoe from the macro-core, allowing the acetate liner to be removed. The liner was then placed atop a work table and the outside of the core was scanned again by RadCon. The driller then used the cutting tool to carefully open the acetate liner to allow for the visual inspection of the sample. The sample run was then measured to determine the percent recovery over the 4-ft run. Soil borings/cores were sampled in 2-ft intervals. Discrete soil sample intervals were field-screened for VOCs with a 10.6 eV photoionization detector (PID). This same process continued downward within the borings until the gray till interface was encountered where a sample was collected. Once continuous gray till was encountered an additional sample was collected. This additional sample was a deviation from the sampling and analysis plan and collected at the request of the NYSDEC. Soils collected within each soil boring were classified according to the Unified Soil Classification System and Modified Burmister Method, and recorded on the boring logs along with PID readings and any related field data for each sample interval. Grab soil samples were collected for VOC analyses. A complete summary of the VOC data is included in Appendix A. Completed borehole logs for each location are included in Appendix B.

Following collection, soil samples for VOC analyses were packaged and shipped out on a daily basis following chain-of-custody procedures outlined in the QAPjP (ARC-PLN-6402), to Test America Laboratories, Inc., an offsite analytical laboratory.



BOREHOLE	EAST	NORTH
SRP-B001	626239.77	1027553.67
SRP-B002	626214.59	1027588.11
SRP-B003	626181.02	1027614.73
SRP-B004	626159.37	1027651.37
SRP-B005	626161.96	1027714.50
SRP-B006	626172.23	1027759.73
SRP-B007	626211.30	1027795.43
SRP-B008	626261.97	1027806.91
SRP-B009	626311.20	1027824.00
SRP-B010	626352.91	1027796.06
SRP-B011	626367.81	1027749.52
SRP-B012	626368.74	1027706.24
SRP-B013	626363.33	1027650.20
SRP-B014	626359.62	1027615.42
SRP-B015	626343.18	1027554.06

Figure 2 Red Pines Area borehole locations

4.0 Results

4.1 Site Geology

The subsurface conditions in the Red Pines Area were derived based on logs of 15 soil borings installed as part of an additional characterization to evaluate the lateral extent of VOCs and as described in the *SPRU RCRA Facility Assessment Sampling Visit Report Addendum – Red Pines Area* (DOE/CH2M HILL 2006). The location of soil borings are shown in Figure 2. Soil boring logs are provided in Appendix B.

Four general types of subsurface soils were identified in the Red Pines Area. These soil types include:

- Till-Derived Fill—Composed primarily of silt and clay with lesser percentages of sand and gravel, and originating from brown till that has been reworked
- Brown Till—Typically composed of silt, some fine sand, minor quantities of fine-to-medium gravel, and traces of clay
- Sand and Gravel—Mostly fine to coarse sands with some traces of silt, with trace to little fine-to-medium gravel
- Gray Till—Typically gray silt, traces to some clay, little to some fine sand, and traces of gravel.

All soil borings included consistent layers of moist, brown till or till-derived fill. Brown till ranged in depths from 0 ft 0 in. to 21 ft 0 in. below ground surface (bgs). The depth of brown till, in general, slopes from north/northwest to south/southeast. Profiles showing the brown till layer are shown on Figures 3B–D.

Trace organic content in the soil is found sporadically throughout the brown till layer from a depth of 0 ft 0 in. to 24 ft 0 in. bgs. Organic material is most likely roots from deciduous trees that were present prior to the planting of red pine trees.

Sand and gravel are also present just above the gray till layer at boreholes SRP-B001, SRP-B002, SRP-B003, SRP-B008, SRP-B009, SRP-B011, and SRP-B015. Sand and gravel was not identified in any of the other soil borings SRP-B004, SRP-B005, SRP-B006, SRP-B007, SRP-B010, SRP-B012, SRP-B013, and SRP-B014. Sand and gravel deposits were moist to wet and range from 7 ft 4 in. to 20 ft 0 in. bgs. This indication of discontinuous sand and gravel deposits is likely a result from isolated ice contact deposits. There is no consistent layer or lateral extent of sand and gravel deposits as to represent a continuous pathway for potential contaminant migration.

The gray till layer consists of silt, some clay and trace to some fine sands and gravels. Typically, the gray till layer was dry to moist and very stiff to hard (low permeability). In the northwest area of the Red Pines Area, gray till was contacted as shallow as 1 ft 7 in. bgs. In the northeast area of the Red Pines Area, gray till was contacted as deep as 21 ft 0 in. bgs.

Figure 3A shows the locations of the three soil profiles and Figures 3B, 3C, and 3D are the profiles showing the gray till layer in relation to surface.

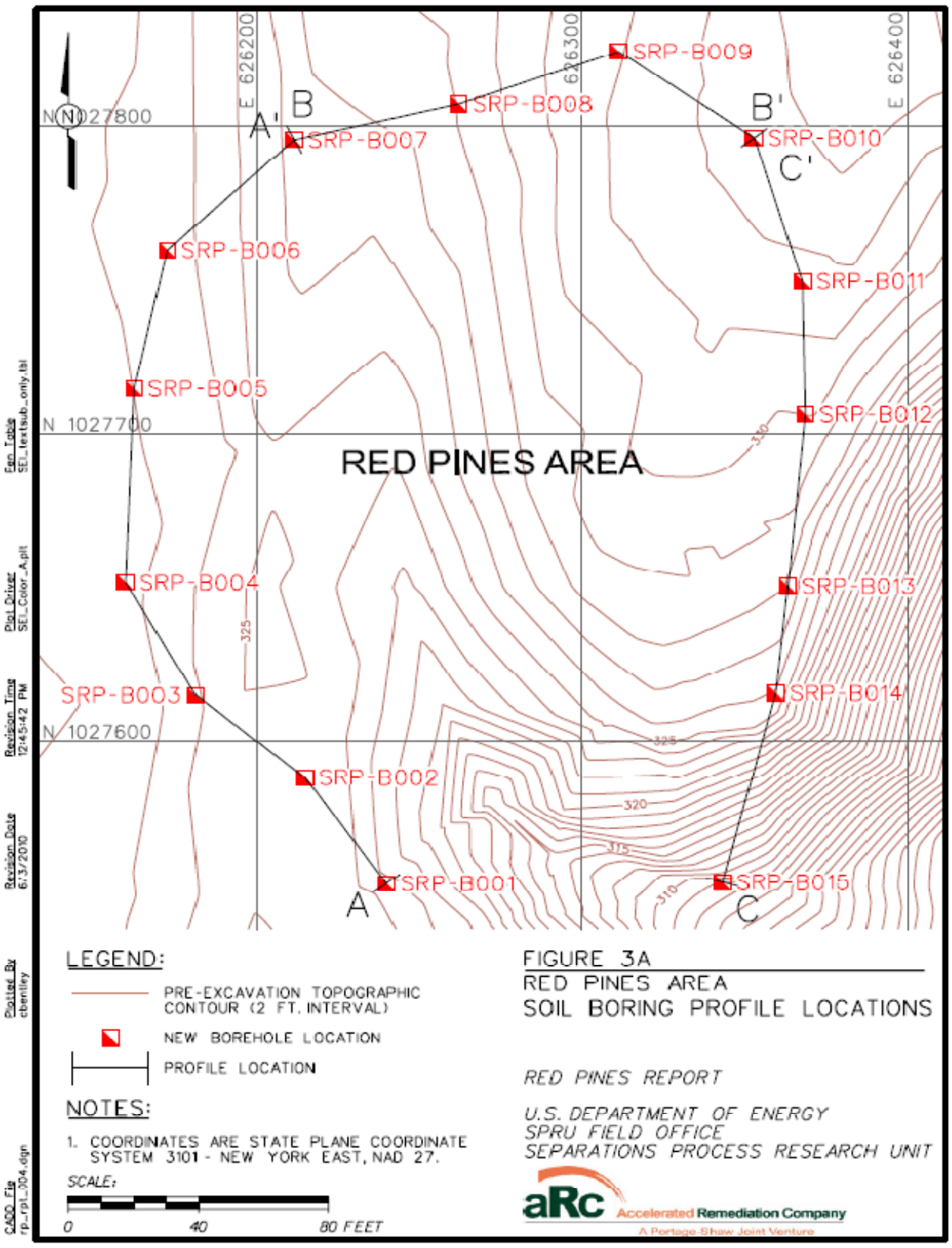


Figure 3A Red Pines Area soil boring profile locations

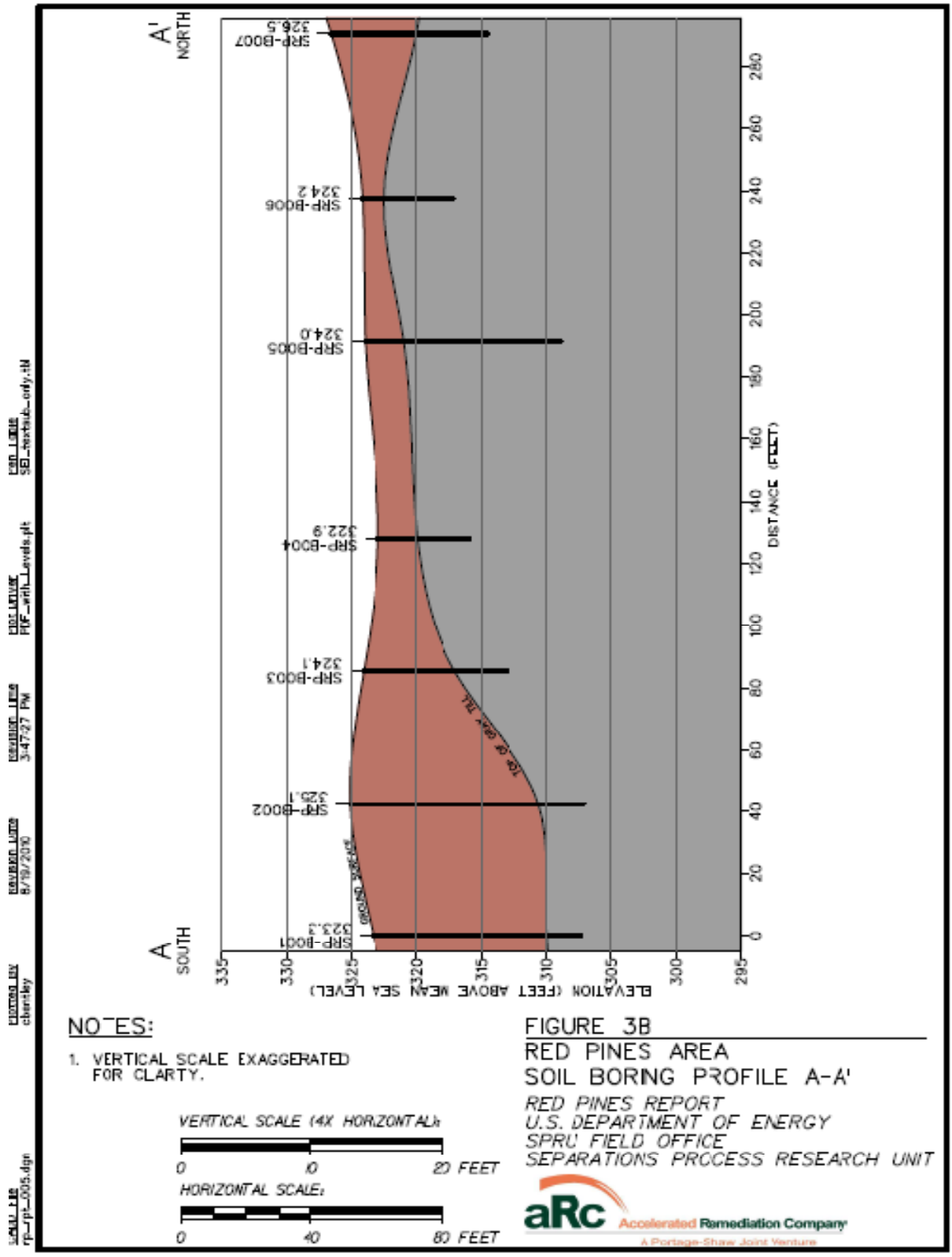


Figure 3B Red Pines Area soil boring profile A-A'

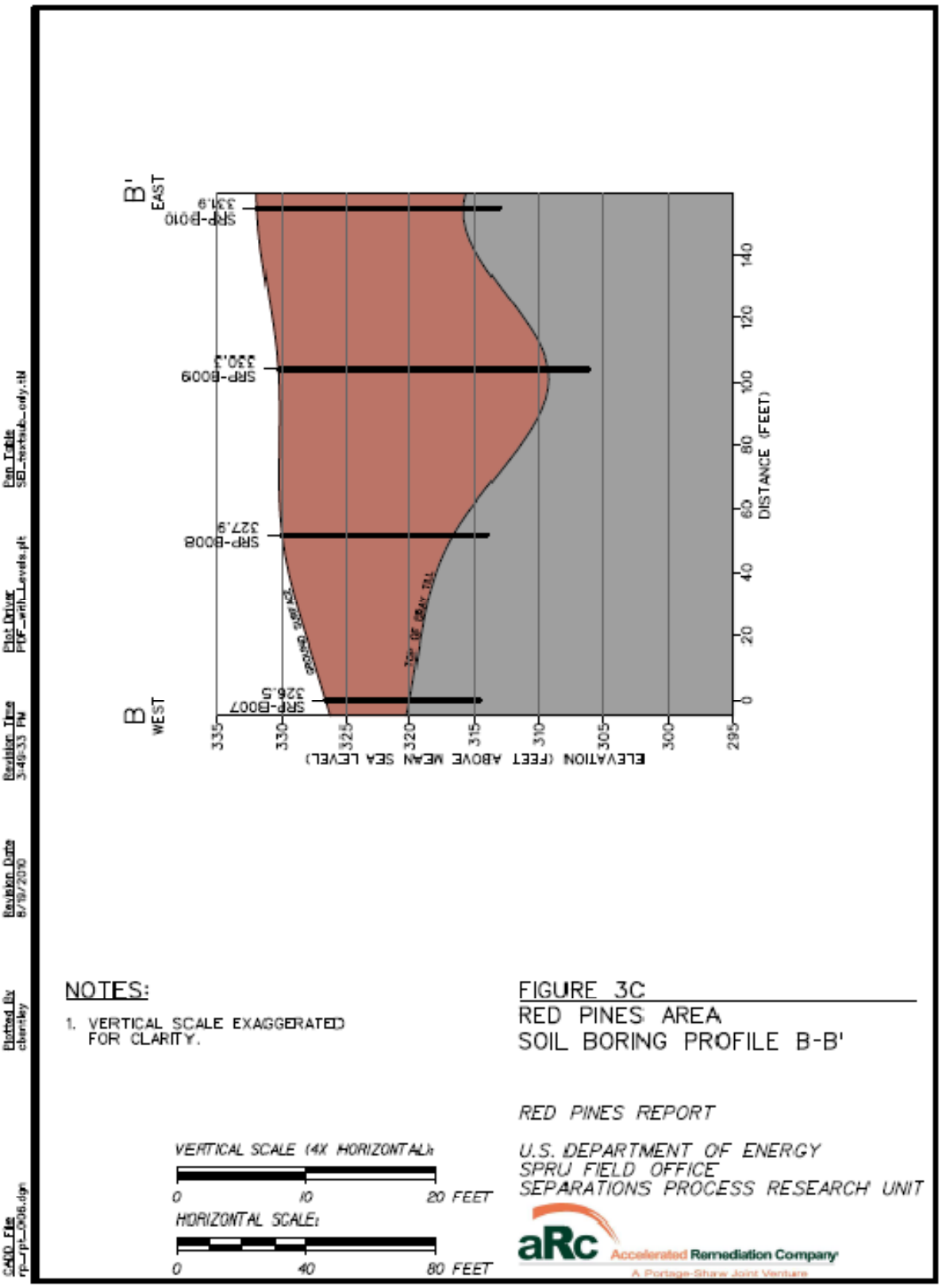


Figure 3C Red Pines Area soil boring profile B-B'

