

Linda Hanefeld  
Remediation and Redevelopment Team Supervisor  
Wisconsin Department of Natural Resources  
South Central Region  
3911 Fish Hatchery Rd  
Fitchburg WI 53711

Subject:

Soil Vapor Extraction (SVE) System Progress Report, September 2015 through February 2015, Madison-Kipp Corporation (MKC) Site, 201 Waubesa Street, Madison, Wisconsin.

Dear Ms. Hanefeld:

On behalf of MKC, this progress report provides a summary of the SVE system monitoring completed as part of the MKC site located at 201 Waubesa Street in Madison, Wisconsin. As presented in the *2013 Annual Report* dated March 31, 2014, the SVE Progress Reports will continue to be submitted to the Wisconsin Department of Natural Resources (WDNR) on a semi-annual basis. This SVE Progress Report provides a summary of tasks completed during the period of September 1, 2014 through February 28, 2015.

**Tasks Completed – September 1, 2014 through February 28, 2015**

During the reporting period, SVE system Operation, Maintenance and Monitoring (OM&M) was performed by ARCADIS and/or MKC personnel each week. All water generated during SVE maintenance activities was incorporated by MKC with the facility process water on site. Monthly SVE OM&M was performed by MKC personnel September 17, October 16, November 12 and December 16, 2014, January 22 and February 20, 2015. Laboratory analytical data collected during the monthly OM&M events is included in Table 1. Field data collected during the OM&M events is included in Table 2. The air emission tables are also included as Tables 3 through 7. A review of the air emission tables indicates the emissions rates are several orders of magnitude lower than the Wisconsin Administrative Code NR445 Emission Threshold Values.

ARCADIS U.S., Inc.  
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ENVIRONMENT

Date:

March 30, 2015

Contact:

Jennine Trask

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414.276.7742

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Our ref:

WI001368.0001

**Tasks In-Progress**

The following tasks are scheduled to be completed from March 1, 2015 through August 31, 2015.

- Weekly and monthly SVE system OM&M activities. The OM&M activities and data collected will be used to optimize system operation and evaluate the future operation of the SVE system.

If you have any questions or require any additional information, please contact us at 414.276.7742.

Sincerely,

ARCADIS U.S., Inc.



Christopher D. Kubacki, PE  
Senior Engineer



Jennine L. Trask, PE  
Project Manager

Attachments:

- Table 1 – SVE System Analytical Data
- Table 2 – Extraction Well Manifold Monitoring Data
- Table 3 – Estimate of Post-Carbon Emissions
- Table 4 – Estimate of Post-Carbon Emissions of Tetrachloroethene
- Table 5 – Estimate of Post-Carbon Emissions of Trichloroethene
- Table 6 – Estimate of Post-Carbon Emissions of Cis-1,2-Dichloroethene
- Table 7 – Estimate of Post-Carbon Emissions of Vinyl Chloride

Electronic Copies:

David Crass – Michael Best  
Alina Satkoski – Madison Kipp  
Mike Schmoller – WDNR

**Table 1**  
**Soil Vapor Extraction System Analytical Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Sample Location Sample Date	Effluent			Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
	3/9/2012	3/10/2012	3/11/2012	3/16/2012		3/23/2012		3/30/2012		4/11/2012	
1,1,1-Trichloroethane	<0.18	<0.35	<0.35	<2.4	<0.035	<1.8	<0.053	<1.8	<0.14	<0.94	<0.02
1,1-Dichloroethene	<0.15	<0.3	<0.3	<2.1	<0.03	<1.5	<0.045	<1.5	<0.12	<4	<b>0.16 J</b>
1,2,4-Trimethylbenzene	<0.26	<0.52	<0.52	<3.6	<b>0.17 J</b>	<2.6	<b>0.079 J</b>	<b>5.7 J</b>	<b>2.4</b>	<0.98	<0.021
1,2-Dichloroethane	<0.16	<0.31	<0.31	<2.2	<0.031	<1.6	<0.047	<1.6	<0.12	<0.84	<0.018
1,3,5-Trimethylbenzene	<0.26	<0.51	<0.51	<3.6	<b>0.069 J</b>	<2.6	<0.077	<2.6	<b>0.69 J</b>	<0.89	<0.019
1,4-Dichlorobenzene	<0.22	<0.44	<0.44	<3.1	<b>0.049 J</b>	<2.2	<0.066	<2.2	<0.18	<0.84	<0.018
Benzene	<0.09	<0.18	<0.18	<1.3	<b>0.71</b>	<0.9	<b>0.69</b>	<0.9	<b>0.57 J</b>	<b>11</b>	<b>0.15 J</b>
Chloroethane	<0.08	<0.16	<0.16	<1.1	<0.016	<0.8	<0.024	<0.8	<b>0.56 J</b>	<1.5	<0.033
Chloroform	<0.16	<0.31	<0.31	<2.2	<0.031	<1.6	<0.047	<1.6	<0.12	<1.1	<b>0.037 J</b>
Chloromethane	<b>5.2</b>	<b>0.86 J</b>	<0.13	<0.91	<b>0.30 J</b>	<0.65	<b>0.65 J</b>	<0.65	<b>0.87 J</b>	<1.6	<b>0.60</b>
cis-1,2-Dichloroethene	<0.07	<0.14	<0.14	<b>78</b>	<b>0.50</b>	<b>190</b>	<b>14</b>	<b>150</b>	<b>17</b>	<b>240</b>	<b>19</b>
Dichlorodifluoromethane	<0.19	<b>0.94 J</b>	<b>0.56 J</b>	<2.6	<b>0.55</b>	<1.9	<b>0.44 J</b>	<1.9	<b>0.73 J</b>	<0.94	<b>0.47 J</b>
Ethylbenzene	<0.11	<0.22	<0.22	<1.5	<b>0.084 J</b>	<1.1	<0.033	<b>2.2 J</b>	<b>0.66 J</b>	<0.7	<0.015
Methylene Chloride	<0.065	<0.13	<0.13	<0.91	<b>0.26 JB</b>	<0.65	<b>0.50 J</b>	<0.65	<b>0.62 J</b>	<b>2.5 JB</b>	<b>0.16 JB</b>
Styrene	<0.15	<0.3	<0.3	<2.1	<0.03	<1.5	<0.045	<1.5	<0.12	<0.52	<0.011
Tetrachloroethene	<0.055	<0.11	<0.11	<b>1,500</b>	<b>14</b>	<b>1,900</b>	<b>38</b>	<b>890</b>	<b>98</b>	<b>700</b>	<b>0.16 J</b>
Toluene	<b>0.23 J</b>	<b>0.32 J</b>	<b>0.22 J</b>	<1.3	<b>0.33</b>	<b>1.0 J</b>	<b>0.14 J</b>	<b>6.1 J</b>	<b>2.7</b>	<b>1.2 J</b>	<0.014
Trichlorofluoromethane	<0.17	<0.34	<0.34	<2.4	<b>0.21</b>	<1.7	<b>0.18 J</b>	<1.7	<0.14	<0.98	<b>0.12 J</b>
Trichloroethene	<0.15	<0.3	<0.3	<b>76</b>	<b>0.20</b>	<b>130</b>	<b>1.2</b>	<b>100</b>	<b>4.4</b>	<b>110</b>	<b>0.061 J</b>
Vinyl chloride	<0.15	<b>10</b>	<b>13</b>	<b>16</b>	<b>18</b>	<b>37</b>	<b>33</b>	<b>34</b>	<b>31</b>	<b>8.7 J</b>	<b>7.6</b>
Xylene (total)	<0.11	<0.22	<0.22	<1.5	<b>0.53</b>	<1.1	<b>0.17 J</b>	<b>10</b>	<b>3.5</b>	<0.75	<0.016
m,p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene, o-	<0.11	<0.22	<0.22	<1.5	<b>0.17 J</b>	<1.1	<b>0.052 J</b>	<b>3.1 J</b>	<b>1.1</b>	<0.75	<0.016

**General Notes:**

Only detected constituents are noted. Constituent concentrations are reported as ppbv.

Between March 9 and October 16, 2012, the system operated with the dilution air valve 50% open to maintain system operation within maximum range of blower vacuum. On October 16, 2012, the blower was replaced and modified to allow more efficient system performance and operation with the dilution air valve fully closed.

Influent sampling began on 3/16/2012 to evaluate the effectiveness of carbon treatment.

System sampling occurred daily for the first 3 days of startup, weekly for the next 3 weeks, and monthly thereafter.

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**Table 1  
Soil Vapor Extraction System Analytical Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Sample Location Sample Date	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent			
	5/9/2012		6/14/2012		6/12/2012		7/10/2012		8/14/2012		9/12/2012		9/16/2012		10/16/2012
1,1,1-Trichloroethane	<4	<1.2	<5	<1.4	<7.3	<0.4	<2	<1	<2.4	<0.75	<12	<0.4			
1,1-Dichloroethene	<4	<1.2	<5	<1.4	<7.3	<0.4	<2	<1	<2.4	<0.75	<12	<0.4			
1,2,4-Trimethylbenzene	<4	<1.2	<5	<1.4	<7.3	<b>2.0</b>	<2	<b>3.4</b>	<2.4	<0.75	<12	<0.4			
1,2-Dichloroethane	<4	<1.2	<5	<1.4	<7.3	<b>1.2</b>	<2	<1	<2.4	<0.75	<12	<0.4			
1,3,5-Trimethylbenzene	<4	<1.2	<5	<1.4	<7.3	<b>0.62</b>	<2	<b>1.3</b>	<2.4	<0.75	<12	<0.4			
1,4-Dichlorobenzene	<4	<1.2	<5	<1.4	<7.3	<b>1.5</b>	<2	<b>2.0</b>	<2.4	<0.75	<12	<0.4			
Benzene	<4	<1.2	<5	<1.4	<7.3	<b>0.41</b>	<2	<1	<2.4	<0.75	<12	<0.4			
Chloroethane	<10	<3	<13	<3.5	<18	<1	<5	<2.5	<6	<1.9	<29	<1			
Chloroform	<4	<1.2	<5	<1.4	<7.3	<b>0.67</b>	<2	<1	<2.4	<0.75	<12	<0.4			
Chloromethane	<10	<3	<13	<3.5	<18	<b>1.1</b>	<5	<2.5	<6	<1.9	<29	<1			
cis-1,2-Dichloroethene	<b>170</b>	<b>230</b>	<b>150</b>	<b>180</b>	<b>190</b>	<b>65</b>	<b>51</b>	<b>120</b>	<b>84</b>	<b>110</b>	<b>400</b>	<b>42</b>			
Dichlorodifluoromethane	<10	<3	<13	<3.5	<18	<1	<5	<2.5	<6	<1.9	<29	<1			
Ethylbenzene	<4	<1.2	<5	<1.4	<7.3	<b>1.1</b>	<2	<1	<2.4	<0.75	<12	<0.4			
Methylene Chloride	<10	<3	<13	<3.5	<18	<b>1.4</b>	<5	<2.5	<6	<1.9	<29	<1			
Styrene	<4	<1.2	<5	<1.4	<7.3	<b>0.84</b>	<2	<1	<2.4	<0.75	<12	<0.4			
Tetrachloroethene	<b>440</b>	<b>36</b>	<b>580</b>	<1.4	<b>650</b>	<0.4	<b>250</b>	<1	<b>290</b>	<b>1.9</b>	<b>1,500</b>	<b>41</b>			
Toluene	<4	<b>2.0</b>	<5	<b>2.2</b>	<7.3	<b>12</b>	<2	<b>1.2</b>	<2.4	<0.75	<12	<0.4			
Trichlorofluoromethane	<4	<1.2	<5	<1.4	<7.3	<0.4	<2	<1	<2.4	<0.75	<12	<0.4			
Trichloroethene	<b>80</b>	<b>3.0</b>	<b>71</b>	<b>8.7</b>	<b>96</b>	<b>3.4</b>	<b>27</b>	<b>7.6</b>	<b>38</b>	<b>7.9</b>	<b>160</b>	<b>5.1</b>			
Vinyl chloride	<4	<b>3.0</b>	<5	<1.4	<7.3	<b>2.4</b>	<2	<b>1.6</b>	<2.4	<b>1.8</b>	<b>20</b>	<b>0.74</b>			
Xylene (total)	<4	<1.2	<5	<b>1.4</b>	<7.3	<b>4.1</b>	<2	<b>2.5</b>	<2.4	<0.75	<12	<0.4			
m,p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Xylene, o-	<4	<1.2	<5	<1.4	<7.3	<b>1.1</b>	<2	<1	<2.4	<0.75	<12	<0.4			

**General Notes:**

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Influent sampling began on 3/16/2012 to evaluate the effectiveness of carbon treatment.