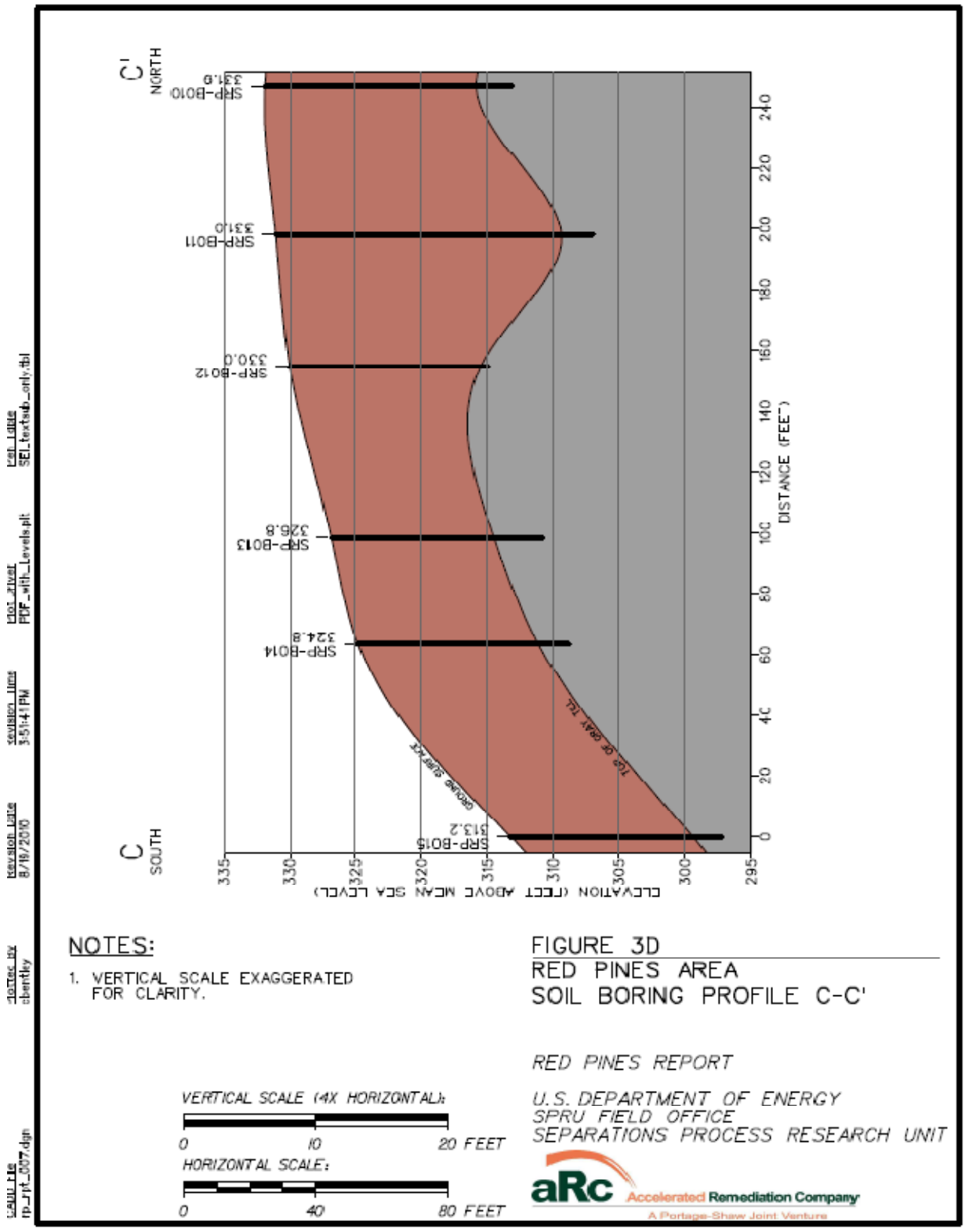


Figure 3D Red Pines Area soil boring profile C-C'

4.2 Analysis

In accordance with the QAPjP (ARC-PLN-6402), the samples were analyzed by Test America Laboratories, Inc., following U.S. Environmental Protection Agency SW-846 (EPA 2008) protocols for VOC analyses by Method 8260. Appendix A, Table A-1 provides the results of the VOC analyses for the Red Pines Area VOC investigation and Appendix A, Table A-2 provides the results of the equipment rinsate and trip blanks. Appendix C (provided on a CD-ROM with this report) includes the associated laboratory analytical reports, as follows:

- *SPRU Northfield Red Pines*, Project No. 136539, SDG # F0A290430, February 10, 2010 (Test America 2010a)
- *SPRU Northfield Red Pines*, Project No. 136539, SDG # F0B020439, February 10, 2010 (Test America 2010b)
- *SPRU Northfield Red Pines*, Project No. 136539, SDG #s F0B050593, February 23, 2010 (Test America 2010c)
- *SPRU Northfield Red Pines*, Project No. 136539, SDG #s F0B060444, February 23, 2010 (Test America 2010d)
- *SPRU Northfield Red Pines*, Project No. 136539, SDG #s F0B050599, February 24, 2010 (Test America 2010e).

A total of 122 samples, including seven field duplicates, were collected from 15 borehole locations for determination of VOCs (see Figure 2). A total of eight different VOCs were detected in one or more of the borehole locations. Acetone, carbon disulfide, cyclohexane, trichlorofluoromethane, methylene chloride, 1,2,3-trichlorobenzene, xylenes (total), and toluene all had detectable concentrations. Table 1 is a summary of the detected VOCs in the Red Pines Area and Figure 4 details the results of detected VOC with regard to sample locations and depths.

- Acetone was detected in all 15 boreholes and in 62 of the 122 samples collected. Seven of the detections had concentrations greater than the 50-µg/kg soil cleanup criteria for acetone. Borehole SRP-B001 had estimated acetone concentrations of 58 and 50 µg/kg at 13.4 and 16 ft bgs, respectively. Borehole SRP-B005 had estimated acetone concentrations of 94 and 81 µg/kg at 6 and 8 ft bgs, respectively. Borehole SRP-B009 had estimated acetone concentrations 53 and 57 µg/kg at 18 and 24 ft bgs, respectively, and borehole SRP-B014 had an estimated acetone concentration detected at 54 µg/kg at 14 ft bgs. None of these acetone concentrations were near the surface and all were at or near the brown till/gray till interface.
- Carbon disulfide was detected in all 15 boreholes and 45 of the 122 samples collected. Concentrations of carbon disulfide ranged from 0.35 to 6.4 µg/kg, which is well below the 2,700 µg/kg SCO.
- Cyclohexane was detected in 11 boreholes and 25 of the 122 samples collected. Concentrations ranged from 0.38 to 13 µg/kg.
- Methylene chloride was detected in five boreholes and 12 of the 122 samples. Concentrations ranged from 3.6 to 40 µg/kg and were all below the 50 µg/kg SCO.

Table 1 Summary of detected VOCs in the Red Pines Area investigation

Borehole ID		SRP-B001			SRP-B002							SRP-B003	
		Sample Depth (ft bgs)			Sample Depth (ft bgs)							Sample Depth (ft bgs)	
	SCO	12	13.4	16	2	4	4 (dup)	6	8	14	18	6	8
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	**15 J**	**58 J**	**50 J**	ND*	ND	ND	**32 J**	**10 J**	ND	ND	**12 J**	**11 J**
Carbon disulfide	2700	**0.45 J**	**1.0 J**	**0.87 J**	**0.63 J**	**0.93 J**	**5.0 J**	ND	ND	**0.80 J**	**0.60 J**	**0.70 J**	**0.75 J**
Cyclohexane	NA	**1.4 J**	**4.0 J**	**4.0 J**	ND	ND	ND	ND	ND	ND	ND	**1.0 J**	**1.2 J**
1,2,3-Trichlorobenzene	NA	**18 J**	**45.0 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Borehole ID		SRP-B004			SRP-B005						
		Sample Depth (ft bgs)			Sample Depth (ft bgs)						
	SCO	2	4	6	2	3	4	6	8	10	15
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	ND	**15 J**	**26 J**	**7.2 J**	**29 J**	**33 J**	**94 J**	**81 J**	**32 J**	**11 J**
Carbon disulfide	2700	ND	ND	**0.80 J**	ND	**6.4 J**	**5.1 J**	**4.4 J**	**3.9 J**	**5.0 J**	**3.4 J**
Methylene chloride	50	ND	**12 J**	**8.4 J**	ND	ND	**6.1 J**	**8.8 J**	**6.6 J**	**5.9 J**	**4.2 J**
Toluene	700	**0.57 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND

Borehole ID		SRP-B006				SRP-B007						
		Sample Depth (ft bgs)				Sample Depth (ft bgs)						
	SCO	2	4	6	7	2	2 (dup)	4	6	6.5	8	10
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	**7.6 J**	**31 J**	**29 J**	**28 J**	**9.6 J**	ND	**25 J**	**9.1 J**	**22 J**	**17 J**	**25 J**
Carbon disulfide	2700	ND	**1.9 J**	**0.99 J**	**1.1 J**	**1.8 J**	ND	ND	**3.0 J**	ND	ND	ND
Cyclohexane	NA	ND	**4.2 J**	**2.9 J**	**3.6 J**	**0.48 J**	ND	**0.72 J**	ND	ND	ND	**0.38 J**
Xylenes (total)	1600	ND	**2.0 J**	**1.7 J**	**3.8 J**	ND	**1.4 J**	**0.73 J**	ND	ND	**0.82 J**	**1.8 J**

Borehole ID		SRP-B008						SRP-B009					
		Sample Depth (ft bgs)						Sample Depth (ft bgs)					
	SCO	4	6	8	10	12	13.4	16	18	20	22	24	24 (dup)
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	**12 J**	**8.3 J**	**16 J**	**11 J**	**8.2 J**	**12 J**	ND	**53 J**	**16 J**	**16 J**	**57 J**	**21 J**
Carbon disulfide	2700	ND	ND	ND	ND	ND	**0.82 J**	ND	**1.8 J**	ND	**0.81 J**	**2.4 J**	ND
Cyclohexane	NA	ND	ND	ND	ND	ND	**0.80 J**	**0.70 J**	**13 J**	ND	ND	ND	ND
Trichlorofluoromethane	NA	ND	ND	ND	ND	ND	ND	ND	**4.7 J**	ND	ND	**3.5 J**	**1.3 J**
Methylene chloride	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**40 J**	ND

Table 1 (continued)

Borehole ID		SRP-B010					SRP-B011						
		Sample Depth (ft bgs)					Sample Depth (ft bgs)						
	SCO	2	10	12	14	16	2	4	14	14 (dup)	16	20	21
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	ND	**8.9 J**	**9.7 J**	ND	ND	ND	ND	ND	**8.5 J**	**13 J**	ND	**17 J**
Carbon disulfide	2700	**0.60 J**	ND	ND	ND	ND	**1.1 J**	**0.35 J**	ND	ND	**0.56 J**	ND	**1.0 J**
Cyclohexane	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.1 J**	**0.38 J**	**3.6 J**
Methylene chloride	50	ND	ND	ND	**5.2 J**	**3.6 J**	**5.4 J**	**4.9 J**	ND	ND	ND	ND	ND
Toluene	700	ND	ND	ND	ND	ND	ND	ND	**0.27 J**	ND	ND	ND	ND

Borehole ID		SRP-B012				SRP-B013			
		Sample Depth (ft bgs)				Sample Depth (ft bgs)			
	SCO	4	12	14	15	4 (dup)	12	13	16
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	**14 J**	**8.8 J**	**20 J**	**25 J**	**8.9 J**	**12 J**	**30 J**	**27 J**
Carbon disulfide	2700	ND	ND	**1.1 J**	**1.6 J**	**2.4 J**	ND	**0.98 J**	**1.3 J**
Cyclohexane	NA	ND	ND	**4.5 J**	**5.9 J**	ND	ND	**1.4 J**	**1.5 J**
Trichlorofluoromethane	NA	ND	ND	ND	ND	ND	ND	**1.3 J**	ND

Borehole ID		SRP-B014							
		Sample Depth (ft bgs)							
	SCO	2	4	6	8 (dup)	12	14	15	16
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	**8.2 J**	ND	**7.9 J**	**8.6 J**	**9.2 J**	**54 J**	ND	**22 J**
Carbon disulfide	2700	**1.3 J**	**3.5 J**	ND	ND	ND	**2.0 J**	ND	ND
Cyclohexane	NA	ND	ND	ND	ND	ND	**1.7 J**	**1.7 J**	**1.7 J**
Trichlorofluoromethane	NA	ND	ND	ND	ND	ND	**1.2 NJ**	**1.4 NJ**	**1.1 NJ**

Borehole ID		SRP-B015							
		Sample Depth (ft bgs)							
	SCO	2	4	10	12	12 (dup)	14	15.8	16
Parameter	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
Acetone	50	ND	**33 J**	**23 J**	**25 J**	**27 J**	ND	**31 J**	**9.5 J**
Carbon disulfide	2700	**0.71 J**	ND	**2.1 J**	**0.59 J**	**0.60 J**	**0.40 J**	**1.3 J**	ND
Cyclohexane	NA	ND	ND	ND	**1.9 J**	ND	ND	ND	ND
1,2,3-Trichlorobenzene	NA	ND	ND	**19 J**	ND	ND	ND	ND	ND

* ND = Not detected
Validation flags:
J = Analyte was detected at an estimated value.
NJ=Analyte was detected with presumptive evidence at estimated value.

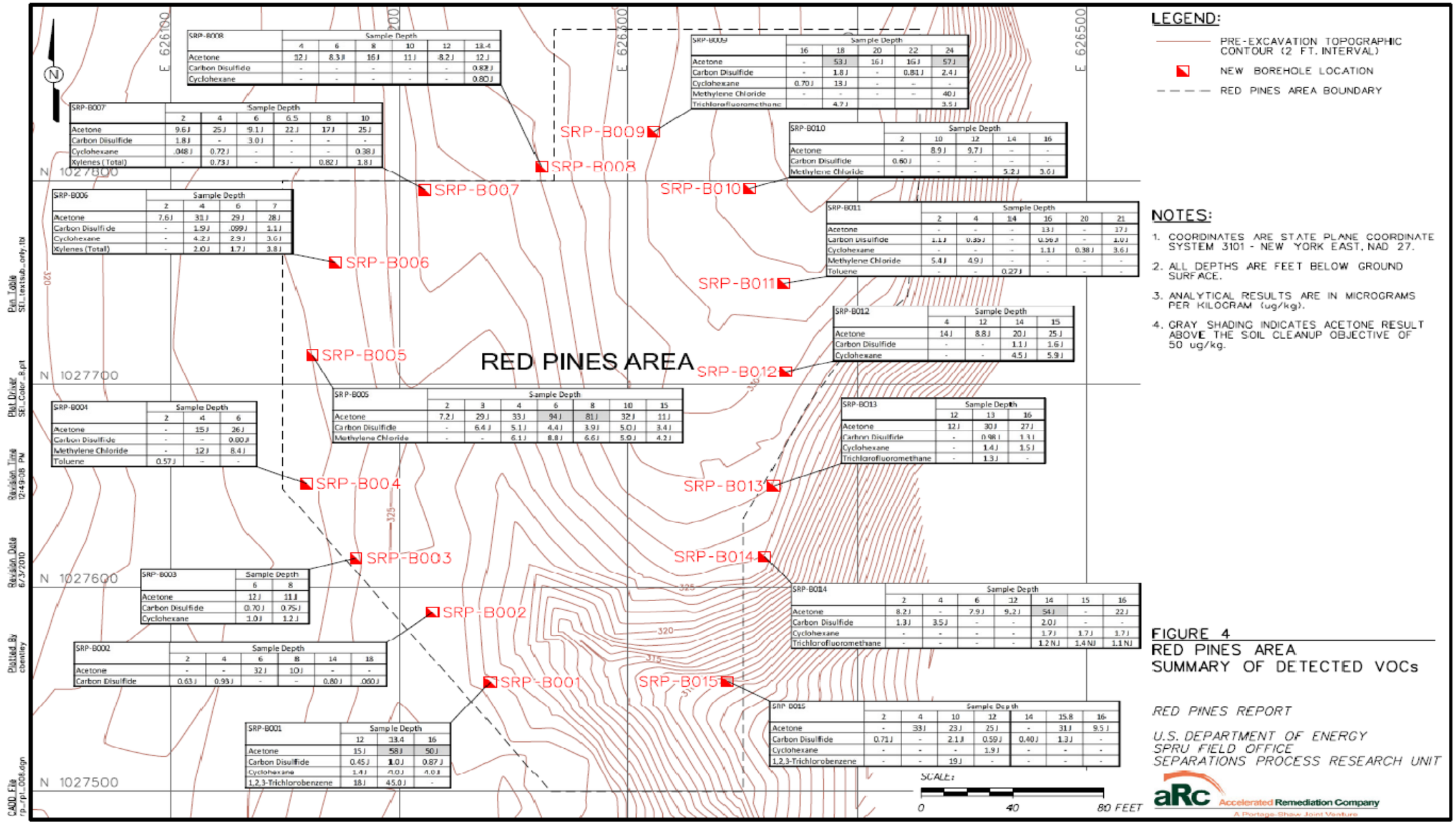


Figure 4 Summary of detected VOCs in the Red Pines Area

- 1,2,3-trichlorobenzene was detected in two samples in borehole SRP-B001 and one sample in borehole SRP-B015.

- Trichlorofluoromethane was detected in three samples in borehole SRP-B009,three samples in SRP-B014 and one sample in Borehole SRP-B013.

- Total xylenes were detected in three samples in borehole SRP-B006 and four samples in borehole SRP-B007 at concentrations well below SCOs.

- Toluene was detected at low concentrations of 0.27 to 0.57 µg/kg in borehole SRP-B004 and SRP-B011 in samples that did not have detections of other VOCs. Several equipment rinsates blanks had low level hits for toluene; this indicates the toluene may have been introduced in the sampling process and may not be associated with residual VOC contamination in the Red Pines Area.

4.3 Data Validation

The laboratory data were validated internally by Test America Laboratories, Inc. in accordance with their quality assurance manual (Appendix B of ARC-PLN-6402). Independent validation was performed by Portage, Inc. in accordance with the National Functional Guidelines (EPA 1999). Validation flags were assigned to reported levels based on laboratory performance on quality control analyses. The limitation and validation reports are on the CD-ROM provided as Appendix D with this report.

- *SPRU North Field, Red Pines*, SRP-B008-007-V (F0A290430 rev1), March 19, 2010 (Portage 2010a)

- *SPRU North Field, Red Pines*, SRP-B010-007-V (F0B020439), March 03, 2010 (Portage 2010b)

- *SPRU North Field, Red Pines*, SRP-B011-007-V (F0B050593), March 23, 2010 (Portage 2010c)

- *SPRU North Field, Red Pines*, SRP-B006-001-V (F0B060444 rev1), March 19, 2010 (Portage 2010d)

- *SPRU North Field, Red Pines*, SRP-B002-007-V (F0B050599), April 02, 2010 (Portage 2010e).

Analytical results data tables for VOCs and the corresponding laboratory and validation flags are shown in Tables A-1 and A-2 (Appendix A).

5.0 Data Quality Assessment

Data quality was examined to ensure adequacy for decision-making purposes, and sample results were compared to the corresponding SCOs.

5.1 Evaluation of Data Quality

Seven field samples were collected in duplicate. Acceptable field precision was demonstrated by relative percent difference between field duplicate results less than 50% for analytes with concentrations greater than the associated quantitation limit.

Data generated for multiple (44) samples were impacted by low internal standard areas and high surrogate recoveries. The affected samples were reanalyzed as required by laboratory protocol and resulted in a similar outcome. Low internal standard areas are attributed to soils matrix interference rather than a loss of sensitivity or instrument malfunction as laboratory control sample analyses were not affected, sample reanalysis exhibited similar performance, and surrogate recoveries reflect an overall potential high bias. During validation, both the initial and reanalysis results were evaluated and sample results associated with the better performance of internal standards and surrogates were retained. Other data were marked "Do Not Use."

The impact on data usability for sample results associated with low internal standard areas is a potential high bias as reflected in the high surrogate recoveries. These sample results have been qualified with a "J" (estimated) or "UJ" (undetected at an estimated value) validation flag. However, the quantitation limit has a higher uncertainty in the reported concentration for analytes when the internal standard areas are less than 25% of the corresponding 12-hour internal standard area count. These results have been assigned an "R" (rejected) validation flag. Although the reported values have a higher uncertainty, it is likely that had these undetected analytes been present, a detection would have been made.

An "R" (rejected) validation flag was also assigned to undetected sample results for analytes having relative response factor less than 0.05 in either the initial or continuing calibration. Affected target analytes include methyl acetate, 1,2-dibromo-3-chloropropane, acetone, 2-butanone, 2-hexanone, and cyclohexane, all of which are known for exhibiting poor responses. The response factor for each of these analytes was greater than 0.01 in all initial and continuing calibrations, assuring that had these compounds been present in the samples at concentrations greater than the quantitation limit, a detection would have been made. The impact to data usability is minimal.

In addition, positive detections in method blanks were noted for acetone, 2-butanone, methylene chloride, and toluene. During validation, positive detections for these analytes in affected samples were identified as false positives and have been qualified accordingly as undetected values with a "U" or "UJ" flag, denoting undetected and undetected at an estimated value, respectively.

The quality of the data is considered adequate for site investigative purposes.

6.0 Conclusions

Evaluation of the data results indicate the majority of the VOCs found in the boreholes were at lower depths, at or near the brown till/gray till interface. Acetone was detected in all of the boreholes and was the only VOC with concentrations above its SCO of 50 µg/kg. Carbon disulfide was found in all 15 boreholes at depths similar to acetone. Other VOCs detected were cyclohexane, methylene chloride, 1,2,3-trichlorobenzene, trichlorofluoromethane, toluene, and xylenes, but these compounds were detected in fewer samples and fewer boreholes. Trichloroethene and tetrachloroethene, which had the highest concentrations reported in the *SPRU RCRA Facility Assessment Sampling Visit Report Addendum – Red Pines Area* (DOE/CH2M HILL 2006) were not detected in any samples collected for this investigation.

The data in this report indicate that acetone and several other VOCs are still present at or near the gray till in the Red Pines Area. Acetone was detected above SCO in boreholes B001, B005, B009, and B014. These boreholes are situated on all sides of the Red Pines Area.

7.0 References

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Portage, 2010d, *SPRU North Field, Red Pines*, SRP-B006-001-V (F0B060444 rev1), Portage, Inc., Idaho Falls, Idaho, March 19, 2010.

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Test America, 2010d, *SPRU Northfield Red Pines*, Project No. 136539, SDG #s F0B060444, Test America Laboratories, Inc., St. Louis, Missouri, February 23, 2010.

Test America, 2010e, *SPRU Northfield Red Pines*, Project No. 136539, SDG #s F0B050599, Test America Laboratories, Inc., St. Louis, Missouri, February 24, 2010.

Appendix A

Data Tables for Red Pines VOC Investigation

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B008-001-V			SRP-B008-002-V			SRP-B008-003-V			SRP-B008-004-V			SRP-B008-005-V			SRP-B008-006-V			SRP-B008-007-V			SRP-B009-001-V		
Sample Date		1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010		
Sample Depth (feet below grade)		2			4			6			8			10			12			13.4			2		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	23	U		12	J	J	8.3	J	J	16	J	J	11	J	J	8.2	J	J	12	J	J	23	U	
Benzene	60	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Bromodichloromethane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Bromoform	NA	12	U		13	U		11	U		11	U	UJ	12	U	UJ	11	U	UJ	11	U	R	11	U	
Bromomethane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
2-Butanone	120	12	U		13	U		11	U		11	J B	U	12	U		11	U		11	U	UJ	11	U	
Carbon disulfide	2700	12	U		13	U		11	U		11	U		12	U		11	U		0.82	J	J	11	U	
Carbon tetrachloride	760	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Chlorobenzene	1100	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Dibromochloromethane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
1,2-Dibromo-3-chloropropane	NA	12	U		13	U		11	U		11	U	UJ	12	U	UJ	11	U	UJ	11	U	R	11	U	
Chloroethane	1900	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Chloroform	370	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Chloromethane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Cyclohexane	NA	12	U		13	U		11	U		11	U		12	U		11	U		0.80	J	J	11	U	
1,2-Dibromoethane	NA	5.8	U		6.3	U		5.5	U		5.6	U		6.0	U		5.4	U		5.4	U	R	5.7	U	
1,2-Dichlorobenzene	1100	5.8	U		6.3	U		5.5	U		5.6	U	UJ	6.0	U	UJ	5.4	U	UJ	5.4	U	R	5.7	U	
1,3-Dichlorobenzene	2400	5.8	U		6.3	U		5.5	U		5.6	U	UJ	6.0	U	UJ	5.4	U	UJ	5.4	U	R	5.7	U	
1,4-Dichlorobenzene	1800	5.8	U		6.3	U		5.5	U		5.6	U	UJ	6.0	U	UJ	5.4	U	UJ	5.4	U	R	5.7	U	
Dichlorodifluoromethane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
1,1-Dichloroethane	270	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
1,2-Dichloroethane	20	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
1,1-Dichloroethene	330	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
cis-1,2-Dichloroethene	250	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
trans-1,2-Dichloroethene	190	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
1,2-Dichloropropane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
cis-1,3-Dichloropropene	NA	5.8	U		6.3	U		5.5	U		5.6	U		6.0	U		5.4	U		5.4	U	R	5.7	U	
trans-1,3-Dichloropropene	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Ethylbenzene	1000	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Trichlorofluoromethane	NA	5.8	U		6.3	U		5.5	U	U	5.6	U		6.0	U		5.4	U		5.4	U	R	5.7	U	
2-Hexanone	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Isopropylbenzene	NA	5.8	U		6.3	U		5.5	U		5.6	U		6.0	U		5.4	U		5.4	U	R	5.7	U	
Methyl acetate	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Methylcyclohexane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Methylene chloride	50	12	J B	U	13	J B	U	11	J B	U	11	J B	U	12	J B	U	11	J B	U	11	J B	UJ	11	J B	U
4-Methyl-2-pentanone	1000	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Styrene	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
1,1,2,2-Tetrachloroethane	600	12	U		13	U		11	U		11	U	UJ	12	U	UJ	11	U	UJ	11	U	R	11	U	
Tetrachloroethene	1300	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Toluene	700	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
1,2,3-Trichlorobenzene	NA	5.8	U		6.3	U		5.5	U		5.6	U	UJ	6.0	U	UJ	5.4	U	UJ	5.4	U	R	5.7	U	
1,1,1-Trichloroethane	680	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
1,1,2-Trichloroethane	NA	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Trichloroethene	470	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.8	U		6.3	U		5.5	U		5.6	U		6.0	U		5.4	U		5.4	U	UJ	5.7	U	
Vinyl chloride	20	12	U		13	U		11	U		11	U		12	U		11	U		11	U	UJ	11	U	
Xylenes (total)	1600	12	U		13	U		11	U		11	U		12	U		11	U		11	U	R	11	U	
Methyl tert-butyl ether (MTBE	930	5.8	U		6.3	U		5.5	U		5.6	U		6.0	U		5.4	U		5.4	U	UJ	5.7	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B009-002-V			SRP-B009-003-V			SRP-B009-004-V			SRP-B009-005-V			SRP-B009-006-V			SRP-B009-007-V			SRP-B009-008-V			SRP-B009-009-V			SRP-B009-010-V		
Sample Date		1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010		
Sample Depth (feet below grade)		4			6			8			10			12			14			16			18			20		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	22	U		23	U		22	U		22	U		21	U		21	U		21	U		53		J	16	J	J
Benzene	60	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Bromodichloromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	R
Bromoform	NA	11	U		11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	10	U	R	11	U	R	11	U	R
Bromomethane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
2-Butanone	120	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Carbon disulfide	2700	11	U		11	U		11	U		11	U		11	U		11	U		10	U		1.8	J	J	11	U	UJ
Carbon tetrachloride	760	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Chlorobenzene	1100	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Dibromochloromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	UJ
1,2-Dibromo-3-chloropropane	NA	11	U		11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	10	U	R	11	U	R	11	U	R
Chloroethane	1900	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Chloroform	370	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Chloromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Cyclohexane	NA	11	U		11	U		11	U		11	U		11	U		11	U		0.70	J	J	13		J	11	U	UJ
1,2-Dibromoethane	NA	5.6	U		5.7	U		5.6	U		5.4	U		5.3	U		5.3	U		5.2	U	UJ	5.4	U	R	5.5	U	R
1,2-Dichlorobenzene	1100	5.6	U		5.7	U		5.6	U		5.4	U	UJ	5.3	U	UJ	5.3	U	UJ	5.2	U	R	5.4	U	R	5.5	U	R
1,3-Dichlorobenzene	2400	5.6	U		5.7	U		5.6	U		5.4	U	UJ	5.3	U	UJ	5.3	U	UJ	5.2	U	R	5.4	U	R	5.5	U	R
1,4-Dichlorobenzene	1800	5.6	U		5.7	U		5.6	U		5.4	U	UJ	5.3	U	UJ	5.3	U	UJ	5.2	U	R	5.4	U	R	5.5	U	R
Dichlorodifluoromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
1,1-Dichloroethane	270	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
1,2-Dichloroethane	20	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
1,1-Dichloroethene	330	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
cis-1,2-Dichloroethene	250	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
trans-1,2-Dichloroethene	190	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
1,2-Dichloropropane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
cis-1,3-Dichloropropene	NA	5.6	U		5.7	U		5.6	U		5.4	U		5.3	U		5.3	U		5.2	U		5.4	U	R	5.5	U	UJ
trans-1,3-Dichloropropene	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Ethylbenzene	1000	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Trichlorofluoromethane	NA	5.6	U		5.7	U		5.6	U		5.4	U		5.3	U		5.3	U		5.2	U		4.7	J	J	5.5	U	UJ
2-Hexanone	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Isopropylbenzene	NA	5.6	U		5.7	U		5.6	U		5.4	U		5.3	U		5.3	U		5.2	U	UJ	5.4	U	R	5.5	U	R
Methyl acetate	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Methylcyclohexane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Methylene chloride	50	11	U		11	U		11	J	B U	11	J	B U	11	J	B U	11	U		10	J	B U	19	B	R	11	JB	UJ
4-Methyl-2-pentanone	1000	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Styrene	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
1,1,2,2-Tetrachloroethane	600	11	U		11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	10	U	R	11	U	R	11	U	R
Tetrachloroethene	1300	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Toluene	700	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
1,2,3-Trichlorobenzene	NA	5.6	U		5.7	U		5.6	U		5.4	U	UJ	5.3	U	UJ	5.3	U	UJ	5.2	U	R	5.4	U	R	5.5	U	R
1,1,1-Trichloroethane	680	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
1,1,2-Trichloroethane	NA	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Trichloroethene	470	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.6	U		5.7	U		5.6	U		5.4	U		5.3	U		5.3	U		5.2	U		5.4	U	R	5.5	U	UJ
Vinyl chloride	20	11	U		11	U		11	U		11	U		11	U		11	U		10	U		11	U	R	11	U	UJ
Xylenes (total)	1600	11	U		11	U		11	U		11	U		11	U		11	U		10	U	UJ	11	U	R	11	U	R
Methyl tert-butyl ether (MTBE	930	5.6	U		5.7	U		5.6	U		5.4	U		5.3	U		5.3	U		5.2	U		5.4	U	R	5.5	U	UJ