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**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Sample Location Sample Date	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
	11/14/2012		12/18/2012		1/16/2013		2/15/2013		3/13/2013		4/23/2013	
1,1,1-Trichloroethane	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
1,1-Dichloroethene	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
1,2,4-Trimethylbenzene	<0.8	<1.2	<9.1	<b>0.26</b>	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
1,2-Dichloroethane	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
1,3,5-Trimethylbenzene	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
1,4-Dichlorobenzene	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
Benzene	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
Chloroethane	<2	<3	<23	<0.5	<6.6	<0.75	<15	<0.5	<10	<2	<2.5	<0.8
Chloroform	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
Chloromethane	<2	<3	<23	<0.5	<6.6	<0.75	<15	<b>0.57</b>	<10	<2	<2.5	<0.8
cis-1,2-Dichloroethene	<b>20</b>	<b>32</b>	<b>380</b>	<b>33</b>	<b>250</b>	<b>27</b>	<b>95</b>	<b>23</b>	<b>94</b>	<b>25</b>	<b>170</b>	<b>61</b>
Dichlorodifluoromethane	<2	<3	<23	<b>0.54</b>	<6.6	<0.75	<15	<b>0.67</b>	<10	<2	<2.5	<0.8
Ethylbenzene	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
Methylene Chloride	<2	<3	<23	<0.5	<6.6 *	<0.75 *	<15	<0.5	<10	<2	<2.5	<0.8
Styrene	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
Tetrachloroethene	<b>150</b>	<b>170</b>	<b>1,200</b>	<b>36</b>	<b>460</b>	<b>42</b>	<b>260</b>	<b>4.5</b>	<b>200</b>	<b>11</b>	<b>190</b>	<b>0.61</b>
Toluene	<0.8	<1.2	<9.1	<b>2.0</b>	<2.6	<b>1.8</b>	<6	<b>0.38</b>	<4	<b>5.4</b>	<1	<0.32
Trichlorofluoromethane	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32
Trichloroethene	<b>13</b>	<b>11</b>	<b>140</b>	<b>3.9</b>	<b>74</b>	<b>4.7</b>	<b>36</b>	<b>0.82</b>	<b>29</b>	<b>1.3</b>	<b>48</b>	<b>1.3</b>
Vinyl chloride	<0.8	<b>4.3</b>	<b>12</b>	<b>5.9</b>	<b>3.1</b>	<b>4.2</b>	<6	<b>4.5</b>	<4	<b>2.7</b>	<1	<b>0.64</b>
Xylene (total)	<0.8	<1.2	<9.1	<b>0.37</b>	<2.6	<0.3	<b>6.9</b>	<0.2	<4	<0.8	<1	<0.32
m,p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene, o-	<0.8	<1.2	<9.1	<0.2	<2.6	<0.3	<6	<0.2	<4	<0.8	<1	<0.32

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Sample Location Sample Date	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
	5/14/2013		6/13/2013		7/15/2013		8/13/2013		9/10/2013		10/15/2013	
1,1,1-Trichloroethane	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
1,1-Dichloroethene	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
1,2,4-Trimethylbenzene	<6	<0.4	<10	<1	<6	<0.2	<4	<b>0.25</b>	<3.9	<0.2	<3.4	<0.25
1,2-Dichloroethane	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
1,3,5-Trimethylbenzene	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
1,4-Dichlorobenzene	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
Benzene	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
Chloroethane	<15	<1	<25	<2.5	<15	<0.5	<10	<0.5	<9.9	<0.5	<8.6	<0.63
Chloroform	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
Chloromethane	<15	<1	<25	<2.5	<15	<b>0.57</b>	<10	<0.5	<9.9	<0.5	<8.6	<0.63
cis-1,2-Dichloroethene	<b>340</b>	<b>1.9</b>	<b>450</b>	<b>6.1</b>	<b>240</b>	<0.2	<b>320</b>	<0.2	<b>180</b>	<b>0.30</b>	<b>200</b>	<b>43</b>
Dichlorodifluoromethane	<15	<1	<25	<2.5	<15	<0.5	<10	<b>0.52</b>	<9.9	<b>0.56</b>	<8.6	<b>0.67</b>
Ethylbenzene	<6	<0.4	<10	<1	<6	<b>0.31</b>	<4	<b>0.20</b>	<3.9	<0.2	<3.4	<0.25
Methylene Chloride	<15	<1	<25	<2.5	<15	<b>1.4</b>	<10	<0.5	<9.9	<0.5	<8.6	<0.63
Styrene	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
Tetrachloroethene	<b>860</b>	<b>41</b>	<b>1,900</b>	<b>140</b>	<b>670</b>	<b>4.3</b>	<b>700</b>	<b>1.2</b>	<b>600</b>	<b>0.30</b>	<b>470</b>	<b>36</b>
Toluene	<6	<b>2.0</b>	<10	<b>1.8</b>	<6	<b>4.1</b>	<4	<b>3.0</b>	<3.9	<b>0.37</b>	<3.4	<0.25
Trichlorofluoromethane	<6	<0.4	<10	<1	<6	<0.2	<4	<0.2	<3.9	<0.2	<3.4	<0.25
Trichloroethene	<b>140</b>	<b>1.9</b>	<b>270</b>	<b>7.4</b>	<b>150</b>	<0.2	<b>130</b>	<0.2	<b>83</b>	<0.2	<b>86</b>	<b>3.2</b>
Vinyl chloride	<6	<0.4	<10	<1	<6	<b>0.54</b>	<4	<b>0.52</b>	<3.9	<b>1.2</b>	<3.4	<b>0.56</b>
Xylene (total)	<6	<b>1.5</b>	<10	<b>1.4</b>	<6	<b>0.88</b>	<4	<b>0.71</b>	<3.9	<b>0.38</b>	<3.4	<0.25
m,p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene, o-	<6	<b>0.44</b>	<10	<1	<6	<b>0.24</b>	<4	<b>0.20</b>	<3.9	<0.2	<3.4	<0.25

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**Table 1**  
**Soil Vapor Extraction System Analytical Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Sample Location Sample Date	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
	11/6/2013		12/11/2013		1/16/2014		2/12/2014		3/10/2014		4/10/2014	
1,1,1-Trichloroethane	<3.2	<0.2	<1.4	<0.5	<3.0	<b>0.32</b>	<1.0	<0.20	<0.89	<0.20	<0.80	<0.20
1,1-Dichloroethene	<3.2	<0.2	<1.4	<0.5	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<0.20
1,2,4-Trimethylbenzene	<3.2	<0.2	<1.4	<b>3.3</b>	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<b>0.22</b>
1,2-Dichloroethane	<3.2	<0.2	<1.4	<0.5	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<b>0.22</b>
1,3,5-Trimethylbenzene	<3.2	<0.2	<1.4	<b>1.3</b>	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<0.20
1,4-Dichlorobenzene	<3.2	<0.2	<1.4	<b>0.58</b>	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<0.20
Benzene	<3.2	<0.2	<1.4	<0.5	<3.0	<0.20	<1.0	<b>0.25</b>	<0.89	<0.20	<0.80	<0.20
Chloroethane	<7.9	<0.5	<3.5	<1.3	<7.5	<0.50	<2.5	<0.50	<2.2	<0.50	<2.0	<0.50
Chloroform	<3.2	<0.2	<1.4	<0.5	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<0.20
Chloromethane	<7.9	<0.5	<3.5	<1.3	<7.5	<0.50	<2.5	<0.50	<2.2	<b>0.51</b>	<2.0	<b>0.52</b>
cis-1,2-Dichloroethene	<b>210</b>	<b>20</b>	<b>110</b>	<b>15</b>	<b>200</b>	<b>23</b>	<b>81</b>	<b>0.64</b>	<b>130</b>	<b>6.5</b>	<b>74</b>	<b>3.2</b>
Dichlorodifluoromethane	<7.9	<0.5	<3.5	<b>1.3</b>	<7.5	<0.50	<2.5	<0.50	<2.2	<b>0.70</b>	<2.0	<0.50
Ethylbenzene	<3.2	<0.2	<1.4	<b>6.4</b>	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<b>0.48</b>
Methylene Chloride	<7.9	<0.5	<3.5	<1.3	<7.5	<0.50	<2.5	<0.50	<2.2	<0.50	<2.0	<b>0.73</b>
Styrene	<3.2	<0.2	<1.4	<0.5	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<b>0.41</b>
Tetrachloroethene	<b>580</b>	<b>1.5</b>	<b>230</b>	<b>71</b>	<b>430</b>	<b>19</b>	<b>39</b>	<b>2.7</b>	<b>120</b>	<b>13</b>	<b>140</b>	<b>16</b>
Toluene	<3.2	<b>0.23</b>	<1.4	<b>6.5</b>	<3.0	<0.20	<1.0	<0.20	<0.89	<b>0.30</b>	<0.80	<b>14</b>
Trichlorofluoromethane	<3.2	<0.2	<1.4	<0.5	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<0.20
Trichloroethene	<b>83</b>	<b>0.22</b>	<b>37</b>	<b>6.0</b>	<b>61</b>	<b>1.8</b>	<b>15</b>	<b>0.41</b>	<b>54</b>	<b>2.0</b>	<b>40</b>	<b>1.6</b>
Vinyl chloride	<3.2	<b>0.63</b>	<1.4	<b>1.4</b>	<b>7.2</b>	<b>4.3</b>	<b>6.2</b>	<0.20	<b>3.4</b>	<b>8.7</b>	<0.80	<b>0.44</b>
Xylene (total)	<3.2	<b>0.29</b>	<1.4	<b>15</b>	<3.0	<b>0.23</b>	<1.0	<0.20	<0.89	<0.20	<0.80	<b>1.5</b>
m,p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylene, o-	<3.2	<0.2	<1.4	<b>3.6</b>	<3.0	<0.20	<1.0	<0.20	<0.89	<0.20	<0.80	<b>0.38</b>