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B009-011-V			SRP-B009-012-V			SRP-DU05-013-V RE			SRP-B010-001-V			SRP-B010-002-V			SRP-B010-003-V			SRP-B010-004-V			SRP-B010-005-V		
Sample Date		1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010			1/28/2010		
Sample Depth (feet below grade)		22			24			24			2			4			6			8			10		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	16	J	J	57		J	21		J	23	U		23	U		22	U		22	U		8.9	J	J
Benzene	60	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Bromodichloromethane	NA	11	U	R	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Bromoform	NA	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	UJ
Bromomethane	NA	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
2-Butanone	120	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Carbon disulfide	2700	0.81	J	J	2.4	J	J	10	U	UJ	0.60	J	J	12	U		11	U		11	U		11	U	
Carbon tetrachloride	760	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Chlorobenzene	1100	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Dibromochloromethane	NA	11	U	UJ	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
1,2-Dibromo-3-chloropropane	NA	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	UJ
Chloroethane	1900	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Chloroform	370	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Chloromethane	NA	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Cyclohexane	NA	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
1,2-Dibromoethane	NA	5.4	U	R	5.2	U	R	5.2	U	R	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	
1,2-Dichlorobenzene	1100	5.4	U	R	5.2	U	R	5.2	U	R	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	UJ
1,3-Dichlorobenzene	2400	5.4	U	R	5.2	U	R	5.2	U	R	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	UJ
1,4-Dichlorobenzene	1800	5.4	U	R	5.2	U	R	5.2	U	R	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	UJ
Dichlorodifluoromethane	NA	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
1,1-Dichloroethane	270	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
1,2-Dichloroethane	20	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
1,1-Dichloroethene	330	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
cis-1,2-Dichloroethene	250	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
trans-1,2-Dichloroethene	190	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
1,2-Dichloropropane	NA	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
cis-1,3-Dichloropropene	NA	5.4	U	UJ	5.2	U	R	5.2	U	UJ	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	
trans-1,3-Dichloropropene	NA	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Ethylbenzene	1000	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Trichlorofluoromethane	NA	5.4	U	UJ	3.5	J	J	1.3	J	J	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	
2-Hexanone	NA	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Isopropylbenzene	NA	5.4	U	R	5.2	U	R	5.2	U	R	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	
Methyl acetate	NA	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Methylcyclohexane	NA	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Methylene chloride	50	11	JB	UJ	40	B	J	22	B	UJ	12	U		12	U		11	J B	U	11	J B	U	11	J B	U
4-Methyl-2-pentanone	1000	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Styrene	NA	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
1,1,2,2-Tetrachloroethane	600	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	UJ
Tetrachloroethene	1300	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Toluene	700	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
1,2,3-Trichlorobenzene	NA	5.4	U	R	5.2	U	R	5.2	U	R	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	UJ
1,1,1-Trichloroethane	680	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
1,1,2-Trichloroethane	NA	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Trichloroethene	470	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.4	U	UJ	5.2	U	R	5.2	U	UJ	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	
Vinyl chloride	20	11	U	UJ	10	U	R	10	U	UJ	12	U		12	U		11	U		11	U		11	U	
Xylenes (total)	1600	11	U	R	10	U	R	10	U	R	12	U		12	U		11	U		11	U		11	U	
Methyl tert-butyl ether (MTBE	930	5.4	U	UJ	5.2	U	R	5.2	U	UJ	5.8	U		5.8	U		5.5	U		5.5	U		5.4	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B010-006-V			SRP-B010-007-V			SRP-B010-008-V			SRP-B011-001-V			SRP-B011-002-V			SRP-B011-003-V			SRP-B011-004-V			SRP-B011-005-V			SRP-B011-006-V		
Sample Date		1/28/2010			2/1/2010			2/1/2010			2/1/2010			2/1/2010			2/1/2010			2/1/2010			2/1/2010			2/1/2010		
Sample Depth (feet below grade)		12			14			16			2			4			6			8			10			12		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	**9.7**	J	J	22	U	R	22	U	R	22	U	R	23	U	R	22	J B	R	22	J B	R	22	U	R	22	J B	R
Benzene	60	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Bromodichloromethane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Bromoform	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Bromomethane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
2-Butanone	120	11	U		11	U	R	11	U	R	11	U	R	12	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Carbon disulfide	2700	11	U		11	U		11	U		**1.1**	J	J	**0.35**	J	J	11	U		11	U		11	U		11	U	
Carbon tetrachloride	760	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Chlorobenzene	1100	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Dibromochloromethane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dibromo-3-chloropropane	NA	11	U		11	U		11	U	UJ	11	U		12	U		11	U		11	U		11	U		11	U	UJ
Chloroethane	1900	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Chloroform	370	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Chloromethane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Cyclohexane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dibromoethane	NA	5.5	U		5.5	U		5.4	U		5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	
1,2-Dichlorobenzene	1100	5.5	U		5.5	U		5.4	U	UJ	5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	UJ
1,3-Dichlorobenzene	2400	5.5	U		5.5	U		5.4	U	UJ	5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	UJ
1,4-Dichlorobenzene	1800	5.5	U		5.5	U		5.4	U	UJ	5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	UJ
Dichlorodifluoromethane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,1-Dichloroethane	270	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dichloroethane	20	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,1-Dichloroethene	330	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
cis-1,2-Dichloroethene	250	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
trans-1,2-Dichloroethene	190	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dichloropropane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
cis-1,3-Dichloropropene	NA	5.5	U		5.5	U		5.4	U		5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	
trans-1,3-Dichloropropene	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Ethylbenzene	1000	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Trichlorofluoromethane	NA	5.5	U		5.5	U		5.4	U		5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	
2-Hexanone	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Isopropylbenzene	NA	5.5	U		5.5	U		5.4	U		5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	
Methyl acetate	NA	11	U		11	U	R	11	U	R	11	U	R	12	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Methylcyclohexane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Methylene chloride	50	11	J B	U	**5.2**	J	J	**3.6**	J	J	**5.4**	J	J	**4.9**	J	J	11	J B	U	11	J B	U	11	J B	U	11	J B	U
4-Methyl-2-pentanone	1000	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Styrene	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,1,2,2-Tetrachloroethane	600	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Tetrachloroethene	1300	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Toluene	700	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,2,3-Trichlorobenzene	NA	5.5	U		5.5	U		5.4	U	UJ	5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	UJ
1,1,1-Trichloroethane	680	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,1,2-Trichloroethane	NA	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Trichloroethene	470	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.5	U		5.5	U		5.4	U		5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	
Vinyl chloride	20	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Xylenes (total)	1600	11	U		11	U		11	U		11	U		12	U		11	U		11	U		11	U		11	U	
Methyl tert-butyl ether (MTBE	930	5.5	U		5.5	U		5.4	U		5.6	U		5.8	U		5.6	U		5.5	U		5.5	U		5.5	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B011-007-V			SRP-DU06-013-V			SRP-B011-008-V			SRP-B011-009-V			SRP-B011-010-V			SRP-B011-011-V			SRP-B012-001-V			SRP-B012-002-V			SRP-B012-003-V		
Sample Date		2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010		
Sample Depth (feet below grade)		14			14			16			18			20			21			2			4			6		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	22	U		**8.5**	J	J	**13**	J	J	22	U		21	U		**17**	J	J	23	U		**14**	J	J	23	U	
Benzene	60	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Bromodichloromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Bromoform	NA	11	U		11	U	UJ	11	U	UJ	11	U		11	U		11	U	R	11	U		11	U		11	U	UJ
Bromomethane	NA	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
2-Butanone	120	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Carbon disulfide	2700	11	U		11	U		**0.56**	J	J	11	U		11	U		**1.0**	J	J	11	U		11	U		11	U	
Carbon tetrachloride	760	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Chlorobenzene	1100	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Dibromochloromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
1,2-Dibromo-3-chloropropane	NA	11	U		11	U	UJ	11	U	UJ	11	U		11	U		11	U	R	11	U		11	U		11	U	UJ
Chloroethane	1900	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Chloroform	370	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Chloromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Cyclohexane	NA	11	U		11	U		**1.1**	J	J	11	U		**0.38**	J	J	**3.6**	J	J	11	U		11	U		11	U	
1,2-Dibromoethane	NA	5.4	U		5.4	U		5.6	U		5.4	U		5.4	U		5.3	U	R	5.7	U		5.7	U		5.7	U	
1,2-Dichlorobenzene	1100	5.4	U		5.4	U	UJ	5.6	U	UJ	5.4	U		5.4	U		5.3	U	R	5.7	U		5.7	U		5.7	U	UJ
1,3-Dichlorobenzene	2400	5.4	U		5.4	U	UJ	5.6	U	UJ	5.4	U		5.4	U		5.3	U	R	5.7	U		5.7	U		5.7	U	UJ
1,4-Dichlorobenzene	1800	5.4	U		5.4	U	UJ	5.6	U	UJ	5.4	U		5.4	U		5.3	U	R	5.7	U		5.7	U		5.7	U	UJ
Dichlorodifluoromethane	NA	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
1,1-Dichloroethane	270	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
1,2-Dichloroethane	20	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
1,1-Dichloroethene	330	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
cis-1,2-Dichloroethene	250	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
trans-1,2-Dichloroethene	190	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
1,2-Dichloropropane	NA	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
cis-1,3-Dichloropropene	NA	5.4	U		5.4	U		5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.7	U		5.7	U		5.7	U	
trans-1,3-Dichloropropene	NA	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Ethylbenzene	1000	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Trichlorofluoromethane	NA	5.4	U		5.4	U		5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.7	U		5.7	U		5.7	U	
2-Hexanone	NA	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Isopropylbenzene	NA	5.4	U		5.4	U		5.6	U		5.4	U		5.4	U		5.3	U	R	5.7	U		5.7	U		5.7	U	
Methyl acetate	NA	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Methylcyclohexane	NA	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Methylene chloride	50	11	J B	U	11	J B	U	11	J B	U	11	J B	U	11	U		11	J B	UJ	11	J B	U	11	J B	U	11	J B	U
4-Methyl-2-pentanone	1000	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Styrene	NA	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
1,1,2,2-Tetrachloroethane	600	11	U		11	U	UJ	11	U	UJ	11	U		11	U		11	U	R	11	U		11	U		11	U	UJ
Tetrachloroethene	1300	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Toluene	700	**0.27**	J	J	11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
1,2,3-Trichlorobenzene	NA	5.4	U		5.4	U	UJ	5.6	U	UJ	5.4	U		5.4	U		5.3	U	R	5.7	U		5.7	U		5.7	U	UJ
1,1,1-Trichloroethane	680	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
1,1,2-Trichloroethane	NA	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Trichloroethene	470	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.4	U		5.4	U		5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.7	U		5.7	U		5.7	U	
Vinyl chloride	20	11	U		11	U		11	U		11	U		11	U		11	U	UJ	11	U		11	U		11	U	
Xylenes (total)	1600	11	U		11	U		11	U		11	U		11	U		11	U	R	11	U		11	U		11	U	
Methyl tert-butyl ether (MTBE	930	5.4	U		5.4	U		5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.7	U		5.7	U		5.7	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B012-004-V			SRP-B012-005-V			SRP-B012-006-V			SRP-B012-007-V			SRP-B012-008-V			SRP-B013-001-V			SRP-B013-002-V			SRP-DU07-013-V			SRP-B013-003-V		
Sample Date		2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010		
Sample Depth (feet below grade)		8			10			12			14			15			2			4			4			6		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	22	U		22	U		**8.8**	**J**	J	**20**	**J**	J	**25**		J	23	U		23	U		**8.9**	**J**	J	22	U	
Benzene	60	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Bromodichloromethane	NA	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Bromoform	NA	11	U		11	U		11	U	UJ	11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Bromomethane	NA	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
2-Butanone	120	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Carbon disulfide	2700	11	U		11	U		11	U		**1.1**	**J**	J	**1.6**	**J**	J	11	U		11	U		**2.4**	**J**	J	11	U	
Carbon tetrachloride	760	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Chlorobenzene	1100	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Dibromochloromethane	NA	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
1,2-Dibromo-3-chloropropane	NA	11	U		11	U		11	U	UJ	11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Chloroethane	1900	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Chloroform	370	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Chloromethane	NA	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Cyclohexane	NA	11	U		11	U		11	U		**4.5**	**J**	J	**5.9**	**J**	J	11	U		11	U		11	U		11	U	
1,2-Dibromoethane	NA	5.6	U		5.4	U		5.4	U		5.3	U	R	5.2	U	R	5.7	U		5.7	U		5.7	U		5.6	U	
1,2-Dichlorobenzene	1100	5.6	U		5.4	U		5.4	U	UJ	5.3	U	R	5.2	U	R	5.7	U		5.7	U		5.7	U		5.6	U	
1,3-Dichlorobenzene	2400	5.6	U		5.4	U		5.4	U	UJ	5.3	U	R	5.2	U	R	5.7	U		5.7	U		5.7	U		5.6	U	
1,4-Dichlorobenzene	1800	5.6	U		5.4	U		5.4	U	UJ	5.3	U	R	5.2	U	R	5.7	U		5.7	U		5.7	U		5.6	U	
Dichlorodifluoromethane	NA	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
1,1-Dichloroethane	270	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
1,2-Dichloroethane	20	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
1,1-Dichloroethene	330	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
cis-1,2-Dichloroethene	250	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
trans-1,2-Dichloroethene	190	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
1,2-Dichloropropane	NA	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
cis-1,3-Dichloropropene	NA	5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.2	U	UJ	5.7	U		5.7	U		5.7	U		5.6	U	
trans-1,3-Dichloropropene	NA	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Ethylbenzene	1000	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Trichlorofluoromethane	NA	5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.2	U	UJ	5.7	U		5.7	U		5.7	U		5.6	U	
2-Hexanone	NA	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Isopropylbenzene	NA	5.6	U		5.4	U		5.4	U		5.3	U	R	5.2	U	R	5.7	U		5.7	U		5.7	U		5.6	U	
Methyl acetate	NA	11	U	R	11	U	R	11	U	R	11	U	R	10	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Methylcyclohexane	NA	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Methylene chloride	50	11	J B	U	11	J B	U	11	J B	U	11	JB	UJ	10	JB	UJ	11	J B	U	11	J B	U	11	J B	U	11	J B	U
4-Methyl-2-pentanone	1000	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Styrene	NA	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
1,1,2,2-Tetrachloroethane	600	11	U		11	U		11	U	UJ	11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Tetrachloroethene	1300	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Toluene	700	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
1,2,3-Trichlorobenzene	NA	5.6	U		5.4	U		5.4	U	UJ	5.3	U	R	5.2	U	R	5.7	U		5.7	U		5.7	U		5.6	U	
1,1,1-Trichloroethane	680	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
1,1,2-Trichloroethane	NA	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Trichloroethene	470	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.2	U	UJ	5.7	U		5.7	U		5.7	U		5.6	U	
Vinyl chloride	20	11	U		11	U		11	U		11	U	UJ	10	U	UJ	11	U		11	U		11	U		11	U	
Xylenes (total)	1600	11	U		11	U		11	U		11	U	R	10	U	R	11	U		11	U		11	U		11	U	
Methyl tert-butyl ether (MTBE	930	5.6	U		5.4	U		5.4	U		5.3	U	UJ	5.2	U	UJ	5.7	U		5.7	U		5.7	U		5.6	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B013-004-V			SRP-B013-005-V			SRP-B013-006-V			SRP-B013-007-V			SRP-B013-008-V			SRP-B014-001-V			SRP-B014-002-V			SRP-B014-003-V			SRP-B014-004-V		
Sample Date		2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010		
Sample Depth (feet below grade)		8			10			12			13			16			2			4			6			8		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	22	U		23	U		**12**	**J**	J	**30**		J	**27**		J	**8.2**	**J**	J	23	U		**7.9**	**J**	J	23	U	
Benzene	60	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Bromodichloromethane	NA	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Bromoform	NA	11	U		11	U		12	U		11	U	R	11	U	R	12	U		12	U		11	U		12	U	
Bromomethane	NA	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
2-Butanone	120	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Carbon disulfide	2700	11	U		11	U		12	U		**0.98**	**J**	J	**1.3**	**J**	J	**1.3**	**J**	J	**3.5**	**J**	J	11	U		12	U	
Carbon tetrachloride	760	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Chlorobenzene	1100	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Dibromochloromethane	NA	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
1,2-Dibromo-3-chloropropane	NA	11	U		11	U		12	U		11	U	R	11	U	R	12	U		12	U		11	U		12	U	
Chloroethane	1900	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Chloroform	370	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Chloromethane	NA	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Cyclohexane	NA	11	U		11	U		12	U		**1.4**	**J**	J	**1.5**	**J**	J	12	U		12	U		11	U		12	U	
1,2-Dibromoethane	NA	5.6	U		5.7	U		5.9	U		5.6	U	UJ	5.6	U	UJ	5.8	U		5.8	U		5.6	U		5.9	U	
1,2-Dichlorobenzene	1100	5.6	U		5.7	U		5.9	U		5.6	U	R	5.6	U	R	5.8	U		5.8	U		5.6	U		5.9	U	
1,3-Dichlorobenzene	2400	5.6	U		5.7	U		5.9	U		5.6	U	R	5.6	U	R	5.8	U		5.8	U		5.6	U		5.9	U	
1,4-Dichlorobenzene	1800	5.6	U		5.7	U		5.9	U		5.6	U	R	5.6	U	R	5.8	U		5.8	U		5.6	U		5.9	U	
Dichlorodifluoromethane	NA	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
1,1-Dichloroethane	270	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
1,2-Dichloroethane	20	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
1,1-Dichloroethene	330	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
cis-1,2-Dichloroethene	250	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
trans-1,2-Dichloroethene	190	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
1,2-Dichloropropane	NA	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
cis-1,3-Dichloropropene	NA	5.6	U		5.7	U		5.9	U		5.6	U		5.6	U		5.8	U		5.8	U		5.6	U		5.9	U	
trans-1,3-Dichloropropene	NA	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Ethylbenzene	1000	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Trichlorofluoromethane	NA	5.6	U		5.7	U		5.9	U		**1.3**	**J**	NJ	5.6	U		5.8	U		5.8	U		5.6	U		5.9	U	
2-Hexanone	NA	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Isopropylbenzene	NA	5.6	U		5.7	U		5.9	U		5.6	U	UJ	5.6	U	UJ	5.8	U		5.8	U		5.6	U		5.9	U	
Methyl acetate	NA	11	U	R	11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Methylcyclohexane	NA	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Methylene chloride	50	11	J B	U	11	J B	U	12	J B	U	11	J B	U	11	J B	U	12	J B	U	12	J B	U	11	J B	U	12	U	
4-Methyl-2-pentanone	1000	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Styrene	NA	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
1,1,2,2-Tetrachloroethane	600	11	U		11	U		12	U		11	U	R	11	U	R	12	U		12	U		11	U		12	U	
Tetrachloroethene	1300	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Toluene	700	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
1,2,3-Trichlorobenzene	NA	5.6	U		5.7	U		5.9	U		5.6	U	R	5.6	U	R	5.8	U		5.8	U		5.6	U		5.9	U	
1,1,1-Trichloroethane	680	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
1,1,2-Trichloroethane	NA	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Trichloroethene	470	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.6	U		5.7	U		5.9	U		5.6	U		5.6	U		5.8	U		5.8	U		5.6	U		5.9	U	
Vinyl chloride	20	11	U		11	U		12	U		11	U		11	U		12	U		12	U		11	U		12	U	
Xylenes (total)	1600	11	U		11	U		12	U		11	U	UJ	11	U	UJ	12	U		12	U		11	U		12	U	
Methyl tert-butyl ether (MTBE	930	5.6	U		5.7	U		5.9	U		5.6	U		5.6	U		5.8	U		5.8	U		5.6	U		5.9	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-DU08-013-V			SRP-B014-005-V			SRP-B014-006-V			SRP-B014-007-V			SRP-B014-008-V			SRP-B014-009-V		
Sample Date		2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010			2/3/2010		
Sample Depth (feet below grade)		8			10			12			14			15			16		
Parameter	SCOs (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	**8.6**	J	J	22	U		**9.2**	J	J	**54**		J	21	U	UJ	**22**		J
Benzene	60	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Bromodichloromethane	NA	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Bromoform	NA	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Bromomethane	NA	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
2-Butanone	120	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Carbon disulfide	2700	12	U		11	U		11	U		**2.0**	J	J	11	U	UJ	11	U	UJ
Carbon tetrachloride	760	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Chlorobenzene	1100	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Dibromochloromethane	NA	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
1,2-Dibromo-3-chloropropane	NA	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Chloroethane	1900	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Chloroform	370	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Chloromethane	NA	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Cyclohexane	NA	12	U		11	U		11	U		**1.7**	J	J	**1.7**	J	J	**1.7**	J	J
1,2-Dibromoethane	NA	5.9	U		5.6	U		5.5	U		5.8	U	R	5.3	U	R	5.3	U	R
1,2-Dichlorobenzene	1100	5.9	U		5.6	U		5.5	U		5.8	U	R	5.3	U	R	5.3	U	R
1,3-Dichlorobenzene	2400	5.9	U		5.6	U		5.5	U		5.8	U	R	5.3	U	R	5.3	U	R
1,4-Dichlorobenzene	1800	5.9	U		5.6	U		5.5	U		5.8	U	R	5.3	U	R	5.3	U	R
Dichlorodifluoromethane	NA	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
1,1-Dichloroethane	270	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
1,2-Dichloroethane	20	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
1,1-Dichloroethene	330	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
cis-1,2-Dichloroethene	250	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
trans-1,2-Dichloroethene	190	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
1,2-Dichloropropane	NA	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
cis-1,3-Dichloropropene	NA	5.9	U		5.6	U		5.5	U		5.8	U	UJ	5.3	U	UJ	5.3	U	UJ
trans-1,3-Dichloropropene	NA	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Ethylbenzene	1000	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Trichlorofluoromethane	NA	5.9	U		5.6	U		5.5	U		**1.2**	J	NJ	**1.4**	J	NJ	**1.1**	J	NJ
2-Hexanone	NA	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Isopropylbenzene	NA	5.9	U		5.6	U		5.5	U		5.8	U	R	5.3	U	R	5.3	U	R
Methyl acetate	NA	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Methylcyclohexane	NA	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Methylene chloride	50	12	J B	U	11	J B	U	11	J B	U	19	B	UJ	13	B	UJ	11	JB	UJ
4-Methyl-2-pentanone	1000	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Styrene	NA	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
1,1,2,2-Tetrachloroethane	600	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Tetrachloroethene	1300	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Toluene	700	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
1,2,3-Trichlorobenzene	NA	5.9	U		5.6	U		5.5	U		5.8	U	R	5.3	U	R	5.3	U	R
1,1,1-Trichloroethane	680	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
1,1,2-Trichloroethane	NA	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Trichloroethene	470	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
1,1,2-Trichloro-1,2,2-trifluoroe	6000	5.9	U		5.6	U		5.5	U		5.8	U	UJ	5.3	U	UJ	5.3	U	UJ
Vinyl chloride	20	12	U		11	U		11	U		12	U	UJ	11	U	UJ	11	U	UJ
Xylenes (total)	1600	12	U		11	U		11	U		12	U	R	11	U	R	11	U	R
Methyl tert-butyl ether (MTBE	930	5.9	U		5.6	U		5.5	U		5.8	U	UJ	5.3	U	UJ	5.3	U	UJ

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B001-001-V			SRP-B001-002-V			SRP-B001-003-V			SRP-B001-004-V			SRP-B001-005-V			SRP-B001-006-V RE			SRP-B001-007-V RE			SRP-B001-008-V		
Sample Date		2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010		
Sample Depth (feet below grade)		2			4			6			8			10			12			13.4			16		
Parameter	SCO (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	24	U	R	24	U	R	22	U	R	22	U	R	21	U	R	**15**	**J**	J	**58**		J	**50**	**D**	J
Benzene	60	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Bromodichloromethane	NA	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Bromoform	NA	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Bromomethane	NA	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
2-Butanone	120	12	U	R	12	U	R	11	U	R	11	U	R	10	U	R	11	U	R	10	U	R	10	U	R
Carbon disulfide	2700	12	U		12	U		11	U		11	U		10	U		**0.45**	**J**	J	**1.0**	**J**	J	**0.87**	**J**	J
Carbon tetrachloride	760	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Chlorobenzene	1100	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Dibromochloromethane	NA	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
1,2-Dibromo-3-chloropropane	NA	12	U		12	U		11	U		11	U		10	U	UJ	11	U	R	10	U	R	10	U	R
Chloroethane	1900	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Chloroform	370	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Chloromethane	NA	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Cyclohexane	NA	12	U		12	U		11	U		11	U		10	U		**1.4**	**J**	J	**4.0**	**J**	J	**4.0**	**J**	J
1,2-Dibromoethane	NA	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U		5.3	U	R	5.2	U	R	5.2	U	R
1,2-Dichlorobenzene	1100	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U	UJ	5.3	U	R	5.2	U	R	5.2	U	R
1,3-Dichlorobenzene	2400	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U	UJ	5.3	U	R	5.2	U	R	5.2	U	R
1,4-Dichlorobenzene	1800	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U	UJ	5.3	U	R	5.2	U	R	5.2	U	R
Dichlorodifluoromethane	NA	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
1,1-Dichloroethane	270	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
1,2-Dichloroethane	20	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
1,1-Dichloroethene	330	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
cis-1,2-Dichloroethene	250	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
trans-1,2-Dichloroethene	190	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
1,2-Dichloropropane	NA	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
cis-1,3-Dichloropropene	NA	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U		5.3	U	UJ	5.2	U	UJ	5.2	U	UJ
trans-1,3-Dichloropropene	NA	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Ethylbenzene	1000	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Trichlorofluoromethane	NA	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U		5.3	J	UJ	5.2	U	UJ	5.2	U	UJ
2-Hexanone	NA	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Isopropylbenzene	NA	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U		5.3	U	R	5.2	U	R	5.2	U	R
Methyl acetate	NA	12	U	R	12	U	R	11	U	R	11	U	R	10	U	R	11	U	R	10	U	R	10	U	R
Methylcyclohexane	NA	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Methylene chloride	50	12	J B	U	12	J B	U	11	J B	U	11	J B	U	10	J B	U	13	B	UJ	43	B	UJ	35	B	R
4-Methyl-2-pentanone	1000	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Styrene	NA	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
1,1,2,2-Tetrachloroethane	600	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Tetrachloroethene	1300	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Toluene	700	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
1,2,3-Trichlorobenzene	NA	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U	UJ	**18**		J	**45**		J	5.2	U	R
1,1,1-Trichloroethane	680	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
1,1,2-Trichloroethane	NA	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Trichloroethene	470	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U		5.3	U	UJ	5.2	U	UJ	5.2	U	UJ
Vinyl chloride	20	12	U		12	U		11	U		11	U		10	U		11	U	UJ	10	U	UJ	10	U	UJ
Xylenes (total)	1600	12	U		12	U		11	U		11	U		10	U		11	U	R	10	U	R	10	U	R
Methyl tert-butyl ether (MTBE)	930	6.1	U		6.1	U		5.4	U		5.5	U		5.2	U		5.3	U	UJ	5.2	U	UJ	5.2	U	UJ

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B002-001-V			SRP-B002-002-V			SRP-DU01-013-V			SRP-B002-003-V RE			SRP-B002-004-V			SRP-B002-005-V			SRP-B002-006-V			SRP-B002-007-V		
Sample Date		2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010		
Sample Depth (feet below grade)		2			4			4			6			8			10			12			14		
Parameter	SCO (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	24	U	R	25	U	R	13	JB	R	32		J	10	J	J	23	U	R	21	U	R	22	U	R
Benzene	60	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Bromodichloromethane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Bromoform	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Bromomethane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
2-Butanone	120	12	U	R	12	U	R	13	U	R	12	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Carbon disulfide	2700	0.63	J	J	0.93	J	J	5.0	J	J	12	U		11	U		11	U		11	U		0.80	J	J
Carbon tetrachloride	760	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Chlorobenzene	1100	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Dibromochloromethane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dibromo-3-chloropropane	NA	12	U		12	U		13	U		12	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	
Chloroethane	1900	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Chloroform	370	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Chloromethane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Cyclohexane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dibromoethane	NA	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U		5.7	U		5.4	U		5.5	U	
1,2-Dichlorobenzene	1100	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U	UJ	5.7	U	UJ	5.4	U	UJ	5.5	U	
1,3-Dichlorobenzene	2400	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U	UJ	5.7	U	UJ	5.4	U	UJ	5.5	U	
1,4-Dichlorobenzene	1800	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U	UJ	5.7	U	UJ	5.4	U	UJ	5.5	U	
Dichlorodifluoromethane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,1-Dichloroethane	270	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dichloroethane	20	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,1-Dichloroethene	330	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
cis-1,2-Dichloroethene	250	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
trans-1,2-Dichloroethene	190	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,2-Dichloropropane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
cis-1,3-Dichloropropene	NA	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U		5.7	U		5.4	U		5.5	U	
trans-1,3-Dichloropropene	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Ethylbenzene	1000	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Trichlorofluoromethane	NA	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U		5.7	J	U	5.4	J	U	5.5	U	
2-Hexanone	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Isopropylbenzene	NA	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U		5.7	U		5.4	U		5.5	U	
Methyl acetate	NA	12	U	R	12	U	R	13	U	R	12	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Methylcyclohexane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Methylene chloride	50	12	J B	U	12	J B	U	13	J B	U	12	J B	U	11	B	U	11	J B	U	11	J B	U	11	B	U
4-Methyl-2-pentanone	1000	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Styrene	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,1,2,2-Tetrachloroethane	600	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Tetrachloroethene	1300	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Toluene	700	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,2,3-Trichlorobenzene	NA	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U	UJ	5.7	U	UJ	5.4	U	UJ	5.5	U	
1,1,1-Trichloroethane	680	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,1,2-Trichloroethane	NA	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Trichloroethene	470	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U		5.7	U		5.4	U		5.5	U	
Vinyl chloride	20	12	U		12	U		13	U		12	U		11	U		11	U		11	U		11	U	
Xylenes (total)	1600	12	J B	U	12	J B	U	13	U		12	U		11	U		11	J B	U	11	J B	U	11	U	
Methyl tert-butyl ether (MTBE)	930	5.9	U		6.2	U		6.3	U		5.9	U		5.7	U		5.7	U		5.4	U		5.5	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B002-008-V RE			SRP-B002-009-V			SRP-B003-001-V			SRP-B003-002-V			SRP-B003-003-V			SRP-B003-004-V			SRP-B004-001-V		
Sample Date		2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010		
Sample Depth (feet below grade)		14.5			18			2			4			6			8			2		
Parameter	SCO (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	22	U	R	15	J B	R	22	U	R	22	U	R	12	J	J	11	J	J	21	U	R
Benzene	60	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Bromodichloromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Bromoform	NA	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Bromomethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
2-Butanone	120	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Carbon disulfide	2700	11	U		0.60	J	J	11	U		11	U		0.70	J	J	0.75	J	J	11	U	
Carbon tetrachloride	760	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Chlorobenzene	1100	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Dibromochloromethane	NA	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
1,2-Dibromo-3-chloropropane	NA	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R
Chloroethane	1900	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Chloroform	370	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Chloromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Cyclohexane	NA	11	U		11	U	UJ	11	U		11	U		1.0	J	J	1.2	J	J	11	U	
1,2-Dibromoethane	NA	5.5	U		5.3	U	R	5.5	U		5.5	U		5.4	U	R	5.4	U	UJ	5.4	U	UJ
1,2-Dichlorobenzene	1100	5.5	U	UJ	5.3	U	R	5.5	U		5.5	U		5.4	U	R	5.4	U	R	5.4	U	R
1,3-Dichlorobenzene	2400	5.5	U	UJ	5.3	U	R	5.5	U		5.5	U		5.4	U	R	5.4	U	R	5.4	U	R
1,4-Dichlorobenzene	1800	5.5	U	UJ	5.3	U	R	5.5	U		5.5	U		5.4	U	R	5.4	U	R	5.4	U	R
Dichlorodifluoromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
1,1-Dichloroethane	270	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
1,2-Dichloroethane	20	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
1,1-Dichloroethene	330	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
cis-1,2-Dichloroethene	250	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
trans-1,2-Dichloroethene	190	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
1,2-Dichloropropane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
cis-1,3-Dichloropropene	NA	5.5	U		5.3	U	UJ	5.5	U		5.5	U		5.4	U	UJ	5.4	U	UJ	5.4	U	
trans-1,3-Dichloropropene	NA	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Ethylbenzene	1000	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Trichlorofluoromethane	NA	5.5	J	U	5.3	U	UJ	5.5	U		5.5	U		5.4	U	UJ	5.4	U	UJ	5.4	U	U
2-Hexanone	NA	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Isopropylbenzene	NA	5.5	U		5.3	U	R	5.5	U		5.5	U		5.4	U	R	5.4	U	UJ	5.4	U	U
Methyl acetate	NA	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Methylcyclohexane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Methylene chloride	50	11	J B	U	21	B	UJ	11	J B	U	4.6	J B	U	20	B	UJ	17	B	UJ	14	B	U
4-Methyl-2-pentanone	1000	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Styrene	NA	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
1,1,2,2-Tetrachloroethane	600	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Tetrachloroethene	1300	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Toluene	700	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	0.57	J	J
1,2,3-Trichlorobenzene	NA	5.5	U	UJ	5.3	U	R	5.5	U		5.5	U		5.4	U	R	5.4	U	R	5.4	U	R
1,1,1-Trichloroethane	680	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
1,1,2-Trichloroethane	NA	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Trichloroethene	470	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	5.5	U		5.3	U	UJ	5.5	U		5.5	U		5.4	U	UJ	5.4	U	UJ	5.4	U	
Vinyl chloride	20	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	
Xylenes (total)	1600	11	U		11	U	R	11	U		11	U		11	U	R	11	U	UJ	11	U	UJ
Methyl tert-butyl ether (MTBE)	930	5.5	U		5.3	U	UJ	5.5	U		5.5	U		5.4	U	UJ	5.4	U	UJ	5.4	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B004-002-V RE			SRP-B004-003-V			SRP-B005-001-V			SRP-B005-011-V			SRP-B005-002-V			SRP-B005-003-V RE			SRP-B005-004-V RE			SRP-B005-005-V		
Sample Date		2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010		
Sample Depth (feet below grade)		4			6			2			3			4			6			8			10		
Parameter	SCO (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	15	J	J	26		J	7.2	J	J	29		J	33		J	94		J	81		J	32		J
Benzene	60	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Bromodichloromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Bromoform	NA	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Bromomethane	NA	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
2-Butanone	120	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Carbon disulfide	2700	11	U		0.80	J	J	11	U		6.4	J	J	5.1	J	J	4.4	J	J	3.9	J	J	5.0	J	J
Carbon tetrachloride	760	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Chlorobenzene	1100	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Dibromochloromethane	NA	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
1,2-Dibromo-3-chloropropane	NA	11	U	R	11	U	R	11	U	UJ	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Chloroethane	1900	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Chloroform	370	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Chloromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Cyclohexane	NA	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
1,2-Dibromoethane	NA	5.4	U		5.3	U	R	5.5	U		5.5	U	UJ	5.5	U	UJ	5.5	U	UJ	5.5	U	UJ	5.5	U	R
1,2-Dichlorobenzene	1100	5.4	U	R	5.3	U	R	5.5	U	UJ	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R
1,3-Dichlorobenzene	2400	5.4	U	R	5.3	U	R	5.5	U	UJ	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R
1,4-Dichlorobenzene	1800	5.4	U	R	5.3	U	R	5.5	U	UJ	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R
Dichlorodifluoromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
1,1-Dichloroethane	270	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
1,2-Dichloroethane	20	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
1,1-Dichloroethene	330	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
cis-1,2-Dichloroethene	250	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
trans-1,2-Dichloroethene	190	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
1,2-Dichloropropane	NA	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
cis-1,3-Dichloropropene	NA	5.4	U		5.3	U	UJ	5.5	U		5.5	U		5.5	U		5.5	U		5.5	U		5.5	U	UJ
trans-1,3-Dichloropropene	NA	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Ethylbenzene	1000	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Trichlorofluoromethane	NA	5.4	U	U	5.3	U	UJ	5.5	U	U	5.5	U	U	5.5	U	U	5.5	U	U	5.5	U	U	5.5	U	UJ
2-Hexanone	NA	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Isopropylbenzene	NA	5.4	U		5.3	U	R	5.5	U		5.5	U	UJ	5.5	U	UJ	5.5	U	UJ	5.5	U	UJ	5.5	U	R
Methyl acetate	NA	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R	11	U	R
Methylcyclohexane	NA	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Methylene chloride	50	12		J	8.4	J	J	11	U		11	U		6.1	J	J	8.8	J	J	6.6	J	J	5.9	J	J
4-Methyl-2-pentanone	1000	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Styrene	NA	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
1,1,2,2-Tetrachloroethane	600	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Tetrachloroethene	1300	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Toluene	700	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
1,2,3-Trichlorobenzene	NA	5.4	U	R	5.3	U	R	5.5	U	UJ	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R	5.5	U	R
1,1,1-Trichloroethane	680	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
1,1,2-Trichloroethane	NA	11	U		11	U	UJ	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Trichloroethene	470	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	5.4	U		5.3	U	UJ	5.5	U		5.5	U		5.5	U		5.5	U		5.5	U		5.5	U	UJ
Vinyl chloride	20	11	U		11	U	UJ	11	U		11	U		11	U		11	U		11	U		11	U	UJ
Xylenes (total)	1600	11	U		11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	11	U	UJ	11	U	R
Methyl tert-butyl ether (MTBE)	930	5.4	U		5.3	U	UJ	5.5	U		5.5	U		5.5	U		5.5	U		5.5	U		5.5	U	UJ

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B005-006-V			SRP-B015-001-V			SRP-B015-002-V			SRP-B015-003-V			SRP-B015-004-V			SRP-B015-005-V RE			SRP-B015-006-V			SRP-DU09-013-V		
Sample Date		2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010			2/4/2010		
Sample Depth (feet below grade)		15			2			4			6			8			10			12			12		
Parameter	SCO (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	**11**	J	J	24	U	R	**33**		J	22	U	R	24	U	R	**23**		J	**25**		J	**27**		J
Benzene	60	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Bromodichloromethane	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Bromoform	NA	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Bromomethane	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
2-Butanone	120	11	U	R	12	U	R	12	U	R	11	U	R	12	U	R	11	U	R	11	U	R	11	U	R
Carbon disulfide	2700	**3.4**	J	J	**0.71**	J	J	12	U		11	U		12	U		**2.1**	J	J	**0.59**	J	J	**0.60**	J	J
Carbon tetrachloride	760	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Chlorobenzene	1100	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Dibromochloromethane	NA	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
1,2-Dibromo-3-chloropropane	NA	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	R	11	U	R
Chloroethane	1900	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Chloroform	370	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Chloromethane	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Cyclohexane	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	**1.9**	J	J	11	U	UJ
1,2-Dibromoethane	NA	5.4	U	R	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	R	5.4	U	UJ	5.5	U	R
1,2-Dichlorobenzene	1100	5.4	U	R	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	R	5.4	U	R	5.5	U	R
1,3-Dichlorobenzene	2400	5.4	U	R	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	R	5.4	U	R	5.5	U	R
1,4-Dichlorobenzene	1800	5.4	U	R	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	R	5.4	U	R	5.5	U	R
Dichlorodifluoromethane	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
1,1-Dichloroethane	270	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
1,2-Dichloroethane	20	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
1,1-Dichloroethene	330	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
cis-1,2-Dichloroethene	250	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
trans-1,2-Dichloroethene	190	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
1,2-Dichloropropane	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
cis-1,3-Dichloropropene	NA	5.4	U	UJ	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	UJ	5.4	U		5.5	U	UJ
trans-1,3-Dichloropropene	NA	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Ethylbenzene	1000	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Trichlorofluoromethane	NA	5.4	U	UJ	5.9	U		5.8	U		5.5	U		6.0	U		5.7	J	UJ	5.4	U	U	5.5	U	UJ
2-Hexanone	NA	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Isopropylbenzene	NA	5.4	U	R	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	R	5.4	U	UJ	5.5	U	R
Methyl acetate	NA	11	U	R	12	U	R	12	U	R	11	U	R	12	U	R	11	U	R	11	U	R	11	U	R
Methylcyclohexane	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Methylene chloride	50	**4.2**	J	J	12.0	J B	U	17	B	U	13	B	U	13	B	U	38	B	UJ	33	B	U	19	B	UJ
4-Methyl-2-pentanone	1000	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Styrene	NA	11	U	UJ	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
1,1,2,2-Tetrachloroethane	600	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Tetrachloroethene	1300	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Toluene	700	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
1,2,3-Trichlorobenzene	NA	5.4	U	R	5.9	U		5.8	U		5.5	U		6.0	U		**19**		J	5.4	U	R	5.5	U	R
1,1,1-Trichloroethane	680	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
1,1,2-Trichloroethane	NA	11	U	R	12	U		12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Trichloroethene	470	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	5.4	U	UJ	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	UJ	5.4	U		5.5	U	UJ
Vinyl chloride	20	11	U	UJ	12	U		12	U		11	U		12	U		11	U	UJ	11	U		11	U	UJ
Xylenes (total)	1600	11	U	R	12	J B	U	12	U		11	U		12	U		11	U	R	11	U	UJ	11	U	R
Methyl tert-butyl ether (MTBE)	930	5.4	U	UJ	5.9	U		5.8	U		5.5	U		6.0	U		5.7	U	UJ	5.4	U		5.5	U	UJ