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**Table 1  
Soil Vapor Extraction System Analytical Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Sample Location Sample Date	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
	5/13/2014		6/11/2014		7/16/2014		8/13/2014		9/17/2014		10/16/2014	
1,1,1-Trichloroethane	<0.21	<0.021	<0.77	<0.042	<0.47	<0.20	<0.74	<0.20	<0.60	<0.84	<0.91	<0.48
1,1-Dichloroethene	<0.24	<b>0.11 J</b>	<0.88	<b>0.46</b>	<0.55	<0.24	<0.88	<0.23	<1.4	<1.9	<1.1	<0.57
1,2,4-Trimethylbenzene	<b>0.87 J</b>	<b>1.2</b>	<0.52	<b>0.35 J</b>	<0.51	<0.22	<0.81	<0.22	<0.56	<0.78	<1.0	<0.52
1,2-Dichloroethane	<0.17	<b>0.091 J</b>	<0.63	<0.034	<0.72	<0.32	<1.2	<0.30	<0.82	<1.1	<1.4	<0.74
1,3,5-Trimethylbenzene	<b>0.33 J</b>	<b>0.42</b>	<0.44	<b>0.11 J</b>	<0.34	<0.15	<0.54	<0.14	<0.42	<0.59	<0.66	<0.35
1,4-Dichlorobenzene	<0.14	<b>0.13 J</b>	<0.52	<b>0.13 J</b>	<0.44	<0.19	<0.70	<0.18	<1.0	<1.4	<0.86	<0.45
Benzene	<0.19	<b>0.12 J</b>	<0.70	<b>0.87</b>	<0.50	<0.22	<0.79	<0.21	<0.64	<0.88	<0.97	<0.51
Chloroethane	<0.30	<b>0.25 J</b>	<1.1	<0.060	<0.92	<0.40	<1.5	<0.39	<4.6	<6.4	<1.8	<0.94
Chloroform	<0.25	<0.025	<0.92	<0.050	<0.48	<0.21	<0.77	<0.20	<0.42	<0.58	<0.95	<0.50
Chloromethane	<1.4	<0.14	<5.0	<0.27	<1.4 J	<0.62 J	<2.3	<0.60	<4.7	<6.5	<2.8	<1.4
cis-1,2-Dichloroethene	<b>90</b>	<b>11</b>	<b>230</b>	<b>46</b>	<b>150</b>	<b>120</b>	<b>270</b>	<b>280</b>	<b>220</b>	<b>1,000</b>	<b>230</b>	<b>580</b>
Dichlorodifluoromethane	<0.30	<b>0.47 J</b>	<1.1	<b>0.55 J</b>	<0.49	<0.22	<0.79	<0.21	<0.83	<1.2	<0.97	<0.50
Ethylbenzene	<b>0.81 J</b>	<b>1.2</b>	<0.48	<b>1.0</b>	<0.61	<0.26	<0.96	<0.26	<3.4	<4.7	<2.2	<1.1
Methylene Chloride	<1.3	<b>0.91</b>	<4.6	<b>0.89 J</b>	<1.1	<0.48	<1.8	<0.47	<0.79	<1.1	<1.2	<0.62
Styrene	<0.18	<b>0.20</b>	<0.66	<0.036	<0.57	<0.25	<0.91	<0.24	<0.97	<1.4	<1.1	<0.58
Tetrachloroethene	<b>210</b>	<b>22</b>	<b>1,000</b>	<b>0.72</b>	<b>620</b>	<b>3.0</b>	<b>820</b>	<0.20	<b>1,000</b>	<0.94	<b>1,000</b>	<b>8.5</b>
Toluene	<b>1.8 J</b>	<b>17</b>	<0.63	<b>0.98</b>	<0.32	<b>1.1</b>	<0.51	<0.13	<0.82	<1.1	<0.62	<0.33
Trichlorofluoromethane	<0.30	<b>0.22</b>	<1.1	<b>0.51</b>	<0.58	<0.25	<0.92	<0.24	<0.59	<0.82	<1.1	<0.59
Trichloroethene	<b>46</b>	<b>1.6</b>	<b>140</b>	<b>0.25 J</b>	<b>100</b>	<b>0.97</b>	<b>130</b>	<0.34	<b>150</b>	<b>6.8</b>	<b>160</b>	<b>15</b>
Vinyl chloride	<0.38	<b>0.35</b>	<1.4	<b>0.33 J</b>	<0.44	<0.19	<0.70	<0.19	<0.61	<0.84	<0.86	<0.45
Xylene (total)	<b>4.5</b>	<b>6.1</b>	<1.3	<b>4.1</b>	NA	NA	NA	NA	NA	NA	NA	NA
m,p-Xylene	NA	NA	NA	NA	<0.30	<0.13	<0.48	<0.13	<0.36	<0.50	<0.59	<0.31
Xylene, o-	<b>1.1 J</b>	<b>1.6</b>	<0.59	<b>1.1</b>	<0.45	<0.20	<0.72	<0.19	<0.81	<1.1	<0.88	<0.46

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**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

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	11/12/2014		12/16/2014		1/22/2015		2/20/2015	
1,1,1-Trichloroethane	<b>1.3</b>	<0.10	<0.15	<0.15	<0.12	<0.12	<0.11	<0.11
1,1-Dichloroethene	<0.16	<0.17	<0.32	<0.31	<0.31	<0.29	<0.27	<0.27
1,2,4-Trimethylbenzene	<0.071	<0.075	<0.14	<0.13	<0.12	<0.11	<0.038	<0.038
1,2-Dichloroethane	<0.088	<0.093	<0.26	<0.25	<0.11	<0.10	<0.089	<0.089
1,3,5-Trimethylbenzene	<0.091	<0.096	<0.11	<0.11	<0.25	<0.23	<0.091	<0.091
1,4-Dichlorobenzene	<0.14	<0.15	<0.11	<0.11	<0.32	<0.30	<0.13	<0.13
Benzene	<0.21	<0.22	<0.084	<0.081	<0.13	<0.12	<0.15	<0.15
Chloroethane	<0.61	<0.64	<0.56	<0.54	<1.2	<1.1	<0.63	<0.63
Chloroform	<0.10	<0.11	<0.18	<0.18	<0.13	<0.12	<0.16	<0.16
Chloromethane	<0.98	<1.0	<0.63	<0.61	<1.2	<1.1	<0.79 J	<0.79 J
cis-1,2-Dichloroethene	<b>0.96</b>	<b>62</b>	<b>76</b>	<b>77</b>	<b>95</b>	<b>35</b>	<b>160</b>	<b>54</b>
Dichlorodifluoromethane	<0.079	<0.084	<0.17	<0.16	<0.086	<0.080	<0.18	<0.18
Ethylbenzene	<0.70	<0.74	<0.42	<0.40	<0.78	<0.73	<0.75	<0.75
Methylene Chloride	<0.11	<0.11	<0.15	<0.14	<0.16	<0.15	<0.16	<0.16
Styrene	<0.13	<0.14	<0.091	<0.087	<0.10	<0.093	<0.068	<0.068
Tetrachloroethene	<0.16	<b>11</b>	<b>180</b>	<b>13</b>	<b>240</b>	<b>9.6</b>	<b>180</b>	<0.099
Toluene	<0.13	<0.14	<0.083	<b>1.4</b>	<b>1.6</b>	<b>3.5</b>	<b>0.76</b>	<b>0.96</b>
Trichlorofluoromethane	<0.077	<0.081	<0.16	<0.15	<0.10	<0.093	<0.20	<0.20
Trichloroethene	<b>1.5</b>	<b>6.1</b>	<b>27</b>	<b>2.7</b>	<b>34</b>	<b>2.6</b>	<b>40</b>	<b>0.82</b>
Vinyl chloride	<0.20	<0.20	<0.20	<0.19	<0.18	<0.17	<0.18	<0.18
Xylene (total)	NA	NA	NA	NA	NA	NA	NA	NA
m,p-Xylene	<0.092	<0.097	<0.12	<0.11	<0.26	<b>0.83</b>	<b>1.2</b>	<b>0.95</b>
Xylene, o-	<0.12	<0.13	<0.080	<0.077	<0.13	<0.12	<0.16	<0.16

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**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-1	03/09/12	-88.4	20	109.7 <sup>1</sup>
SVE-1	03/09/12	-74.8	30	47.4 <sup>2</sup>
SVE-1	03/10/12	-81.6	30	27.3
SVE-1	03/11/12	-81.6	30	25.1
SVE-1	03/16/12	-74.8	20	15.9
SVE-1	03/23/12	-81.6	25	--
SVE-1	03/23/12	-81.6	25	13.5
SVE-1 <sup>3</sup>	03/29/12	-40.8	20	--
SVE-1 <sup>4</sup>	03/29/12	-54.4	30	--
SVE-1	03/30/12	-68.0	25	14.8
SVE-1	04/11/12	-68.0	25	14.1
SVE-1	04/16/12	-68.0	25	--
SVE-1	04/23/12	-68.0	100	--
SVE-1	04/30/12	-68.0	30	--
SVE-1	05/07/12	-68.0	10	--
SVE-1	05/09/12	-68.0	30	4.3
SVE-1	05/14/12	-68.0	30	--
SVE-1	05/21/12	-68.0	10	--
SVE-1	05/30/12	-54.4	20	--
SVE-1	06/04/12	-68.0	30	--
SVE-1	06/11/12	-68.0	30	--
SVE-1	06/12/12	-61.2	28	6
SVE-1	06/14/12	-47.6	22	--
SVE-1	06/18/12	-27.2	20	--
SVE-1	06/25/12	-27.2	10	--
SVE-1	07/02/12	-27.2	20	--
SVE-1	07/09/12	-27.2	20	--
SVE-1	07/10/12	-27.2	18	12.6
SVE-1	07/16/12	-27.2	20	--
SVE-1	07/23/12	-27.2	20	--
SVE-1	07/30/12	-27.2	20	--
SVE-1	08/06/12	-27.2	20	--
SVE-1	08/14/12	-27.2	19	34.69
SVE-1	08/20/12	-27.2	20	--
SVE-1	08/27/12	-27.2	20	--
SVE-1	09/04/12	-13.6	20	--
SVE-1	09/10/12	-27.2	20	--
SVE-1	09/12/12	-27.2	12	1.02
SVE-1	09/17/12	-27.2	20	--
SVE-1	09/24/12	-27.2	20	--
SVE-1	10/01/12	-27.2	20	--
SVE-1	10/08/12	-27.2	20	--
SVE-1	10/16/12	-51.0	30	0
SVE-1	10/22/12	-54.4	30	--
SVE-1	10/29/12	-54.4	30	--
SVE-1	11/05/12	-54.4	30	--