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-B015-007-V			SRP-B015-008-V			SRP-B015-009-V RE			SRP-B006-001-V			SRP-B006-002-V			SRP-B006-003-V			SRP-B006-004-V			SRP-B007-001-V		
Sample Date		2/4/2010			2/4/2010			2/4/2010			2/5/2010			2/5/2010			2/5/2010			2/5/2010			2/5/2010		
Sample Depth (feet below grade)		14			15.8			16			2			4			6			7			2		
Parameter	SCO (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	23	U	R	31		J	9.5	J	J	7.6	J	J	31		J	29		J	28		J	9.6	J	J
Benzene	60	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Bromodichloromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Bromoform	NA	11	U	UJ	11	U	R	11	U		11	U	UJ	11	U	R	11	U	R	11	U	R	12	U	
Bromomethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
2-Butanone	120	11	U	R	11	U	R	11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Carbon disulfide	2700	0.40	J	J	1.3	J	J	11	U		11	U		1.9	J	J	0.99	J	J	1.1	J	J	1.8	J	J
Carbon tetrachloride	760	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Chlorobenzene	1100	11	U	UJ	11	U	UJ	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
Dibromochloromethane	NA	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
1,2-Dibromo-3-chloropropane	NA	11	U	R	11	U	R	11	U	R	11	U	UJ	11	U	R	11	U	R	11	U	R	12	U	
Chloroethane	1900	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Chloroform	370	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Chloromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Cyclohexane	NA	11	U		11	U	UJ	11	U		11	U		4.2	J	J	2.9	J	J	3.6	J	J	0.48	J	J
1,2-Dibromoethane	NA	5.7	U	UJ	5.4	U	R	5.3	U		5.4	U		5.3	U	R	5.3	U	R	5.3	U	R	6.0	U	
1,2-Dichlorobenzene	1100	5.7	U	R	5.4	U	R	5.3	U	R	5.4	U	UJ	5.3	U	R	5.3	U	R	5.3	U	R	6.0	U	
1,3-Dichlorobenzene	2400	5.7	U	R	5.4	U	R	5.3	U	R	5.4	U	UJ	5.3	U	R	5.3	U	R	5.3	U	R	6.0	U	
1,4-Dichlorobenzene	1800	5.7	U	R	5.4	U	R	5.3	U	R	5.4	U	UJ	5.3	U	R	5.3	U	R	5.3	U	R	6.0	U	
Dichlorodifluoromethane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
1,1-Dichloroethane	270	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
1,2-Dichloroethane	20	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
1,1-Dichloroethene	330	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
cis-1,2-Dichloroethene	250	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
trans-1,2-Dichloroethene	190	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
1,2-Dichloropropane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
cis-1,3-Dichloropropene	NA	5.7	U		5.4	U	UJ	5.3	U		5.4	U		5.3	U	UJ	5.3	U	UJ	5.3	U	UJ	6.0	U	
trans-1,3-Dichloropropene	NA	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
Ethylbenzene	1000	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
Trichlorofluoromethane	NA	5.7	U		5.4	U	UJ	5.3	U	U	5.4	U		5.3	U	UJ	5.3	U	UJ	5.3	U	UJ	6.0	U	
2-Hexanone	NA	11	U	UJ	11	U	UJ	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
Isopropylbenzene	NA	5.7	U	UJ	5.4	U	R	5.3	U		5.4	U		5.3	U	R	5.3	U	R	5.3	U	R	6.0	U	
Methyl acetate	NA	11	U	R	11	U	R	11	U	R	11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Methylcyclohexane	NA	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Methylene chloride	50	17	B	U	36	B	UJ	11	U		12	B	U	28	B	UJ	21	B	UJ	32	B	UJ	13	B	U
4-Methyl-2-pentanone	1000	11	U		11	U	UJ	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
Styrene	NA	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
1,1,2,2-Tetrachloroethane	600	11	U	UJ	11	U	UJ	11	U		11	U	UJ	11	U	R	11	U	R	11	U	R	12	U	
Tetrachloroethene	1300	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
Toluene	700	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R	12	J	B	U
1,2,3-Trichlorobenzene	NA	5.7	U	R	5.4	U	R	5.3	U	R	5.4	U	UJ	5.3	U	R	5.3	U	R	5.3	U	R	6.0	U	
1,1,1-Trichloroethane	680	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
1,1,2-Trichloroethane	NA	11	U	UJ	11	U	R	11	U		11	U		11	U	R	11	U	R	11	U	R	12	U	
Trichloroethene	470	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	5.7	U		5.4	U	UJ	5.3	U		5.4	U		5.3	U	UJ	5.3	U	UJ	5.3	U	UJ	6.0	U	
Vinyl chloride	20	11	U		11	U	UJ	11	U		11	U		11	U	UJ	11	U	UJ	11	U	UJ	12	U	
Xylenes (total)	1600	11	U	UJ	11	U	R	11	U		11	U		2.0	J	J	1.7	J	J	3.8	J	J	12	U	
Methyl tert-butyl ether (MTBE)	930	5.7	U		5.4	U	UJ	5.3	U		5.4	U		5.3	U	UJ	5.3	U	UJ	5.3	U	UJ	6.0	U	

Table A-1
SPRU Northfield Red Pines
Volatile Organic Compound Results

Sample ID		SRP-DU04-013-V			SRP-B007-002-V RE			SRP-B007-003-V			SRP-B007-004-V RE			SRP-B007-005-V			SRP-B007-006-V		
Sample Date		2/5/2010			2/5/2010			2/5/2010			2/5/2010			2/5/2010			2/5/2010		
Sample Depth (feet below grade)		2			4			6			6.5			8			10		
Parameter	SCO (ug/kg)	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V	(ug/kg)	L	V
Acetone	50	24	U		**25**		J	**9.1**	J	J	**22**		J	**17**	J	J	**25**		J
Benzene	60	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Bromodichloromethane	NA	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Bromoform	NA	12	U	UJ	11	U	R	12	U		11	U	R	11	U	UJ	12	U	R
Bromomethane	NA	12	U		11	U		12	U		11	U		11	U		12	U	UJ
2-Butanone	120	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Carbon disulfide	2700	12	U		11	U		**3.0**	J	J	11	U		11	U		12	U	UJ
Carbon tetrachloride	760	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Chlorobenzene	1100	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
Dibromochloromethane	NA	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
1,2-Dibromo-3-chloropropane	NA	12	U	UJ	11	U	R	12	U		11	U	R	11	U	UJ	12	U	R
Chloroethane	1900	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Chloroform	370	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Chloromethane	NA	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Cyclohexane	NA	12	U		**0.72**	J	J	12	U		11	U		11	U		**0.38**	J	J
1,2-Dibromoethane	NA	6.0	U		5.6	U	UJ	5.8	U		5.6	U	UJ	5.5	U	UJ	5.8	U	UJ
1,2-Dichlorobenzene	1100	6.0	U	UJ	5.6	U	R	5.8	U		5.6	U	R	5.5	U	UJ	5.8	U	R
1,3-Dichlorobenzene	2400	6.0	U	UJ	5.6	U	R	5.8	U		5.6	U	R	5.5	U	UJ	5.8	U	R
1,4-Dichlorobenzene	1800	6.0	U	UJ	5.6	U	R	5.8	U		5.6	U	R	5.5	U	UJ	5.8	U	R
Dichlorodifluoromethane	NA	12	U		11	U		12	U		11	U		11	U		12	U	UJ
1,1-Dichloroethane	270	12	U		11	U		12	U		11	U		11	U		12	U	UJ
1,2-Dichloroethane	20	12	U		11	U		12	U		11	U		11	U		12	U	UJ
1,1-Dichloroethene	330	12	U		11	U		12	U		11	U		11	U		12	U	UJ
cis-1,2-Dichloroethene	250	12	U		11	U		12	U		11	U		11	U		12	U	UJ
trans-1,2-Dichloroethene	190	12	U		11	U		12	U		11	U		11	U		12	U	UJ
1,2-Dichloropropane	NA	12	U		11	U		12	U		11	U		11	U		12	U	UJ
cis-1,3-Dichloropropene	NA	6.0	U		5.6	U		5.8	U		5.6	U		5.5	U		5.8	U	UJ
trans-1,3-Dichloropropene	NA	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
Ethylbenzene	1000	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
Trichlorofluoromethane	NA	6.0	U		5.6	U		5.8	U		5.6	U		5.5	U		5.8	U	UJ
2-Hexanone	NA	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
Isopropylbenzene	NA	6.0	U		5.6	U	UJ	5.8	U		5.6	U	UJ	5.5	U	UJ	5.8	U	UJ
Methyl acetate	NA	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Methylcyclohexane	NA	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Methylene chloride	50	12	B	U	73	B	U	12	J B	U	68	B	U	13	B	U	19	B	UJ
4-Methyl-2-pentanone	1000	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
Styrene	NA	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
1,1,2,2-Tetrachloroethane	600	12	U	UJ	11	U	R	12	U		11	U	R	11	U	UJ	12	U	R
Tetrachloroethene	1300	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
Toluene	700	12	U		11	U	UJ	12	J B	U	11	U	UJ	11	U	UJ	12	U	UJ
1,2,3-Trichlorobenzene	NA	6.0	U	UJ	5.6	U	R	5.8	U		5.6	U	R	5.5	U	UJ	5.8	U	R
1,1,1-Trichloroethane	680	12	U		11	U		12	U		11	U		11	U		12	U	UJ
1,1,2-Trichloroethane	NA	12	U		11	U	UJ	12	U		11	U	UJ	11	U	UJ	12	U	UJ
Trichloroethene	470	12	U		11	U		12	U		11	U		11	U		12	U	UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	6.0	U		5.6	U		5.8	U		5.6	U		5.5	U		5.8	U	UJ
Vinyl chloride	20	12	U		11	U		12	U		11	U		11	U		12	U	UJ
Xylenes (total)	1600	**1.4**	J	J	**0.73**	J	J	12	U		11	U	UJ	**0.82**	J	J	**1.8**	J	J
Methyl tert-butyl ether (MTBE)	930	6.0	U		5.6	U		5.8	U		5.6	U		5.5	U		5.8	U	UJ

Table A-2
SPRU Northfield Red Pines
Rinsate and Trip Blank VOC Data

Sample ID		SRP-RB1-001-V			SRP-RB2-001-V			SRP-RB3-001-V			SRP-RB6-001-V			SRP-TB1-001-V			SRP-TB2-001-V			SRP-TB3-001-V			SRP-RB4-001-V			SRP-RB5-001-V			SRP-RB9-001-V			SRP-TB4-001-V			SRP-TB4-001-V		
Sample Date		1/28/2010			2/1/2010			2/3/2010			2/3/2010			1/28/2010			2/1/2010			2/3/2010			2/4/2010			2/4/2010			2/5/2010			2/4/2010			2/5/2010		
Sample Type		Equip Blank			Equip Blank			Equip Blank			Equip Blank			Trip blank			Trip blank			Trip blank			Equip Blank			Equip Blank			Equip Blank			Trip blank			Trip blank		
Parameter	SCOs (ug/kg)	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L	V	(ug/L)	L		(ug/L)	L	V
Acetone	50	**0.86**	J	J	5.0	U	R	**0.99**	J	J	**0.79**	J	J	5.0	U	R	5.0	U	R	5.0	U	R	**3.2**	J	J	**2.6**	J	J	**3.2**	J	J	5.0	U	R	5.0	U	R
Benzene	60	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Bromodichloromethane	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Bromoform	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Bromomethane	NA	1.0	J	U	1.0	J	U	0.17	J B	U	0.19	J B	U	**0.16**	J	J	**0.15**	J	J	0.14	J B	U	1.0	J B	U	1.0	J B	U	1.00	J B	U	1.0	U		1.0	J B	U
2-Butanone	120	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R
Carbon disulfide	2700	2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U	
Carbon tetrachloride	760	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Chlorobenzene	1100	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Dibromochloromethane	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,2-Dibromo-3-chloropropane	NA	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R	1.0	U	R
Chloroethane	1900	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Chloroform	370	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Chloromethane	NA	**0.32**	J	J	**0.22**	J	J	**0.18**	J	J	**0.70**	J	J	1.0	U		1.0	U		1.0	U		**0.22**	J	J	**0.20**	J	J	**0.46**	J	J	1.0	U		1.0	U	
Cyclohexane	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,2-Dibromoethane	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,2-Dichlorobenzene	1100	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,3-Dichlorobenzene	2400	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,4-Dichlorobenzene	1800	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Dichlorodifluoromethane	NA	2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U	
1,1-Dichloroethane	270	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,2-Dichloroethane	20	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,1-Dichloroethene	330	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
cis-1,2-Dichloroethene	250	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
trans-1,2-Dichloroethene	190	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,2-Dichloropropane	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
cis-1,3-Dichloropropene	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
trans-1,3-Dichloropropene	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Ethylbenzene	1000	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Trichlorofluoromethane	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
2-Hexanone	NA	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R
Isopropylbenzene	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Methyl acetate	NA	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R	5.0	U	R
Methylcyclohexane	NA	4.0	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0	U		4.0	U	
Methylene chloride	50	2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		1.4	J		**0.14**	J	J	**0.14**	J	J	**0.18**	J	J	2.0	U		2.0	U	
4-Methyl-2-pentanone	1000	5.0	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0	U		5.0	U	
Styrene	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,1,2,2-Tetrachloroethane	600	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Tetrachloroethene	1300	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Toluene	700	**0.12**	J	J	**0.10**	J	J	**0.089**	J	J	**0.084**	J	J	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,2,3-Trichlorobenzene	NA	2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U	
1,1,1-Trichloroethane	680	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,1,2-Trichloroethane	NA	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Trichloroethene	470	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
1,1,2-Trichloro-1,2,2-trifluoroethane	6000	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Vinyl chloride	20	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Xylenes (total)	1600	1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U		1.0	U	
Methyl tert-butyl ether (MTBE)	930	2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U		2.0	U	

Appendix B

Borehole Logs for Red Pines VOC Investigation

Drilling Log

Soil Boring **SRP-B001**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *323.3 ft.* Total Hole Depth *16.0 ft.* North *1027553.67 ft.* East *626239.77 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/4/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B001-001-V)
Volatile Samples collected from:
SRP-B001-001-V at (2'-0"-O.C.)
SRP-B001-002-V at (3'-10"-4'-0")
SRP-B001-003-V at (6'-0"-O.C.)
SRP-B001-004-V at (7'-10"-8'-0")
SRP-B001-005-V at (10'-0"-O.C.)
SRP-B001-006-V at (11'-10"-12'-0")
SRP-B001-007-V at (13'-5" - O.C.)
SRP-B001-008-V at (15'-10"-16'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery / Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure). Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	80%		CL	(0'-0"-4'-3") Brown CLAY & SILT, little (-) fine Sand, trace fine Gravel, moist, stiff, fine grain, Lean Clay with Sand.
2	0.0	B001-001-V			
	0.0	80%			
4	0.0	B001-002-V		ML	(4'-3"-5'-7") Brown Clayey Silt, little (-) fine Sand, wet, medium to stiff, fine grain, SILT.
	0.0	100%			
6	0.0	B001-003-V		CL ML	(5'-7"-8'-11") SILT & CLAY, little (-) fine Sand, trace fine Gravel, moist, stiff to very stiff, fine grain, Lean Clay with Sand.
	0.0	100%			
8	0.0	B001-004-V			
	0.0	100%			
10	0.0	B001-005-V		SM	(8'-11"-11'-1") Brown coarse to fine SAND, some (-) Clayey Silt, little (+) medium to fine Gravel, coarse grain, dry to moist, medium dense to dense, Silty Sand with Gravel.
	0.0	100%			
	0.0	B001-006-V			(11'-1"-11'-4") Rock
12	0.0	100%		SW SM	(11'-4"-12'-1") Gray coarse to fine SAND, little (+) medium to fine Gravel, trace (+) Silt, dry, coarse grain, medium dense, well graded Sand with Silt and Gravel.
	0.0	B001-007-V		ML	(12'-1"-12'-9") Brown gray SILT, some fine Sand, wet, soft to medium, fine grain, Silt with Sand.
14	0.0	100%		ML	(12'-9"-13'-4") (Gradual transition to gray) Gray brown Clayey SILT and coarse to fine SAND, trace fine Gravel, moist, fine grain, medium to stiff, Sandy Silt.
	0.0	B001-008-V			(13'-4"-16'-0") Gray Clayey SILT, some coarse to fine Sand, little (-) fine Gravel, becoming stiff to hard with increasing depth, fine grain, dry to moist, Sandy Silt.
16					**END OF BORING AT 16'-0"**
18					

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Drilling Log

Soil Boring **SRP-B002**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *325.1 ft.* Total Hole Depth *18.0 ft.* North *1027588.11 ft* East *626214.59 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/4/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B002-001-V) Volatile Samples collected from: SRP-B002-001-V at (2'-0"-O.C.), SRP-B002-002-V at (3'-10"-4'-0"), SRP-B002-003-V at (6'-0"-O.C.), SRP-B002-004-V at (7'-10"-8'-0"), SRP-B002-005-V at (10'-0"-O.C.), SRP-B002-006-V at (11'-10"-12'-0"), SRP-B002-007-V at (14'-0"-O.C.), SRP-B002-008-V at (14'-6"-O.C.), SRP-B002-009-V at (18'-0"-O.C.)