Footnotes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-1	11/12/12	-54.4	25	--
SVE-1	11/14/12	-54.4	30	0
SVE-1	11/19/12	-54.4	20	--
SVE-1	11/26/12	-54.4	20	--
SVE-1	12/03/12	-54.4	40	--
SVE-1	12/10/12	-54.4	20	--
SVE-1	12/14/12	-47.6	40	--
SVE-1	12/17/12	-47.6	40	--
SVE-1	12/18/12	-47.6	35	0.2
SVE-1	01/02/13	--	60	--
SVE-1	01/07/13	--	--	--
SVE-1	01/16/13	-136.0	0	NM
SVE-1	01/21/13	-88.4	30	--
SVE-1	01/28/13	-74.8	40	--
SVE-1	02/04/13	-34.0	50	--
SVE-1	02/11/13	-40.8	20	--
SVE-1	02/15/13	-68.0	--	9.7
SVE-1	02/18/13	-115.6	20	--
SVE-1	02/22/13	-81.6	20	--
SVE-1	02/24/13	-68.0	20	--
SVE-1	03/04/13	-95.2	15	--
SVE-1	03/13/13	-81.6	<20	12.1
SVE-1	03/18/13	-68.0	20	--
SVE-1	03/25/13	-68.0	20	--
SVE-1	04/01/13	-81.6	20	--
SVE-1	04/02/13	-68.0	10	--
SVE-1	04/04/13	-68.0	10	--
SVE-1	04/09/13	-81.6	16	--
SVE-1	04/15/13	-81.6	10	--
SVE-1	04/16/13	-95.2	10	--
SVE-1	04/18/13	-108.8	10	--
SVE-1	04/19/13	-108.8	7	--
SVE-1	04/21/13	-68.0	8	--
SVE-1	04/22/13	-68.0	8	1.3
SVE-1	05/14/13	-78.0	19	11.4
SVE-1	05/20/13	-90.0	13	--
SVE-1	05/28/13	-98.0	19	--
SVE-1	05/30/13	-100.0	19	--
SVE-1	06/04/13	-90.0	19	--
SVE-1	06/10/13	-80.0	19	--
SVE-1	06/12/13	-80.0	19	1.3
SVE-1	06/17/13	-94.0	23	--
SVE-1	06/18/13	-90.0	23	--
SVE-1	06/24/13	-98.0	23	--
SVE-1	07/01/13	-90.0	23	--
SVE-1	07/11/13	-68.0	19	2.8
SVE-1	07/15/13	-68.0	26	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-1	07/22/13	-68.0	13	--
SVE-1	07/30/13	-54.4	23	--
SVE-1	08/06/13	-54.4	--	--
SVE-1	08/12/13	-54.4	23	--
SVE-1	08/13/13	-54.4	13	0.5
SVE-1	08/19/13	-40.8	19	--
SVE-1	08/22/13	-40.8	13	--
SVE-1	08/26/13	-47.6	26	--
SVE-1	09/03/13	-34.0	23	--
SVE-1	09/10/13	-40.8	18	1.4
SVE-1	09/16/13	-40.8	23	--
SVE-1	09/23/13	-54.4	23	--
SVE-1	09/30/13	-54.4	23	--
SVE-1	10/15/13	-40.8	13	1.6
SVE-1	10/28/13	-40.8	19	--
SVE-1	11/04/13	-54.4	19	--
SVE-1	11/06/13	-54.4	13	2
SVE-1	12/02/13	-40.8	23	--
SVE-1	12/09/13	-54.4	27	--
SVE-1	12/11/13	-54.4	19	0.5
SVE-1	12/16/13	-54.4	19	--
SVE-1	12/23/13	-61.2	33	--
SVE-1	12/30/13	-61.2	24	--
SVE-1	01/06/14	-48	24	--
SVE-1	01/13/14	-68	19	--
SVE-1	01/16/14	-68	19	0.4
SVE-1	01/20/14	-68	19	--
SVE-1	01/26/14	-82	24	--
SVE-1	02/10/14	-136	19	--
SVE-1	02/12/14	-136	0	0
SVE-1	02/18/14	-122	19	--
SVE-1	02/24/14	-136	27	--
SVE-1	02/25/14	-136	0	--
SVE-1	02/25/14	-136	0	--
SVE-1	02/25/14	-136	0	--
SVE-1	02/27/14	-136	0	--
SVE-1	02/27/14	-82	0	--
SVE-1	03/03/14	-81.6	23.3	--
SVE-1	03/10/14	-88.4	0	0.6
SVE-1	03/11/14	-81.6	23.2	--
SVE-1	03/17/14	-81.6	23.2	--
SVE-1	04/14/14	-95.2	23.2	--
SVE-1	04/22/14	-68	34.7	--
SVE-1	04/29/14	-68	34.7	--
SVE-1	05/05/14	-68	45.9	--
SVE-1	05/12/14	-68	45.4	--
SVE-1	05/13/14	-68	11.4	0

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-1	05/14/14	-68	45.8	--
SVE-1	05/27/14	-54.4	34.1	--
SVE-1	06/02/14	-68	45.2	--
SVE-1	06/11/14	-62.5	124.9	0
SVE-1	06/16/14	-54.4	34	--
SVE-1	06/23/14	-54.4	22.6	--
SVE-1	07/07/14	-47.6	33.9	--
SVE-1	07/16/14	-54.4	15.9	0
SVE-1	07/21/14	-54.4	45.2	--
SVE-1	07/25/14	-61.2	34	--
SVE-1	08/04/14	-54.4	45.4	--
SVE-1	08/11/14	-61.2	44.5	--
SVE-1	08/13/14	-66.6	67.8	2.6
SVE-1	08/18/14	-68	45	--
SVE-1	08/29/14	-68	45.3	--
SVE-1	09/08/14	-54.4	44.9	--
SVE-1	09/15/14	-68	45.5	--
SVE-1	09/17/14	-68	22.7	0.4
SVE-1	10/01/14	-54.4	11.4	--
SVE-1	10/10/14	-68	11.4	--
SVE-1	10/15/14	-68	34.2	45.9
SVE-1	11/04/14	-54.4	34.4	--
SVE-1	11/12/14	-68	34.6	0.1
SVE-1	11/21/14	-61.2	34.7	--
SVE-1	11/24/14	-68	34.7	--
SVE-1	12/03/14	-68	34.7	--
SVE-1	12/16/14	-68	23.2	0.1
SVE-1	01/15/15	-61.2	23.3	--
SVE-1	01/22/15	-61.2	34.9	0
SVE-1	01/30/15	-61.2	23.3	--
SVE-1	02/05/15	-61.2	35.1	--
SVE-1	02/13/15	-54.4	23.3	--
SVE-1	02/20/15	-88.4	0	--
SVE-2	03/09/12	-40.8	40	105.8 <sup>1</sup>
SVE-2	03/09/12	-54.4	60	11.5 <sup>2</sup>
SVE-2	03/10/12	-47.6	55	10.3
SVE-2	03/11/12	-47.6	50	8.2
SVE-2	03/16/12	-47.6	50	5.3
SVE-2	03/23/12	-44.2	40	--
SVE-2	03/23/12	-44.2	40	6.1
SVE-2 <sup>3</sup>	03/29/12	-20.4	25	--
SVE-2 <sup>4</sup>	03/29/12	-34.0	37	--
SVE-2	03/30/12	-40.8	40	6.9
SVE-2	04/11/12	-34.0	35	6.3
SVE-2	04/16/12	-34.0	40	--
SVE-2	04/23/12	-34.0	120	--

Notes on Page 35.

**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-2	04/30/12	-40.8	40	--
SVE-2	05/07/12	-34.0	30	--
SVE-2	05/09/12	-40.8	35	2.6
SVE-2	05/14/12	-40.8	50	--
SVE-2	05/21/12	-34.0	45	--
SVE-2	05/30/12	-34.0	40	--
SVE-2	06/04/12	-40.8	45	--
SVE-2	06/11/12	-34.0	45	--
SVE-2	06/12/12	-34.0	40	6.6
SVE-2	06/14/12	-47.6	25	--
SVE-2	06/18/12	-13.6	20	--
SVE-2	06/25/12	-13.6	20	--
SVE-2	07/02/12	NM <sup>5</sup>	20	--
SVE-2	07/09/12	-13.6	20	--
SVE-2	07/10/12	-13.6	20	8.8
SVE-2	07/16/12	NM <sup>5</sup>	10	--
SVE-2	07/23/12	NM <sup>5</sup>	20	--
SVE-2	07/30/12	-13.6	10	--
SVE-2	08/06/12	NM <sup>5</sup>	20	--
SVE-2	08/14/12	-8.4	19	32.36
SVE-2	08/20/12	-8.0	20	--
SVE-2	08/27/12	-7.0	20	--
SVE-2	09/04/12	-6.0	20	--
SVE-2	09/10/12	-6.0	20	--
SVE-2	09/12/12	-6.5	20	22.26
SVE-2	09/17/12	-5.5	20	--
SVE-2	09/24/12	-9.0	20	--
SVE-2	10/01/12	-8.0	20	--
SVE-2	10/08/12	-9.0	20	--
SVE-2	10/16/12	>-15.0 <sup>7</sup>	50	1.6
SVE-2	10/22/12	NM <sup>5</sup>	50	--
SVE-2	10/29/12	NM <sup>5</sup>	50	--
SVE-2	11/05/12	NM <sup>5</sup>	50	--
SVE-2	11/12/12	NM <sup>5</sup>	45	--
SVE-2	11/14/12	NM <sup>5</sup>	55	1.2
SVE-2	11/19/12	NM <sup>5</sup>	60	--
SVE-2	11/26/12	NM <sup>5</sup>	50	--
SVE-2	12/03/12	NM <sup>5</sup>	50	--
SVE-2	12/10/12	NM <sup>5</sup>	60	--
SVE-2	12/14/12	NM <sup>5</sup>	50	--
SVE-2	12/17/12	NM <sup>5</sup>	50	--
SVE-2	12/18/12	NM <sup>5</sup>	50	2.7
SVE-2	01/02/13	--	60	--
SVE-2	01/07/13	NM <sup>5</sup>	55	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-2	01/16/13	NM <sup>5</sup>	60	0.3
SVE-2	01/21/13	-81.6	20	--
SVE-2	01/28/13	-95.2	20	--
SVE-2	02/04/13	-34.0	50	--
SVE-2	02/11/13	NM <sup>5</sup>	15	--
SVE-2	02/15/13	-27.2	40	12
SVE-2	02/18/13	-27.2	35	--
SVE-2	02/22/13	-54.4	35	--
SVE-2	02/24/13	-40.8	70	--
SVE-2	03/04/13	-34.0	30	--
SVE-2	03/13/13	-40.8	45	10.6
SVE-2	03/18/13	-40.8	48	--
SVE-2	03/25/13	-40.8	35	--
SVE-2	04/01/13	-40.8	50	--
SVE-2	04/02/13	-40.8	20	--
SVE-2	04/04/13	-27.2	20	--
SVE-2	04/09/13	-54.4	20	--
SVE-2	04/15/13	-40.8	20	--
SVE-2	04/16/13	-40.8	20	--
SVE-2	04/18/13	-68.0	15	--
SVE-2	04/19/13	-68.0	18	--
SVE-2	04/21/13	-40.8	15	--
SVE-2	04/22/13	-40.8	15	2.2
SVE-2	05/14/13	-80.0	46	13.2
SVE-2	05/20/13	-90.0	48	--
SVE-2	05/28/13	-98.0	46	--
SVE-2	05/30/13	-100.0	46	--
SVE-2	06/04/13	-90.0	44	--
SVE-2	06/10/13	-80.0	46	--
SVE-2	06/12/13	-84.0	48	1.2
SVE-2	06/17/13	-84.0	30	--
SVE-2	06/18/13	-84.0	32	--
SVE-2	06/24/13	-95.0	26	--
SVE-2	07/01/13	-100.0	23	--
SVE-2	07/11/13	-61.2	37	12.7
SVE-2	07/15/13	-54.4	39	--
SVE-2	07/22/13	-54.4	29	--
SVE-2	07/30/13	-40.8	29	--
SVE-2	08/06/13	-47.6	--	--
SVE-2	08/12/13	-47.6	29	--
SVE-2	08/13/13	-40.8	29	0.5
SVE-2	08/19/13	-34.0	30	--
SVE-2	08/22/13	-34.0	29	--
SVE-2	08/26/13	-40.8	32	--

Notes on Page 35.

**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-2	09/03/13	-34.0	30	--
SVE-2	09/10/13	-20.4	29	0.9
SVE-2	09/16/13	-40.8	29	--
SVE-2	09/23/13	-34.0	29	--
SVE-2	09/30/13	-40.8	30	--
SVE-2	10/15/13	-34.0	30	1.2
SVE-2	10/28/13	-40.8	30	--
SVE-2	11/04/13	-40.8	30	--
SVE-2	11/06/13	-40.8	32	0.4
SVE-2	12/02/13	-40.8	30	--
SVE-2	12/09/13	-40.8	33	--
SVE-2	12/11/13	-40.8	31	0.2
SVE-2	12/16/13	-40.8	31	--
SVE-2	12/23/13	-40.8	31	--
SVE-2	12/30/13	-47.6	31	--
SVE-2	01/06/14	-41	30	--
SVE-2	01/13/14	-54	33	--
SVE-2	01/16/14	-61	36	0.4
SVE-2	01/20/14	-54	33	--
SVE-2	01/26/14	-68	36	--
SVE-2	02/10/14	-95	49	--
SVE-2	02/12/14	-109	51	0
SVE-2	02/18/14	-109	52	--
SVE-2	02/24/14	-136	61	--
SVE-2	02/25/14	-136	59	--
SVE-2	02/25/14	-136	58	--
SVE-2	02/25/14	-136	58	--
SVE-2	02/27/14	-122	56	--
SVE-2	02/27/14	-82	43	--
SVE-2	03/03/14	-81.6	128	--
SVE-2	03/10/14	-88.4	115.8	1.6
SVE-2	03/11/14	-81.6	115.8	--
SVE-2	03/17/14	-81.6	127.9	--
SVE-2	04/14/14	-95.2	104.2	--
SVE-2	04/22/14	-54.4	46.2	--
SVE-2	04/29/14	-68	57.8	--
SVE-2	05/05/14	-54.4	57.4	--
SVE-2	05/12/14	-54.4	56.8	--
SVE-2	05/13/14	-68	114.1	0.2
SVE-2	05/14/14	-68	114.6	--
SVE-2	05/27/14	-68	56.8	--
SVE-2	06/02/14	-68	56.5	--
SVE-2	06/11/14	-39.4	45.4	0
SVE-2	06/16/14	-54.4	56.6	--
SVE-2	06/23/14	-68	56.5	--
SVE-2	07/07/14	-54.4	56.4	--

Notes on Page 35.



**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-2	07/16/14	-54.4	68.1	0.2
SVE-2	07/21/14	-54.4	56.5	--
SVE-2	07/25/14	-61.2	56.6	--
SVE-2	08/04/14	-68	56.8	--
SVE-2	08/11/14	-68	55.6	--
SVE-2	08/13/14	-58.5	67.8	3.3
SVE-2	08/18/14	-68	67.5	--
SVE-2	08/29/14	-68	113.3	--
SVE-2	09/08/14	-68	89.8	--
SVE-2	09/15/14	-54.4	79.6	--
SVE-2	09/17/14	-54.4	90.8	0
SVE-2	10/01/14	-54.4	68.1	--
SVE-2	10/10/14	-54.4	79.5	--
SVE-2	10/15/14	-68	68.4	19.4
SVE-2	11/04/14	-54.4	68.8	--
SVE-2	11/12/14	-54.4	80.6	0
SVE-2	11/21/14	-54.4	69.5	--
SVE-2	11/24/14	-54.4	69.5	--
SVE-2	12/03/14	-61.2	81	--
SVE-2	12/16/14	-54.4	81	0.2
SVE-2	01/15/15	-54.4	81.4	--
SVE-2	01/22/15	-54.4	81.4	1.4
SVE-2	01/30/15	-54.4	81.4	--
SVE-2	02/05/15	-54.4	70.2	--
SVE-2	02/13/15	-54.4	69.8	--
SVE-2	02/20/15	-81.6	116.9	44
SVE-3	03/09/12	-30.6	60	85.3 <sup>1</sup>
SVE-3	03/09/12	-40.8	85	5.92 <sup>2</sup>
SVE-3	03/09/12	0.0	0	
SVE-3	03/10/12	-34.0	80	6.1
SVE-3	03/11/12	-34.0	75	4.5
SVE-3	03/16/12	-34.0	60	1.6
SVE-3	03/23/12	-40.8	60	--
SVE-3	03/23/12	-40.8	60	4.4
SVE-3 <sup>3</sup>	03/29/12	-27.2	30	--
SVE-3 <sup>4</sup>	03/29/12	-34.0	50	--
SVE-3	03/30/12	-54.4	50	6.1
SVE-3	04/11/12	-40.8	50	4.9
SVE-3	04/16/12	-34.0	50	--
SVE-3	04/23/12	-34.0	140	--
SVE-3	04/30/12	-35.3	50	--
SVE-3	05/07/12	-40.8	50	--
SVE-3	05/09/12	-40.8	40	5.9
SVE-3	05/14/12	-40.8	50	--
SVE-3	05/21/12	-40.8	50	--
SVE-3	05/30/12	-47.6	50	--

Notes on Page 35.

**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-3	06/04/12	-40.8	50	--
SVE-3	06/11/12	-34.0	50	--
SVE-3	06/12/12	-30.6	50	9.3
SVE-3	06/14/12	-27.2	40	--
SVE-3	06/18/12	-13.6	20	--
SVE-3	06/25/12	-13.6	25	--
SVE-3	07/02/12	-13.6	20	--
SVE-3	07/09/12	-13.6	20	--
SVE-3	07/10/12	-13.6	21	7.6
SVE-3	07/16/12	-13.6	20	--
SVE-3	07/23/12	NM <sup>5</sup>	20	--
SVE-3	07/30/12	-13.6	20	--
SVE-3	08/06/12	NM <sup>5</sup>	25	--
SVE-3	08/14/12	-9.8	21	33.73
SVE-3	08/20/12	-10.5	30	--
SVE-3	08/27/12	-9.0	20	--
SVE-3	09/04/12	-8.0	20	--
SVE-3	09/10/12	-9.0	20	--
SVE-3	09/12/12	-7.0	20	0.88
SVE-3	09/17/12	-6.5	20	--
SVE-3	09/24/12	-15.0	20	--
SVE-3	10/01/12	-7.0	20	--
SVE-3	10/08/12	>-15.0 <sup>7</sup>	20	--
SVE-3	10/16/12	>-15.0 <sup>7</sup>	55	0.2
SVE-3	10/22/12	NM <sup>5</sup>	50	--
SVE-3	10/29/12	NM <sup>5</sup>	55	--
SVE-3	11/05/12	NM <sup>5</sup>	50	--
SVE-3	11/12/12	NM <sup>5</sup>	50	--
SVE-3	11/14/12	NM <sup>5</sup>	50	0.5
SVE-3	11/19/12	NM <sup>5</sup>	50	--
SVE-3	11/26/12	NM <sup>5</sup>	50	--
SVE-3	12/03/12	NM <sup>5</sup>	40	--
SVE-3	12/10/12	NM <sup>5</sup>	50	--
SVE-3	12/14/12	NM <sup>5</sup>	40	--
SVE-3	12/17/12	NM <sup>5</sup>	45	--
SVE-3	12/18/12	NM <sup>5</sup>	40	2.8
SVE-3	01/02/13	--	70	--
SVE-3	01/07/13	NM <sup>5</sup>	60	--
SVE-3	01/16/13	-54.4	40	0
SVE-3	01/21/13	-81.6	30	--
SVE-3	01/28/13	-149.5	10	--
SVE-3	02/04/13	-136.0	10	--
SVE-3	02/11/13	-40.8	20	--
SVE-3	02/15/13	-40.8	30	15.6