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%				
2	0.0	B002-001-V			CL	(0'-0"-4'-6") Brown CLAY & SILT, trace fine Sand, trace fine Gravel, moist, stiff, fine grain, Lean Clay.
	0.0	100%				
4	0.0	B002-002-V				
	0.0	100%				
6	0.0	B002-003-V			ML	(4'-6"-7'-7") Brown SILT, little fine Sand, wet, soft to medium, fine grain, Silt with Sand.
	0.0	100%				
8	0.0	B002-004-V			SM	(7'-7"-8'-0") Brown coarse to fine SAND, some (+) Silt, little medium to fine Gravel, moist, medium dense, coarse grain, Silty Sand with Gravel.
	0.0	100%			CL	(8'-0"-9'-10") Brown CLAY & SILT, trace fine Sand, wet, soft, fine grain, Lean Clay.
10	0.0	B002-005-V			SW	(9'-10"-13'-6") Abrubt transition to Brown coarse (+) medium to fine SAND, little (-) fine Gravel, trace Silt, moist, medium dense to dense, coarse grain, Well Graded Sand.
	0.0	100%				
12	0.0	B002-006-V				
	0.0	100%				
14	0.0	B002-007-V			SW SM	(13'-6"-14'-6") Brown coarse medium to fine SAND, little fine Gravel, little (-) Silt, moist to wet, medium dense, coarse grain, Well Graded Sand with Silt and Gravel.
	0.0	B002-008-V			CL	(14'-6"-16'-0") Gray CLAY & SILT, trace fine Sand, trace fine Gravel, moist, very stiff to hard, fine grain, Lean Clay.
16	0.0	100%				
	0.0	100%			CL	(16'-0"-18'-0") Gray CLAY & SILT, little (-) fine Gravel, trace fine Sand, dry to moist, fine grain, hard, Lean Clay with Gravel.
18	0.0	B002-009-V				**END OF BORING AT 18'-0"**
20						

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Drilling Log

Soil Boring **SRP-B003**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *324.1 ft.* Total Hole Depth *11.0 ft.* North *1027614.73 ft* East *626181.02 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/4/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B003-001-V)
Volatile Samples collected from:
SRP-B003-001-V at (2'-0"-O.C.)
SRP-B003-002-V at (4'-0"-O.C.)
SRP-B003-003-V at (6'-0"-O.C.)
SRP-B003-004-V at (8'-0"-O.C.)

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%				(+1'-0"-0'-0") Wood chips/Organics
	0.0	100%				(0'-0"-4'-0") Brown SILT & CLAY, little fine Gravel, trace medium to fine Sand, moist, stiff, fine grain, Silt with Gravel.
	0.0	100%				
2		B003-001-V			ML	
	0.0	100%				
	0.0	100%				
4		B003-002-V			GM	(4'-0"-4'-7") Gray brown GRAVEL, medium to fine , some (+) coarse to fine Sand, little Clayey Silt, dry, dense, coarse grain, Silty Gravel with Sand.
	0.0	100%				(4'-7"-7'-0") Gray brown CLAY & SILT, little fine Gravel, little (-) fine Sand, moist, very stiff, fine grain, Lean Clay with Gravel.
	0.0	100%			CL	
6		B003-003-V				
	0.0	100%				
	0.0	100%				(7'-0"-11'-0") Gray CLAY & SILT, little fine Gravel, trace (+) medium to fine Sand, dry to moist, very stiff to hard, Lean Clay with Gravel.
8		B003-004-V			CL	
	0.0	100%				
	0.0	100%				
10						
	0.0	100%				
12						**END OF BORING AT 11'-0"**

IT_COMMERCIAL Rev: 12/6/99 SPRU-02-2010.GPJ IT_CORP.GDT 3/18/10

Drilling Log

Soil Boring **SRP-B004**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *322.9 ft.* Total Hole Depth *7.0 ft.* North *1027651.37 ft* East *626159.37 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/4/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B004-001-V)
Volatile Samples collected from:
SRP-B004-001-V at (2'-0"-O.C.)
SRP-B004-002-V at (4'-0"-O.C.)
SRP-B004-003-V at (6'-0"-O.C.)

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%				(+1'-0" - 0'-0") Organics/Wood Chips
	0.0	100%			CL	(0'-0"-0'-9") Brown CLAY & SILT, trace fine Sand, trace Organics, moist, stiff, fine grain, Lean Clay.
1						(0'-9"-3'-0") Gray brown SILT & CLAY (slow transition from brown to gray), some (-) medium to fine Gravel, trace medium to fine Sand, moist , stiff, fine grain, Silt with Gravel.
	0.0	100%				
2		B004-001-V			ML	
	0.0	100%				
3						(3'-0"-7'-0") Gray SILT & CLAY, some (-) medium to fine Gravel, trace medium to fine Sand, moist, stiff to very stiff, fine grain, Silt with Gravel.
	0.0	100%				
4		B004-002-V				
	0.0	100%				
5					ML	
	0.0	100%				
6	0.0	B004-003-V				
	0.0	100%				
7						**END OF BORING AT 7'-0"**
8						

IT_COMMERCIAL Rev: 12/6/99 SPRU-02-2010.GPJ IT_CORP.GDT 3/18/10

Drilling Log

Soil Boring **SRP-B005**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *324.0 ft.* Total Hole Depth *15.0 ft.* North *1027714.5 ft.* East *626161.96 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/4/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B005-001-V)
Volatile Samples collected from:
SRP-B005-001-V at (2'-0"-O.C.)
SRP-B005-011-V at (3'-0"-O.C.)
SRP-B005-002-V at (4'-0"-O.C.)
SRP-B005-003-V at (6'-0"-O.C.)
SRP-B005-004-V at (8'-0"-O.C.)
SRP-B005-005-V at (10'-0"-O.C.)
SRP-B005-006-V at (14'-10"-15'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	1.0	50%				(1'-0"-0'-0") Organics/Wood Chips
	0.0	50%			ML	(0'-0"-2'-6") Brown Clayey SILT, little fine Sand, trace fine Gravel, trace Organics, moist, stiff, fine grain, Silt with Sand.
2	0.1	50% B005-001-V				
	0.0	50% B005-011-V				(2'-6"-3'-0") Rock
	0.0	100% B005-002-V				(3'-0"-15'-0") Gray Clayey SILT, little (+) fine Sand, little fine Gravel, moist to wet, stiff, fine grain, Sandy Silt with Gravel (becoming increasingly very stiff to hard with depth).
4	0.0	100%				
	0.0	100% B005-003-V				
6	0.0	100%				
	0.0	75% B005-004-V				
8	0.0	75%			ML	
	0.0	75% B005-005-V				
10	0.0	75%				
	0.0	100%				
12		100%				
		100%				
14		100% B005-006-V				
						END OF BORING AT 15'-0"
16						

IT_COMMERCIAL Rev: 12/6/99 SPRU-02-2010.GPJ IT_CORP.GDT 3/18/10

Drilling Log

Soil Boring **SRP-B006**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *324.2 ft.* Total Hole Depth *7.0 ft.* North *1027759.73 ft* East *626172.23 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *J. Vincent* Log By *M. Sausville* Date *2/5/10* Permit # *NA*

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COMMENTS

All Samples contain Prefix SRP (e.g. B006-001-V)
Volatile Samples collected from:
SRP-B006-001-V at (2'-0"-O.C.)
SRP-B006-002-V at (4'-0"-O.C.)
SRP-B006-003-V at (6'-0"-O.C.)
SRP-B006-004-V at (6'-10"-7'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	65%				(+1'-0"-0'-0") Wood Chips/Organics
	0.0	65%			CL ML	(0'-0"-1'-4") Brown SILT & CLAY, little (+) fine Sand, trace fine Gravel, moist, stiff, fine grain, Silt with Sand.
1	0.0	65%				(1'-4"-1'-7") Rock
2		SRP-B006-001			ML	(1'-7"-3'-0") Gray Clayey SILT, little medium to fine Sand, little fine Gravel, moist, stiff to very stiff, fine grain, Silty Sand with Gravel.
	0.0	65%				
3	0.0	100%				(3'-0"-7'-0") Gray Clayey SILT, little (+) medium to fine Gravel, little coarse to medium to fine Sand, dry to moist, fine grain, very stiff, Gravelly Silt with Sand.
4		SRP-B006-002				
	0.0	100%				
5					ML	
	0.0	100%				
6		SRP-B006-003				
	0.0	100%				
7		SRP-B006-004				**END OF BORING 7'-0"**
8						

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Drilling Log

Soil Boring **SRP-B007**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *326.5 ft.* Total Hole Depth *12.0 ft.* North *1027795.43 ft* East *626211.3 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *J. Vincent* Log By *M. Sausville* Date *2/5/10* Permit # *NA*

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COMMENTS

All Samples contain Prefix SRP (e.g. B007-001-V)
Volatile Samples collected from:
SRP-B007-001-V at (2'-0"-O.C.)
SRP-B007-002-V at (3'-10"-4'-0")
SRP-B007-003-V at (6'-0"-O.C.)
SRP-B007-004-V at (6'-5"-O.C.)
SRP-B007-005-V at (7'-10"-8'-0")
SRP-B007-006-V at (11'-10"-12'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.3	65%			ML	(0'-0"-0'-6") Brown Clayey SILT, trace fine Sand, moist, very stiff, trace Organics, fine grain, Silt.
	0.1	65% B007-001-V			ML	(0'-6"-3'-8") Brown Clayey SILT, little fine Sand, trace fine Gravel, moist, very stiff, fine grain, Silt with Sand.
2	0.1	65%				
	0.1	65% B007-002-V			ML	
4	0.1	100%			ML	(3'-8"-4'-0") Gray brown SILT & CLAY, trace fine Sand, trace fine Gravel, moist, very stiff, fine grain, Silt. (4'-0"-5'-3") Brown SILT, trace fine Sand, wet, soft to medium, fine grain, Silt.
	0.2	100% B007-003-V			CL	(5'-3"-6'-6") Brown CLAY & SILT, trace coarse to fine Sand, trace fine Gravel, moist, stiff, becoming slightly gray at 6'-4"-6'-6", Lean Clay.
6	0.1	B007-004-V 100%				
	0.0	100% B007-005-V			CL	(6'-6"-12'-0") CLAY & SILT, trace fine Gravel, Trace (-) fine Sand, moist, stiff to very stiff, fine grain, Lean Clay.
8	0.0	75%				
	0.0	75%				
10	0.0	75%				
	0.0	75% B007-006-V				**END OF BORING AT 12'-0"**
12						

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Drilling Log

Soil Boring **SRP-B008**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *327.9 ft.* Total Hole Depth *16.0 ft.* North *1027806.91 ft* East *626261.97 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *1/28/10* Permit # *NA*

Checked By License No.

COMMENTS
All Samples contain Prefix SRP (e.g. B008-001-V)
Volatile Samples collected from:
SRP-B008-001-V at (2'-0"-O.C.)
SRP-B008-002-V at (3'-10"-4'-0")
SRP-B008-003-V at (6'-0"-O.C.)
SRP-B008-004-V at (7'-10"-8'-0")
SRP-B008-005-V at (10'-0"-O.C.)
SRP-B008-006-V at (11'-10"-12'-0")
SRP-B008-007-V at (13'-4"-O.C.)

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	85%			ML	(0'-0"-2'-0") Brown SILT, little fine Sand, trace fine Gravel, trace Organic wood chips, moist, fine grain, stiff to very stiff, Silt with Sand.
	0.0	B008-001-V				
2	0.0	85%			SM	(2'-0"-4'-0") Brown medium to fine SAND, some (-) Silt, trace medium to fine Gravel, moist, coarse grain, medium dense to dense, Silty Sand.
	0.0	B008-002-V				
4	0.0	90%			ML	(4'-0"- 7'-4") Brown Clayey SILT, some medium to fine Sand, trace medium to fine Gravel, moist, fine grain, stiff, Sandy Silt.
	0.0	B008-003-V				
6	0.0	90%				
	0.0	B008-004-V			SM	(7'-4"-9'-0") Brown medium to fine SAND, and Clayey Silt, moist, coarse grain, medium dense, Silty Sand.
8	0.4	100%				
	0.6	B008-005-V			SM	(9'-0"-10'-0") Brown medium to fine SAND, some (+) Clayey Silt, trace moist, medium to fine, coarse grain, medium dense, Gravel.
10	0.0	100%			SM	(10'-0"-12'-0") Brown gray medium to fine SAND, some Silt, little (-) fine Gravel, moist, coarse grain, medium dense.
	0.0	B008-006-V				
12	0.4	100%			SM	(12'-0"-13'-4") Gray brown medium fine SAND, some clayey Silt, moist, coarse grain, medium dense.
	0.4	B008-007-V				
14		100%			CL ML	(13'-4"-16'-0") Gray SILT & CLAY, and (-) fine SAND, moist, fine gain, hard to very hard, Sandy Lean Clay.
16						**END OF BORING AT 16'-0"**

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Drilling Log

Soil Boring **SRP-B009**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *330.3 ft.* Total Hole Depth *24.0 ft.* North *1027824 ft.* East *626311.2 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *1/28/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples Contain Prefix SRP (e.g. B009-001-V). Volatile Samples Collected From: SRP-B009-001-V (2'-0"-O.C.), SRP-B009-002-V (3'-10"-4'-0"), SRP-B009-003-V (6'-0"-O.C.), SRP-B009-004-V (7'-10"-8'-0"), SRP-B009-005-V (10'-0"-O.C.), SRP-B009-006-V,(11'-10"-12'-0"), SRP-B009-007-V (14'-0"-O.C.), SRP-B009-008-V(15'-10"-16'-0"), SRP-B009-009-V (18'-0"-O.C.), SRP-B009-010-V(19'-10"-20'-0"), SRP-B009-011-V (22'-0"-O.C.), SRP-B009-012-V(23'-10"-24'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery / Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.1	100% B009-001-V		ML	(0'-0"-2'-0") Brown SILT, some (+) medium to fine Sand, moist, fine grain, stiff, Sandy Silt.
2	0.1 0.3			SM	(2'-0"-4'-0") Brown medium to fine SAND, some Silt, trace medium to fine Gravel, moist, coarse grain, medium dense to dense, Silty Sand.
4	0.8 0.3	100% B009-002-V		ML	(4'-0"-8'-6") Brown gray SILT, some (+) medium to fine Sand, trace medium to fine Gravel, moist, fine grain, stiff to very stiff, Sandy Silt.
6	0.3 0.4 0.5	100% B009-003-V			
8	0.6 0.2	100% B009-004-V		ML	
10	0.5 0.6	100% B009-005-V		ML	(8'-6"-8'-10") Brown SILT, some medium to fine Sand, trace medium Gravel, moist, fine grain, stiff, Silt with Sand. (8'-10"-10'-2") Brown gray SILT, some (+) medium to fine Sand, trace medium to fine Gravel, moist, fine grain, stiff to very stiff, Sandy Silt.
12	0.7 0.0	100% B009-006-V		SW SM	(10'-2"-10'-7") Rock, dry, coarse grain, loose. (10'-7"-12'-6") Brown coarse to fine SAND, trace fine Gravel, trace Clayey Silt, moist, medium dense to dense, coarse grain, Well Graded Sand with Silt.
14	0.5 1.1	100% B009-007-V		GW SW	(12'-6"-12'-10") Brown coarse to medium GRAVEL, some (+) coarse to fine Sand, little Rock, moist, medium dense, coarse grain, Well Graded Gravel with Sand.
16	2.5 0.0	100% B009-008-V		SW SM	(12'-10"-14'-4") Brown coarse to fine SAND, little (-) fine Gravel, trace (-) Silt, moist, coarse grain, medium dense, Well Graded Sand.
18	0.0 0.5	100% B009-009-V		SM	(14'-4"-16'-0") Brown coarse to fine SAND, some medium to fine Gravel, trace Silt, moist, coarse grain, medium dense, Well Graded Sand with Silt and Gravel.
20	0.8 0.0	100% B009-010-V		SM SM	(16'-0"-18'-0") Gray brown medium to fine SAND, some (+) Clayey Silt, trace fine Gravel, dry to moist, coarse grain, medium dense Silty Sand. (18'-0"-18'-6") Gray brown medium to fine SAND, some (+) Clayey Silt, trace medium Gravel, moist, coarse grain, medium dense, Silty Sand.
22	0.7 1.3	100% B009-011-V		CL ML ML	(18'-6"-20'-0") Gray medium fine SAND, some (+) Clayey Silt, trace fine Gravel, moist, coarse grain, medium dense, Silty Sand. (20'-0"-21'-0") Gray brown SILT & CLAY, little fine Sand, moist, fine grain, stiff, mottled, Silt with Sand. (21'0"-23'-10") Gray Clayey SILT, some medium fine Sand, moist to wet, fine grain, stiff, Sandy Silt.
24	1.5	100% B009-012-V		CL ML	(23'-10"-24'-0") Gray SILT & CLAY, trace fine Sand, trace fine Gravel, dry, hard to very hard, Silt with Sand.
26					**END OF BORING AT 24'-0"**