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-3	02/18/13	-34.0	30	--
SVE-3	02/22/13	-54.4	30	--
SVE-3	02/24/13	-68.0	50	--
SVE-3	03/04/13	-40.8	35	--
SVE-3	03/13/13	-54.4	40	14.5
SVE-3	03/18/13	-47.6	35	--
SVE-3	03/25/13	-40.8	30	--
SVE-3	04/01/13	-40.8	40	--
SVE-3	04/02/13	-40.8	20	--
SVE-3	04/04/13	-40.8	15	--
SVE-3	04/09/13	-95.2	10	--
SVE-3	04/15/13	-68.0	10	--
SVE-3	04/16/13	-68.0	10	--
SVE-3	04/18/13	-108.8	8	--
SVE-3	04/19/13	-68.0	7	--
SVE-3	04/21/13	-54.4	10	--
SVE-3	04/22/13	-54.4	9	1.7
SVE-3	05/14/13	-80.0	23	11.6
SVE-3	05/20/13	-90.0	23	--
SVE-3	05/28/13	-98.0	13	--
SVE-3	05/30/13	-98.0	19	--
SVE-3	06/04/13	-80.0	23	--
SVE-3	06/10/13	-70.0	23	--
SVE-3	06/12/13	-84.0	23	1.9
SVE-3	06/17/13	-98.0	26	--
SVE-3	06/18/13	-90.0	23	--
SVE-3	06/24/13	-98.0	26	--
SVE-3	07/01/13	-98.0	19	--
SVE-3	07/11/13	-68.0	23	21.9
SVE-3	07/15/13	-68.0	26	--
SVE-3	07/22/13	-68.0	37	--
SVE-3	07/30/13	-54.4	39	--
SVE-3	08/06/13	-54.4	--	--
SVE-3	08/12/13	-54.4	45	--
SVE-3	08/13/13	-54.4	44	1.7
SVE-3	08/19/13	-34.0	43	--
SVE-3	08/22/13	-40.8	43	--
SVE-3	08/26/13	-40.8	45	--
SVE-3	09/03/13	-34.0	42	--
SVE-3	09/10/13	-27.2	41	4
SVE-3	09/16/13	-54.4	45	--
SVE-3	09/23/13	-40.8	49	--
SVE-3	09/30/13	-54.4	51	--
SVE-3	10/15/13	-40.8	48	7.8
SVE-3	10/28/13	-34.0	52	--
SVE-3	11/04/13	-40.8	52	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-3	11/06/13	-54.4	54	1
SVE-3	12/02/13	-40.8	52	--
SVE-3	12/09/13	-54.4	56	--
SVE-3	12/11/13	-54.4	58	1
SVE-3	12/16/13	-54.4	56	--
SVE-3	12/23/13	-54.4	56	--
SVE-3	12/30/13	-54.4	61	--
SVE-3	01/06/14	-48	61	--
SVE-3	01/13/14	-68	68	--
SVE-3	01/16/14	-68	66	1.2
SVE-3	01/20/14	-68	60	--
SVE-3	01/26/14	-82	36	--
SVE-3	02/10/14	-136	31	--
SVE-3	02/12/14	-136	31	0
SVE-3	02/18/14	-136	30	--
SVE-3	02/24/14	-136	33	--
SVE-3	02/25/14	-143	36	--
SVE-3	02/25/14	-143	36	--
SVE-3	02/25/14	-143	36	--
SVE-3	02/27/14	-136	33	--
SVE-3	02/27/14	-82	33	--
SVE-3	03/03/14	-81.6	58.2	--
SVE-3	03/10/14	-95.2	34.7	1
SVE-3	03/11/14	-81.6	57.9	--
SVE-3	03/17/14	-81.6	58.1	--
SVE-3	04/14/14	-95.2	57.9	--
SVE-3	04/22/14	-54.4	46.2	--
SVE-3	04/29/14	-68	57.8	--
SVE-3	05/05/14	-54.4	57.4	--
SVE-3	05/12/14	-54.4	56.8	--
SVE-3	05/13/14	-68	45.6	0.3
SVE-3	05/14/14	-68	57.3	--
SVE-3	05/27/14	-68	56.8	--
SVE-3	06/02/14	-68	56.5	--
SVE-3	06/11/14	-39.4	34.1	3.2
SVE-3	06/16/14	-54.4	56.6	--
SVE-3	06/23/14	-68	56.5	--
SVE-3	07/07/14	-54.4	56.4	--
SVE-3	07/16/14	-54.4	45.4	5
SVE-3	07/21/14	-54.4	56.5	--
SVE-3	07/25/14	-61.2	113.3	--
SVE-3	08/04/14	-68	102.2	--
SVE-3	08/11/14	-68	66.7	--
SVE-3	08/13/14	-68	56.5	4.6
SVE-3	08/18/14	-68	67.5	--
SVE-3	08/29/14	-68	68	--
SVE-3	09/08/14	-68	67.3	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-3	09/15/14	-54.4	68.2	--
SVE-3	09/17/14	-61.2	56.8	4.4
SVE-3	10/01/14	-54.4	113.5	--
SVE-3	10/10/14	-61.2	90.8	--
SVE-3	10/15/14	-68	45.6	20.3
SVE-3	11/04/14	-54.4	68.8	--
SVE-3	11/12/14	-68	92.2	0.1
SVE-3	11/21/14	-54.4	92.6	--
SVE-3	11/24/14	-61.2	69.5	--
SVE-3	12/03/14	-68	69.5	--
SVE-3	12/16/14	-68	69.5	0.3
SVE-3	01/15/15	-61.2	58.2	--
SVE-3	01/22/15	-61.2	69.8	1.4
SVE-3	01/30/15	-68	69.8	--
SVE-3	02/05/15	-54.4	81.9	--
SVE-3	02/13/15	-61.2	81.4	--
SVE-3	02/20/15	-95.2	58.5	27
SVE-4	03/09/12	-88.4	33	105.1 <sup>1</sup>
SVE-4	03/09/12	-88.4	32	5.1 <sup>2</sup>
SVE-4	03/09/12	-7.1	0	--
SVE-4	03/09/12	-1.5	0	--
SVE-4	03/10/12	-88.4	30	2.1
SVE-4	03/11/12	-88.4	28	5.2
SVE-4	03/16/12	-95.2	28	3.1
SVE-4	03/23/12	-108.8	27	--
SVE-4	03/23/12	-95.2	27	9.7
SVE-4 <sup>3</sup>	03/29/12	-47.6	25	--
SVE-4 <sup>4</sup>	03/29/12	-61.2	30	--
SVE-4	03/30/12	-95.2	25	10.3
SVE-4	04/11/12	-54.4	20	10
SVE-4	04/16/12	-102.0	17	--
SVE-4	04/23/12	-102.0	20	--
SVE-4	04/30/12	-103.3	27	--
SVE-4	05/07/12	-95.2	18	--
SVE-4	05/09/12	-95.2	18	9.4
SVE-4	05/14/12	-95.2	20	--
SVE-4	05/21/12	-95.2	30	--
SVE-4	05/30/12	-95.2	33	--
SVE-4	06/04/12	-95.2	30	--
SVE-4	06/11/12	-95.2	30	--
SVE-4	06/12/12	-95.2	23	8.3
SVE-4	06/12/12	-80.2	23	
SVE-4	06/12/12	-78.2	23	
SVE-4	06/14/12	-78.2	23	--
SVE-4	06/18/12	-54.4	17	--
SVE-4	06/25/12	-54.4	18	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-4	07/02/12	-54.4	18	--
SVE-4	07/09/12	-54.4	20	--
SVE-4	07/10/12	-57.1	22	9.8
SVE-4	07/16/12	-68.0	20	--
SVE-4	07/23/12	-54.4	18	--
SVE-4	07/30/12	-54.4	18	--
SVE-4	08/06/12	-54.4	18	--
SVE-4	08/14/12	-57.1	27	32.28 <sup>6</sup>
SVE-4	08/20/12	-54.4	18	--
SVE-4	08/27/12	-54.4	18	--
SVE-4	09/04/12	-54.4	20	--
SVE-4	09/10/12	-54.4	20	--
SVE-4	09/12/12	-54.4	17	1.58
SVE-4	09/17/12	-54.4	20	--
SVE-4	09/24/12	-47.6	15	--
SVE-4	10/01/12	-54.4	15	--
SVE-4	10/08/12	-40.8	20	--
SVE-4	10/16/12	-68.0	27	1.4
SVE-4	10/22/12	-68.0	25	--
SVE-4	10/29/12	-68.0	25	--
SVE-4	11/05/12	-81.6	25	--
SVE-4	11/12/12	-74.8	25	--
SVE-4	11/14/12	-81.6	22	0
SVE-4	11/19/12	-81.6	22	--
SVE-4	11/26/12	-81.6	25	--
SVE-4	12/03/12	-81.6	22	--
SVE-4	12/10/12	-95.2	22	--
SVE-4	12/14/12	-81.6	25	--
SVE-4	12/17/12	-81.6	25	--
SVE-4	12/18/12	-81.6	24	5
SVE-4	01/02/13	--	25	--
SVE-4	01/07/13	-54.4	15	--
SVE-4	01/16/13	-102.0	20	0.3
SVE-4	01/21/13	-81.6	17	--
SVE-4	01/28/13	-149.5	8	--
SVE-4	02/04/13	-136.0	0	--
SVE-4	02/11/13	-95.2	0	--
SVE-4	02/15/13	-68.0	16	11.2
SVE-4	02/18/13	-95.2	15	--
SVE-4	02/22/13	-95.2	15	--
SVE-4	02/24/13	-95.2	0	--
SVE-4	03/04/13	-95.2	20	--
SVE-4	03/13/13	-108.8	20	9.8
SVE-4	03/18/13	-108.8	18	--
SVE-4	03/25/13	-95.2	20	--
SVE-4	04/01/13	-115.6	-8	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-4	04/02/13	-108.8	22	--
SVE-4	04/04/13	-95.2	20	--
SVE-4	04/09/13	-122.4	20	--
SVE-4	04/15/13	-95.2	30	--
SVE-4	04/16/13	-95.2	25	--
SVE-4	04/18/13	-108.8	25	--
SVE-4	04/19/13	-108.8	25	--
SVE-4	04/21/13	-95.2	25	--
SVE-4	04/22/13	-95.2	25	2.6
SVE-4	05/14/13	-80.0	23	12.7
SVE-4	05/20/13	-90.0	30	--
SVE-4	05/28/13	-100.0	27	--
SVE-4	05/30/13	-100.0	26	--
SVE-4	06/04/13	-90.0	26	--
SVE-4	06/10/13	-80.0	26	--
SVE-4	06/12/13	-84.0	26	5
SVE-4	06/17/13	-80.0	26	--
SVE-4	06/18/13	-90.0	26	--
SVE-4	06/24/13	-98.0	26	--
SVE-4	07/01/13	-96.0	26	--
SVE-4	07/11/13	-68.0	23	4.4
SVE-4	07/15/13	-54.4	26	--
SVE-4	07/22/13	-68.0	26	--
SVE-4	07/30/13	-54.4	26	--
SVE-4	08/06/13	-54.4	--	--
SVE-4	08/12/13	-54.4	29	--
SVE-4	08/13/13	-54.4	26	1.1
SVE-4	08/19/13	-40.8	30	--
SVE-4	08/22/13	-40.8	23	--
SVE-4	08/26/13	-47.6	27	--
SVE-4	09/03/13	-34.0	30	--
SVE-4	09/10/13	-40.8	23	2
SVE-4	09/16/13	-54.4	29	--
SVE-4	09/23/13	-68.0	32	--
SVE-4	09/30/13	-68.0	30	--
SVE-4	10/15/13	-40.8	24	6.1
SVE-4	10/28/13	-40.8	30	--
SVE-4	11/04/13	-54.4	27	--
SVE-4	11/06/13	-54.4	26	5
SVE-4	12/02/13	-40.8	30	--
SVE-4	12/09/13	-54.4	30	--
SVE-4	12/11/13	-54.4	31	0.5
SVE-4	12/16/13	-54.4	31	--
SVE-4	12/23/13	-47.6	31	--
SVE-4	12/30/13	-54.4	31	--
SVE-4	01/06/14	-41	27	--
SVE-4	01/13/14	-68	19	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-4	01/16/14	-68	43	0.2
SVE-4	01/20/14	-68	30	--
SVE-4	01/26/14	-82	31	--
SVE-4	02/10/14	-122	19	--
SVE-4	02/12/14	-136	14	0
SVE-4	02/18/14	-136	19	--
SVE-4	02/24/14	-136	27	--
SVE-4	02/25/14	-136	14	--
SVE-4	02/25/14	-136	14	--
SVE-4	02/25/14	-136	14	--
SVE-4	02/27/14	-136	14	--
SVE-4	02/27/14	-82	14	--
SVE-4	03/03/14	-81.6	23.3	--
SVE-4	03/10/14	-88.4	11.6	0.3
SVE-4	03/11/14	-81.6	23.2	--
SVE-4	03/17/14	-81.6	23.2	--
SVE-4	04/14/14	-95.2	34.7	--
SVE-4	04/22/14	-54.4	46.2	--
SVE-4	04/29/14	-68	57.8	--
SVE-4	05/05/14	-54.4	57.4	--
SVE-4	05/12/14	-68	56.8	--
SVE-4	05/13/14	-68	22.8	0
SVE-4	05/14/14	-68	57.3	--
SVE-4	05/27/14	-68	56.8	--
SVE-4	06/02/14	-68	56.5	--
SVE-4	06/11/14	-40.8	28.4	2.4
SVE-4	06/16/14	-54.4	56.6	--
SVE-4	06/23/14	-68	56.5	--
SVE-4	07/07/14	-54.4	56.4	--
SVE-4	07/16/14	-54.4	27.2	5.7
SVE-4	07/21/14	-54.4	45.2	--
SVE-4	07/25/14	-68	56.6	--
SVE-4	08/04/14	-61.2	56.8	--
SVE-4	08/11/14	-68	55.6	--
SVE-4	08/13/14	-58.5	33.9	6.1
SVE-4	08/18/14	-68	56.2	--
SVE-4	08/29/14	-68	56.6	--
SVE-4	09/08/14	-68	56.1	--
SVE-4	09/15/14	-68	56.9	--
SVE-4	09/17/14	-61.2	34.1	6
SVE-4	10/01/14	-54.4	34.1	--
SVE-4	10/10/14	-54.4	34.1	--
SVE-4	10/15/14	-68	34.2	18.8
SVE-4	11/04/14	-54.4	45.8	--
SVE-4	11/12/14	-61.2	34.6	0.2
SVE-4	11/21/14	-54.4	46.3	--
SVE-4	11/24/14	-61.2	34.7	--

Notes on Page 35.



**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-4	12/03/14	-61.2	46.3	--
SVE-4	12/16/14	-61.2	34.7	0.4
SVE-4	01/15/15	-54.4	23.3	--
SVE-4	01/22/15	-54.4	34.9	1
SVE-4	01/30/15	-54.4	34.9	--
SVE-4	02/05/15	-54.4	35.1	--
SVE-4	02/13/15	-54.4	34.9	--
SVE-4	02/20/15	-81.6	11.7	--
SVE-5	03/09/12	-88.4	35	47.2 <sup>1</sup>
SVE-5	03/09/12	-88.4	34	15.0 <sup>2</sup>
SVE-5	03/10/12	-88.4	33	10.8
SVE-5	03/11/12	-88.4	32	3.6
SVE-5	03/16/12	-81.6	34	2.9
SVE-5	03/23/12	-95.2	32	--
SVE-5	03/23/12	-81.6	32	3
SVE-5 <sup>3</sup>	03/29/12	-61.2	30	--
SVE-5 <sup>4</sup>	03/29/12	-74.8	37	--
SVE-5	03/30/12	-95.2	35	2.8
SVE-5	04/11/12	-81.6	27	3.3
SVE-5	04/16/12	-81.6	27	--
SVE-5	04/23/12	-81.6	25	--
SVE-5	04/30/12	-95.2	38	--
SVE-5	05/07/12	-81.6	26	--
SVE-5	05/09/12	-81.6	27	1
SVE-5	05/14/12	-81.6	27	--
SVE-5	05/21/12	-81.6	28	--
SVE-5	05/30/12	-81.6	38	--
SVE-5	06/04/12	-81.6	35	--
SVE-5	06/11/12	-81.6	35	--
SVE-5	06/12/12	-71.4	30	3.6
SVE-5	06/14/12	-68.0	29	--
SVE-5	06/18/12	-54.4	22	--
SVE-5	06/25/12	-54.4	22	--
SVE-5	07/02/12	-54.4	22	--
SVE-5	07/09/12	-54.4	22	--
SVE-5	07/10/12	-43.5	30	5.3
SVE-5	07/16/12	-54.4	25	--
SVE-5	07/23/12	-54.4	20	--
SVE-5	07/30/12	-68.0	15	--
SVE-5	08/06/12	-54.4	20	--
SVE-5	08/14/12	-54.4	29	28.95 <sup>6</sup>
SVE-5	08/20/12	-68.0	20	--
SVE-5	08/27/12	-54.4	23	--
SVE-5	09/04/12	-68.0	25	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-5	09/10/12	-68.0	23	--
SVE-5	09/12/12	-51.0	23	1.33
SVE-5	09/17/12	-40.8	25	--
SVE-5	09/24/12	-40.8	25	--
SVE-5	10/01/12	-40.8	25	--
SVE-5	10/08/12	-27.2	25	--
SVE-5	10/16/12	-74.8	27	0.6
SVE-5	10/22/12	-81.6	25	--
SVE-5	10/29/12	-81.6	25	--
SVE-5	11/05/12	-81.6	25	--
SVE-5	11/12/12	-74.8	22	--
SVE-5	11/14/12	-81.6	20	0.2
SVE-5	11/19/12	-68.0	25	--
SVE-5	11/26/12	-68.0	27	--
SVE-5	12/03/12	-68.0	27	--
SVE-5	12/10/12	-68.0	25	--
SVE-5	12/14/12	-74.8	28	--
SVE-5	12/17/12	-81.6	25	--
SVE-5	12/18/12	-81.6	28	0.8
SVE-5	01/02/13	--	25	--
SVE-5	01/07/13	-81.6	30	--
SVE-5	01/16/13	-68.0	24	0
SVE-5	01/21/13	-68.0	18	--
SVE-5	01/28/13	-149.5	NM	--
SVE-5	02/04/13	-13.6	50	--
SVE-5	02/11/13	-68.0	20	--
SVE-5	02/15/13	-61.2	25	10.1
SVE-5	02/18/13	-81.6	22	--
SVE-5	02/22/13	-74.8	31	--
SVE-5	02/24/13	-68.0	15	--
SVE-5	03/04/13	-68.0	30	--
SVE-5	03/13/13	-81.6	24	8.9
SVE-5	03/18/13	-81.6	32	--
SVE-5	03/25/13	-68.0	28	--
SVE-5	04/01/13	-108.8	15	--
SVE-5	04/02/13	-108.8	30	--
SVE-5	04/04/13	-81.6	25	--
SVE-5	04/09/13	-108.8	30	--
SVE-5	04/15/13	-81.6	32	--
SVE-5	04/16/13	-81.6	30	--
SVE-5	04/18/13	-95.2	35	--
SVE-5	04/19/13	-81.6	35	--
SVE-5	04/21/13	-81.6	32	--
SVE-5	04/22/13	-81.6	35	1.8
SVE-5	05/14/13	-88.0	30	10.9
SVE-5	05/20/13	-100.0	35	--
SVE-5	05/28/13	-100.0	38	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-5	05/30/13	-100.0	32	--
SVE-5	06/04/13	-90.0	32	--
SVE-5	06/10/13	-80.0	32	--
SVE-5	06/12/13	-90.0	35	4.5
SVE-5	06/17/13	-88.0	32	--
SVE-5	06/18/13	-88.0	32	--
SVE-5	06/24/13	-98.0	32	--
SVE-5	07/01/13	-90.0	29	--
SVE-5	07/11/13	-74.8	32	2.8
SVE-5	07/15/13	-68.0	32	--
SVE-5	07/22/13	-68.0	32	--
SVE-5	07/30/13	-54.4	29	--
SVE-5	08/06/13	-68.0	--	--
SVE-5	08/12/13	-68.0	32	--
SVE-5	08/13/13	-54.4	35	0.8
SVE-5	08/19/13	-40.8	32	--
SVE-5	08/22/13	-54.4	35	--
SVE-5	08/26/13	-54.4	32	--
SVE-5	09/03/13	-40.8	32	--
SVE-5	09/10/13	-27.2	35	1.7
SVE-5	09/16/13	-54.4	32	--
SVE-5	09/23/13	-40.8	29	--
SVE-5	09/30/13	-40.8	30	--
SVE-5	10/15/13	-51.0	35	0
SVE-5	10/28/13	-47.6	30	--
SVE-5	11/04/13	-54.4	30	--
SVE-5	11/06/13	-54.4	32	5
SVE-5	12/02/13	-54.4	30	--
SVE-5	12/09/13	-54.4	33	--
SVE-5	12/11/13	-68.0	36	0.6
SVE-5	12/16/13	-54.4	31	--
SVE-5	12/23/13	-61.2	33	--
SVE-5	12/30/13	-68.0	43	--
SVE-5	01/06/14	-54	43	--
SVE-5	01/13/14	-68	52	--
SVE-5	01/16/14	-68	49	0.3
SVE-5	01/20/14	-68	43	--
SVE-5	01/26/14	-82	55	--
SVE-5	02/10/14	-122	31	--
SVE-5	02/12/14	-136	28	0
SVE-5	02/18/14	-136	19	--
SVE-5	02/24/14	-136	27	--
SVE-5	02/25/14	-136	14	--
SVE-5	02/25/14	-136	14	--
SVE-5	02/25/14	-136	14	--
SVE-5	02/27/14	-136	19	--
SVE-5	02/27/14	-82	14	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-5	03/03/14	-81.6	23.3	--
SVE-5	03/10/14	-88.4	23.2	0.1
SVE-5	03/11/14	-81.6	23.2	--
SVE-5	03/17/14	-81.6	23.2	--
SVE-5	04/14/14	-81.6	34.7	--
SVE-5	04/22/14	-68	46.2	--
SVE-5	04/29/14	-68	46.2	--
SVE-5	05/05/14	-68	57.4	--
SVE-5	05/12/14	-54.4	56.8	--
SVE-5	05/13/14	-81.6	45.6	0
SVE-5	05/14/14	-68	57.3	--
SVE-5	05/27/14	-68	45.4	--
SVE-5	06/02/14	-68	45.2	--
SVE-5	06/11/14	-54.4	28.4	1.1
SVE-5	06/16/14	-54.4	56.6	--
SVE-5	06/23/14	-68	56.5	--
SVE-5	07/07/14	-54.4	56.4	--
SVE-5	07/16/14	-61.2	45.4	2.7
SVE-5	07/21/14	-54.4	56.5	--
SVE-5	07/25/14	-68	56.6	--
SVE-5	08/04/14	-61.2	56.8	--
SVE-5	08/11/14	-68	55.6	--
SVE-5	08/13/14	-68	56.5	4
SVE-5	08/18/14	-68	56.2	--
SVE-5	08/29/14	-68	56.6	--
SVE-5	09/08/14	-54.4	56.1	--
SVE-5	09/15/14	-68	56.9	--
SVE-5	09/17/14	-68	56.8	2.9
SVE-5	10/01/14	-61.2	45.4	--
SVE-5	10/10/14	-68	56.8	--
SVE-5	10/15/14	-68	45.6	30.4
SVE-5	11/04/14	-61.2	45.8	--
SVE-5	11/12/14	-68	46.1	0.2
SVE-5	11/21/14	-61.2	57.9	--
SVE-5	11/24/14	-68	46.3	--
SVE-5	12/03/14	-68	46.3	--
SVE-5	12/16/14	-68	46.3	0.2
SVE-5	01/15/15	-68	69.8	--
SVE-5	01/22/15	-68	58.2	0.5
SVE-5	01/30/15	-68	58.2	--
SVE-5	02/05/15	-61.2	58.5	--
SVE-5	02/13/15	-61.2	58.2	--
SVE-5	02/20/15	-95.2	46.8	--
SVE-6	03/09/12	-115.6	19	37.5 <sup>1</sup>
SVE-6	03/09/12	-108.8	19	3.7 <sup>2</sup>
SVE-6	03/10/12	-108.8	20	1.3