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Drilling Log

Soil Boring **SRP-B010**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *331.9 ft.* Total Hole Depth *18.7 ft.* North *1027796.06 ft* East *626352.91 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *1/28/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B010-001-V)
Volatile Samples collected from:
SRP-B010-001-V at (2'-0"-O.C.)
SRP-B010-002-V at (3'-10"-4'-0")
SRP-B010-003-V at (6'-0"-O.C.)
SRP-B010-004-V at (7'-10"-8'-0")
SRP-B010-005-V at (10'-0"-O.C.)
SRP-B010-006-V at (13'-10"-12'-0")
SRP-B010-007-V at (14'-0"-O.C.)
SRP-B010-008-V at (15'-10"-16'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%				
2	0.0	B010-001-V			ML	(0'-0"-4'-0") Brown Clayey SILT, some (-) medium fine Sand, trace fine Gravel, moist, fine grain, stiff, Sandy Silt.
	0.0	100%				
4	0.0	B010-002-V				
	0.0	100%			ML	(4'-0"-6'-0") Brown Clayey SILT, little (-) fine Sand, trace fine Gravel, moist, fine grain, stiff, Silt with Sand.
6	0.0	B010-003-V				
	0.0	100%			ML	(6'-0"-8'-0") Brown Clayey SILT, little (-) medium to fine Sand, trace medium to fine Gravel, moist, stiff, fine grain Silt with Sand.
8	0.0	B010-004-V				
	0.0	100%			ML	(8'-0"-10'-0") Brown Clayey SILT, some (-) medium to fine Sand, little medium to fine Gravel, moist, fine grain, stiff, Sandy Silt with Gravel.
10	0.0	B010-005-V				
	0.0	100%			ML	(10'-0"-12'-3") Brown Clayey SILT, some (-) medium to fine Sand, little medium to fine Gravel, moist, fine grain, very stiff, Sandy Silt with Gravel.
12	0.0	B010-006-V				
	0.0	100%				(12'-3"-15'-6") Brown gray Clayey SILT, little (+) medium to fine Sand, trace medium to fine Gravel, moist, fine grain, very stiff, orange mottled, Silt with Sand.
14	0.0	B010-007-V			ML	
	0.0	100%				
16	0.0	B010-008-V			ML	(15'-6"-16'-0") Gray brown Clayey SILT, little medium to fine Sand, very stiff to hard, dry to moist, fine grain, Silt with Sand.
		0%				(16'-0"-18'-8") No Recovery - Lost Sampler
18						**END OF BORING AT 18'-8"**
20						

Drilling Log

Soil Boring **SRP-B011**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *331.0 ft.* Total Hole Depth *24.0 ft.* North *1027749.52 ft* East *626367.81 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/1/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B011-001-V). Volatile Samples collected from:
SRP-B011-001-V (2'-0"-O.C.),
SRP-B011-002-V(3'-10"-4'-0"),
SRP-B011-003-V (6'-0"-O.C.),
SRP-B011-004-V(7'-10"-8'-0"),
SRP-B011-005-V (10'-0"-O.C.),
SRP-B011-006-V(11'-10"-12'-0"),
SRP-B011-007-V (14'-0"-O.C.),
SRP-B011-008-V(15'-10"-16'-0"),
SRP-B011-009-V (18'-0"-O.C.),
SRP-B011-010-V(19'-10"-20'-0"),
SRP-B011-011-V (22'-0"-O.C.),

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%			ML	(0'-0"-2'-0") Brown Clayey SILT, some (+) medium fine Sand, trace fine Gravel, fine grain, Sandy Silt.
	0.0	B011-001-V				
2	0.0	100%			SM	(2'-0"-4'-2") Brown medium to fine SAND, some (+) Clayey Silt, trace medium to fine Gravel, moist, coarse grain, medium dense, Silty Sand.
	0.0	B011-002-V				
4	0.0	100%			ML	(4'-2"-8'-0") Brown Clayey Silt, some (+) fine Sand, trace (+) fine Gravel, moist, fine grain, stiff, Sandy Silt.
	0.1	B011-003-V				
6	0.3	100%				
	0.3	B011-004-V				
8	0.0	100%			SM	(8'-0"-9'-9") Brown coarse to fine SAND, some (+) Clayey Silt, little fine Gravel, moist, coarse grain, medium dense, Silty Sand.
	5.5	B011-005-V			SM	(9'-9"-10'-4") Brown coarse to fine SAND, little (+) Clayey Silt, little medium to fine Gravel, moist, coarse grain, loose, Silty Sand.
10	9.2	100%			ML	(10'-4"-10'-6") Rock
	0.0	B011-006-V			SM	(10'-6"-11'-0") Brown black Clayey SILT, some (-) medium to fine Sand, fine grain, moist, stiff, Silt with Sand.
12	0.0	100%			ML	(11'-0"-12'-0") Brown coarse to fine SAND, some (-) Clayey Silt, little fine Gravel, coarse grain, moist, loose, Silty Sand.
	0.0	B011-007-V			ML	(12'-0"-12'-7") Brown black Clayey SILT, some (+) coarse to fine Sand, trace fine Gravel, dry to moist, stiff to very stiff, fine grain Sandy Silt.
14	0.0	100%			SM	(12'-7"-13'-10") Brown Clayey SILT and (-) coarse to fine Sand, trace fine Gravel, dry to moist, stiff to very stiff, fine grain, Sandy Silt.
	0.0	B011-008-V			CL	(13'-10"-14'-3") Brown coarse to fine SAND and (-) Clayey Silt, trace fine Gravel, dry to moist, dense to very dense, coarse grain, Silty Sand.
16	0.0	100%			ML	(14'-3"-16'-0") Brown SILT & CLAY, some (+) medium to fine Sand, trace fine Gravel, trace Organics, moist, fine grain, very stiff to hard, Sandy Lean Clay.
	0.0	B011-009-V			CL	(16'-0"-17'-8") Brown Clayey SILT, some (-) medium to fine Sand, trace fine Gravel, moist, fine grain, stiff Sandy Silt.
18	0.0	100%			ML	(17'-8"-19'-2") Gray brown CLAY & SILT, little (+) fine Sand, trace fine Gravel, moist, stiff, fine grain, orange mottled, Lean Clay with Sand.
	0.0	B011-010-V				(19'-2"-21'-8") Gray brown Clayey SILT and (+) medium to fine SAND, trace fine Gravel, moist to dry, medium fine grain, Sandy Silt.
20	0.0	100%			SM	(21'-8"-24'-0") Gray fine SAND and (-) Clayey SILT, trace fine Gravel, moist, medium dense, coarse grain, Silty Sand.
	0.0	B011-011-V				
22	0.1	100%				**END OF BORING AT 24'-0"**
	0.3					
24						

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Drilling Log

Soil Boring **SRP-B012**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *330.0 ft.* Total Hole Depth *15.0 ft.* North *1027706.24 ft* East *626368.74 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/3/10* Permit # *NA*

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COMMENTS
All Samples contain Prefix SRP (e.g. B012-001-V)
Volatile Samples collected from:
SRP-B012-001-V at (2'-0"-O.C.)
SRP-B012-002-V at (3'-10"-4'-0")
SRP-B012-003-V at (6'-0"-O.C.)
SRP-B012-004-V at (7'-10"-8'-0")
SRP-B012-005-V at (10'-0"-O.C.)
SRP-B012-006-V at (11'-10"-12'-0")
SRP-B012-007-V at (14'-0"-O.C.)
SRP-B012-008-V at (14'-8"-15'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%			ML	(0'-0"-4'-0") Brown Clayey SILT, some fine Sand, trace fine Gravel, moist, medium to stiff, some orange mottling, fine grain, Sandy Silt.
2	0.0	B012-001-V				
	0.0	100%				
4	0.0	B012-002-V			CL	(4'-0"-7'-8") Brown CLAY & SILT, little fine Sand, trace medium to fine Gravel, moist, stiff, fine grain, Lean Clay with Sand.
	0.0	100%				
6	0.0	B012-003-V				
	0.0	100%				
8	0.0	B012-004-V			CL	(7'-8"-8'-5") Brown black, CLAY & SILT, little fine Sand, trace fine Gravel, moist, stiff, fine grain, Lean Clay with Sand.
	0.0	100%			CL	(8'-5"-11'-2") Brown CLAY & SILT, little fine Sand, little medium to fine Gravel, moist to dry, fine grain, stiff to very stiff, Sandy Lean Clay.
10	0.0	B012-005-V				
	0.0	100%				
12	0.0	B012-006-V			CL	(11'-2"-12'-0") Brown CLAY & SILT, little (-) fine Sand, trace fine Gravel, moist, very stiff, fine grain, Lean Clay with Sand.
	0.0	75%			ML	(12'-0"-14'-0") Brown Clayey SILT, some (+) coarse to fine Sand, trace medium to fine Gravel, dry, medium to stiff, fine grain, Sandy Silt.
14	0.0	B012-007-V			ML	(14'-0"-14'-6") Gradual transition to gray Clayey SILT, some (+) coarse to fine Sand, trace medium to fine Gravel, dry to moist, fine grain, very stiff, Sandy Silt.
	0.0	75%			CL	(14'-6"-15'-0") Gray CLAY & SILT, trace coarse to fine Sand, fine grain, dry, hard to very hard, Lean Clay.
		B012-008-V				**END OF BORING AT 15'-0"**
16						

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Drilling Log

Soil Boring **SRP-B013**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *326.8 ft.* Total Hole Depth *16.0 ft.* North *1027650.2 ft.* East *626363.33 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/3/10* Permit # *NA*

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COMMENTS
All Samples contain Prefix SRP (e.g. B013-001-V)
Volatile Samples collected from:
SRP-B013-001-V at (2'-0"-O.C.)
SRP-B013-002-V at (3'-10"-4'-0")
SRP-B013-003-V at (6'-0"-O.C.)
SRP-B013-004-V at (7'-10"-8'-0")
SRP-B013-005-V at (10'-0"-O.C.)
SRP-B013-006-V at (11'-10"-12'-0")
SRP-B013-007-V at (13'-0"-O.C.)
SRP-B013-008-V at (15'-10"-16'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%			ML	(0'-0"-4'-6") Brown Clayey SILT, little (+) medium fine Sand, moist, stiff, fine grain, Silt with Sand.
	0.0					
2		B013-001-V				
	0.0	100%				
	0.0					
4		B013-002-V				
	0.0	85%			ML	(4'-6"-4'-10") Brown Clayey SILT, some medium to fine Gravel, trace fine Sand, moist, fine grain, stiff, Gravelly Silt.
	0.0				ML	(4'-10"-5'10") Brown red Clayey SILT, little (+) medium fine Gravel, trace fine Sand, moist, stiff, fine grain, Silt with Gravel.
6		B013-003-V				
	0.0	85%			ML	(5'-10"-7'-0") Brown Clayey SILT, some medium to fine Gravel, trace fine Sand, moist, fine grain, stiff, Gravelly Silt.
	0.0					
8		B013-004-V			ML	(7'-0"-9'-0") Brown Clayey SILT, little medium to fine Sand, trace fine Gravel, moist, stiff, fine grain, Silt with Sand.
	0.0	100%				
	0.0					
10		B013-005-V			ML	(9'-0"-11'-2") Brown Clayey SILT, little (+) coarse to fine Sand, trace fine Gravel, dry, medium to stiff, fine grain, Silt with Sand.
	0.0	100%				
	0.0					
12		B013-006-V			CH	(11'-2"-12'-4") Brown Silty CLAY, trace fine Sand, trace fine Gravel, moist, very stiff, fine grain, Fat Clay.
	0.0	100%				
		B013-007-V				(12'-4"-16'-0") Gray Silty CLAY, trace fine Sand, trace fine Gravel, moist, very stiff to hard, fine grain, Fat Clay.
14	0.0				CH	
	0.0	100%				
	0.0					
16		B013-008-V				**END OF BORING AT 16'-0"**

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Drilling Log

Soil Boring **SRP-B014**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *324.8 ft.* Total Hole Depth *16.0 ft.* North *1027615.42 ft* East *626359.62 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/3/10* Permit # *NA*

Checked By License No.

COMMENTS

All Samples contain Prefix SRP (e.g. B014-001-V) Volatile Samples collected from: SRP-B014-001-V (2'-0"-O.C.), SRP-B014-002-V (3'-10"-4'-0"), SRP-B014-003-V (6'-0"-O.C.) SRP-B014-004-V (7'-10"-8'-0"), SRP-B014-005-V (10'-0"-O.C.), SRP-B014-006-V (11'-10"-12'-0"), SRP-B014-007-V (14'-0"-O.C.), SRP-B014-008-V (15'-0"-O.C.), SRP-B014-009-V (15'-10"-16'-0")

Depth (ft.)	PID (ppm)	Sample ID / % Recovery / Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	100%		ML	(0'-0"-1'-0") Brown Clayey SILT, some (+) medium fine Sand, little (-) medium to fine Gravel, trace Organics, moist, medium to stiff, fine grain, Sandy Silt.
	0.0	B014-001-V			(1'-0"-4'-0") Brown Clayey SILT, some (-) medium to fine Sand, little (-) medium to fine Gravel, moist, medium to stiff, fine grain, Sandy Silt.
2	0.0	100%		ML	
	0.0	B014-002-V			
4	0.0	100%		CL	(4'-0"-8'-0") Brown CLAY & SILT, little (+) fine Sand, trace medium to fine Gravel, moist, stiff to very stiff, fine grain, Lean Clay with Sand.
	0.0	B014-003-V			
6	0.0	100%			
	0.0	B014-004-V			
8	0.0	100%		ML	(8'-0"-12'-0") Brown Clayey SILT, some (-) coarse to fine Sand, trace (+) medium to fine Gravel, dry to moist, very stiff to hard, red to orange mottled, fine grain, Sandy Silt.
	0.0	B014-005-V			
10	0.0	100%			
	0.0	B014-006-V			
12	0.0	100%		ML	(12'-0"-13'-8") Brown gray Clayey SILT, some (-) medium to fine Sand, trace fine Gravel, moist, very stiff, fine grain, Silt with Sand.
	0.0	B014-007-V			
14	0.0	100%		CH	(13'-8"-16'-0") Gray Silty CLAY, trace fine Sand, trace fine Gravel, dry to moist, fine grain, hard to very hard, transitions to hard gray till layer from 13'-8" - 15'-0", Fat Clay.
	0.0	B014-008-V			
	0.0	B014-009-V			
16					**END OF BORING AT 16'-0"**

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Drilling Log

Soil Boring **SRP-B015**

Project *SPRU-Red Pines* Owner

Location *KAPL Niskayuna, NY* Proj. No. *136539*

Surface Elev. *313.2 ft.* Total Hole Depth *16.0 ft.* North *1027554.06 ft* East *626343.18 ft.*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *1.25 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Core/Cuttings* Rig/Core *Geoprobe 6220DT*

Drill Co. *SJB Drilling* Method *Direct-push*

Driller *R. Ciccateri* Log By *M. Sausville* Date *2/4/10* Permit # *NA*

Checked By License No.

COMMENTS
All Samples contain Prefix SRP (e.g. B015-001-V)
Volatile Samples collected from:
SRP-B015-001-V at (2'-0"-O.C.)
SRP-B015-002-V at (3'-10"-4'-0")
SRP-B015-003-V at (6'-0"-O.C.)
SRP-B015-004-V at (7'-10"-8'-0")
SRP-B015-005-V at (10'-0"-O.C.)
SRP-B015-006-V at (11'-10"-12'-0")
SRP-B015-007-V at (14'-0"-O.C.)
SRP-B015-008-V at (15'-10"-16'-0")
SRP-B015-009-V at (16'-0"-O.C.)

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
						Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	70%			CL	(0'-0"-1'-0") Brown CLAY & SILT, little (-) fine Sand, trace fine Gravel, trace Organics, medium to stiff, moist fine grain, Lean Clay with Sand.
	0.0	B015-001-V				(1'-0"-5'-2") CLAY & SILT, little (-) fine Sand, trace fine Gravel, trace Organics, medium to stiff, moist, fine grain, Lean Clay with Sand.
2	0.0	70%			CL	
	0.0	B015-002-V				
4	0.0	90%				
	0.0	B015-003-V				(5'-2"-7'-8") Brown CLAY & SILT, little (+) fine Sand, trace fine Gravel, stiff, moist to wet, fine grain, Lean Clay with Sand.
6	0.0	85%			CL	
	0.0	B015-004-V				
8	0.0	80%			CL ML	(7'-8"-8'-0") Brown CLAY & SILT, little fine Sand, trace fine Gravel, stiff to very stiff, moist, fine grain, Lean Clay with Sand. (8-0"-9'-2") Brown SILT, and (-) fine Sand, soft, wet, fine grain, Sandy Silt.
	0.0	B015-005-V				(9'-2"-12'-0') Gray brown Clayey SILT, and fine Sand, medium, moist, fine grain, Sandy Silt, wet seam at 12'-0".
10	0.0	80%			ML	
	0.0	B015-006-V				
12	0.0	100%			SM	(12'-0"-13-10") Brown medium to fine SAND, some Silt, wet, coarse grain, loose to medium dense, Silty Sand.
	0.0	B015-007-V				
14	0.0	100%			ML	(13'-10"-15-8") Gray Clayey SILT, and fine Sand, moist, medium to stiff, fine grain, Sandy Silt.
	0.0	B015-008-V				
16		B015-008-V			CL	(15'-8"-16'-0") Gray CLAY & SILT, little fine Sand, trace fine Gravel, dry to slightly moist, fine grain, hard to very hard, Fat Clay with Sand.
						END OF BORING AT 16'-0"

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Appendix C

CD-ROM with Electronic Copy of Analytical Reports

Appendix D

CD-ROM with Electronic Copy of Data Limitations and Validation Reports