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-6	03/11/12	-108.8	20	2.8
SVE-6	03/16/12	-102.0	16	1.9
SVE-6	03/23/12	-122.4	--	--
SVE-6	03/23/12	-122.4	17	2.2
SVE-6 <sup>3</sup>	03/29/12	-81.6	23	--
SVE-6 <sup>4</sup>	03/29/12	-95.2	24	--
SVE-6	03/30/12	-122.4	17	2
SVE-6	04/11/12	-95.2	17	2.3
SVE-6	04/16/12	-108.8	5	--
SVE-6	04/23/12	-102.0	19	--
SVE-6	04/30/12	-122.4	25	--
SVE-6	05/07/12	-81.6	18	--
SVE-6	05/09/12	-81.6	13	0.5
SVE-6	05/14/12	-95.2	15	--
SVE-6	05/21/12	-95.2	25	--
SVE-6	05/30/12	-95.2	24	--
SVE-6	06/04/12	-95.2	20	--
SVE-6	06/11/12	-95.2	20	--
SVE-6	06/17/12	-68.0	15	--
SVE-6	06/23/12	-81.6	15	--
SVE-6	06/12/12	-91.8	16	3.1
SVE-6	06/12/12	-81.6	15	
SVE-6	06/12/12	-81.6	16	
SVE-6	06/14/12	-81.6	19	--
SVE-6	06/18/12	-68.0	15	--
SVE-6	06/25/12	-68.0	15	--
SVE-6	07/02/12	-68.0	15	--
SVE-6	07/09/12	-68.0	15	--
SVE-6	07/10/12	-62.6	21	3.9
SVE-6	07/16/12	-68.0	15	--
SVE-6	07/23/12	-68.0	15	--
SVE-6	07/30/12	-68.0	13	--
SVE-6	08/06/12	-68.0	12	--
SVE-6	08/14/12	-68.0	18	24.71 <sup>6</sup>
SVE-6	08/20/12	-68.0	12	--
SVE-6	08/27/12	-68.0	8	--
SVE-6	09/04/12	-54.4	12	--
SVE-6	09/12/12	-64.6	10	0.79
SVE-6	09/17/12	-54.4	12	--
SVE-6	09/24/12	-54.4	22	--
SVE-6	10/01/12	-54.4	25	--
SVE-6	10/08/12	-40.8	20	--
SVE-6	10/16/12	-81.6	20	0
SVE-6	10/22/12	-81.6	20	--
SVE-6	10/29/12	-81.6	20	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-6	11/05/12	-81.6	20	--
SVE-6	11/12/12	-81.6	20	--
SVE-6	11/14/12	-81.6	18	0
SVE-6	11/19/12	-81.6	17	--
SVE-6	11/26/12	-81.6	25	--
SVE-6	12/03/12	-68.0	25	--
SVE-6	12/10/12	-81.6	17	--
SVE-6	12/14/12	-95.2	22	--
SVE-6	12/17/12	-95.2	20	--
SVE-6	12/18/12	-95.2	19	0.3
SVE-6	01/02/13	--	20	--
SVE-6	01/07/13	-68.0	23	--
SVE-6	01/16/13	-88.4	25	0
SVE-6	01/21/13	-136.0	10	--
SVE-6	01/28/13	-81.6	30	--
SVE-6	02/04/13	-54.4	0	--
SVE-6	02/11/13	-81.6	15	--
SVE-6	02/15/13	-102.0	23	8.7
SVE-6	02/18/13	-81.6	15	--
SVE-6	02/22/13	-95.2	26	--
SVE-6	02/24/13	-108.8	10	--
SVE-6	03/04/13	-68.0	18	--
SVE-6	03/13/13	-108.8	25	7.7
SVE-6	03/18/13	-81.6	25	--
SVE-6	03/25/13	-81.6	25	--
SVE-6	04/01/13	-108.8	15	--
SVE-6	04/02/13	-108.8	30	--
SVE-6	04/04/13	-68.0	25	--
SVE-6	04/09/13	-95.2	25	--
SVE-6	04/15/13	-81.6	28	--
SVE-6	04/16/13	-68.0	30	--
SVE-6	04/18/13	-81.6	32	--
SVE-6	04/19/13	-81.6	28	--
SVE-6	04/21/13	-68.0	30	--
SVE-6	04/22/13	-68.0	30	1.3
SVE-6	05/14/13	-80.0	23	11.3
SVE-6	05/20/13	-90.0	26	--
SVE-6	05/28/13	-98.0	23	--
SVE-6	05/30/13	-100.0	26	--
SVE-6	06/04/13	-92.0	26	--
SVE-6	06/10/13	-80.0	30	--
SVE-6	06/12/13	-82.0	26	2.8
SVE-6	06/17/13	-80.0	26	--
SVE-6	06/18/13	-84.0	26	--
SVE-6	06/24/13	-98.0	26	--
SVE-6	07/01/13	-94.0	26	--
SVE-6	07/11/13	-68.0	29	2

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-6	07/15/13	-68.0	29	--
SVE-6	07/22/13	-68.0	18	--
SVE-6	07/30/13	-54.4	26	--
SVE-6	08/06/13	-54.4	--	--
SVE-6	08/12/13	-54.4	32	--
SVE-6	08/13/13	-54.4	32	0.5
SVE-6	08/19/13	-40.8	32	--
SVE-6	08/22/13	-40.8	32	--
SVE-6	08/26/13	-40.8	26	--
SVE-6	09/03/13	-40.8	30	--
SVE-6	09/10/13	-34.0	32	1.3
SVE-6	09/16/13	-54.4	29	--
SVE-6	09/23/13	-54.4	29	--
SVE-6	09/30/13	-68.0	32	--
SVE-6	10/15/13	-40.8	32	0
SVE-6	10/28/13	-54.4	30	--
SVE-6	11/04/13	-54.4	30	--
SVE-6	11/06/13	-54.4	26	7.1
SVE-6	12/02/13	-54.4	27	--
SVE-6	12/09/13	-54.4	27	--
SVE-6	12/11/13	-54.4	19	0.4
SVE-6	12/16/13	-54.4	27	--
SVE-6	12/23/13	-54.4	31	--
SVE-6	12/30/13	-54.4	31	--
SVE-6	01/06/14	-54	30	--
SVE-6	01/13/14	-68	33	--
SVE-6	01/16/14	-68	36	0.2
SVE-6	01/20/14	-68	33	--
SVE-6	01/26/14	-82	31	--
SVE-6	02/10/14	-41	19	--
SVE-6	02/12/14	-129	0	0.1
SVE-6	02/18/14	-136	19	--
SVE-6	02/24/14	-136	27	--
SVE-6	02/25/14	-136	0	--
SVE-6	02/25/14	-136	0	--
SVE-6	02/25/14	-136	0	--
SVE-6	02/27/14	-136	14	--
SVE-6	02/27/14	-82	14	--
SVE-6	03/03/14	-81.6	23.3	--
SVE-6	03/10/14	-81.6	0	0
SVE-6	03/11/14	-81.6	23.2	--
SVE-6	03/17/14	-81.6	23.2	--
SVE-6	04/14/14	-95.2	34.7	--
SVE-6	04/22/14	-68	46.2	--
SVE-6	04/29/14	-68	46.2	--
SVE-6	05/05/14	-54.4	45.9	--
SVE-6	05/12/14	-54.4	45.4	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-6	05/13/14	-68	22.8	0
SVE-6	05/14/14	-68	57.3	--
SVE-6	05/27/14	-54.4	45.4	--
SVE-6	06/02/14	-68	45.2	--
SVE-6	06/11/14	-34	15.9	0
SVE-6	06/16/14	-54.4	45.3	--
SVE-6	06/23/14	-68	56.5	--
SVE-6	07/07/14	-54.4	56.4	--
SVE-6	07/16/14	-54.4	29.5	0.6
SVE-6	07/21/14	-54.4	56.5	--
SVE-6	07/25/14	-68	56.6	--
SVE-6	08/04/14	-54.4	56.8	--
SVE-6	08/11/14	-61.2	55.6	--
SVE-6	08/13/14	-58.5	45.2	2.5
SVE-6	08/18/14	-68	56.2	--
SVE-6	08/29/14	-54.4	56.6	--
SVE-6	09/08/14	-54.4	56.1	--
SVE-6	09/15/14	-68	56.9	--
SVE-6	09/17/14	-61.2	34.1	0
SVE-6	10/01/14	-54.4	34.1	--
SVE-6	10/10/14	-61.2	34.1	--
SVE-6	10/15/14	-68	22.8	59.2
SVE-6	11/04/14	-54.4	34.4	--
SVE-6	11/12/14	-61.2	46.1	0.2
SVE-6	11/21/14	-54.4	46.3	--
SVE-6	11/24/14	-61.2	23.2	--
SVE-6	12/03/14	-61.2	34.7	--
SVE-6	12/16/14	-68	23.2	0.1
SVE-6	01/15/15	-54.4	34.9	--
SVE-6	01/22/15	-54.4	46.5	0.2
SVE-6	01/30/15	-54.4	34.9	--
SVE-6	02/05/15	-54.4	46.8	--
SVE-6	02/13/15	-54.4	46.5	--
SVE-6	02/20/15	-81.6	58.5	--
SVE-7	03/09/12	-81.6	40	96.2 <sup>1</sup>
SVE-7	03/09/12	-74.8	30	11.8 <sup>2</sup>
SVE-7	03/10/12	-74.8	30	10.5
SVE-7	03/11/12	-71.4	30	7.3
SVE-7	03/16/12	-74.8	30	3.6
SVE-7	03/23/12	-81.6	35	--
SVE-7	03/23/12	-81.6	35	3.4
SVE-7 <sup>3</sup>	03/29/12	-47.6	20	--
SVE-7 <sup>4</sup>	03/29/12	-54.4	30	--
SVE-7	03/30/12	-68.0	30	3
SVE-7	04/11/12	-54.4	25	7
SVE-7	04/16/12	-68.0	25	--

Notes on Page 35.



**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-7	04/23/12	-68.0	120	--
SVE-7	04/30/12	-68.0	30	--
SVE-7	05/07/12	-68.0	25	--
SVE-7	05/09/12	-68.0	30	0.6
SVE-7	05/14/12	-68.0	30	--
SVE-7	05/21/12	-68.0	40	--
SVE-7	05/30/12	-54.4	30	--
SVE-7	06/04/12	-68.0	40	--
SVE-7	06/11/12	-54.4	40	--
SVE-7	06/12/12	-61.2	35	4
SVE-7	06/14/12	-47.6	25	--
SVE-7	06/18/12	-34.0	20	--
SVE-7	06/25/12	-27.2	15	--
SVE-7	07/02/12	-27.2	20	--
SVE-7	07/09/12	-13.6	20	--
SVE-7	07/10/12	-32.4	16	4.9
SVE-7	07/16/12	-13.6	10	--
SVE-7	07/23/12	-13.6	20	--
SVE-7	07/30/12	-13.6	20	--
SVE-7	08/06/12	-27.2	20	--
SVE-7	08/14/12	-31.3	20	25.27 <sup>6</sup>
SVE-7	08/20/12	-27.2	20	--
SVE-7	08/27/12	-13.6	20	--
SVE-7	09/04/12	-13.6	20	--
SVE-7	09/10/12	-13.6	20	--
SVE-7	09/12/12	-27.2	12	1.12
SVE-7	09/17/12	-13.6	20	--
SVE-7	09/24/12	-27.2	20	--
SVE-7	10/01/12	-27.2	20	--
SVE-7	10/08/12	-27.2	20	--
SVE-7	10/16/12	-47.6	40	0.7
SVE-7	10/22/12	-47.6	30	--
SVE-7	10/29/12	-27.2	45	--
SVE-7	11/05/12	-40.8	40	--
SVE-7	11/12/12	-40.8	40	--
SVE-7	11/14/12	-47.6	30	0.3
SVE-7	11/19/12	-54.4	30	--
SVE-7	11/26/12	-54.4	35	--
SVE-7	12/03/12	-54.4	30	--
SVE-7	12/10/12	-54.4	30	--
SVE-7	12/14/12	-54.4	30	--
SVE-7	12/17/12	-54.4	30	--
SVE-7	12/18/12	-54.4	30	0.5
SVE-7	01/02/13	--	50	--
SVE-7	01/07/13	-40.8	40	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-7	01/16/13	-61.2	30	0
SVE-7	01/21/13	-95.2	15	--
SVE-7	01/28/13	-163.1	10	--
SVE-7	02/04/13	-68.0	30	--
SVE-7	02/11/13	-54.4	10	--
SVE-7	02/15/13	-68.0	NM	9.7
SVE-7	02/18/13	-68.0	20	--
SVE-7	02/22/13	-61.2	20	--
SVE-7	02/24/13	-68.0	60	--
SVE-7	03/04/13	-47.6	20	--
SVE-7	03/13/13	-81.6	25	9.2
SVE-7	03/18/13	-68.0	20	--
SVE-7	03/25/13	-68.0	30	--
SVE-7	04/01/13	-81.6	20	--
SVE-7	04/02/13	-68.0	10	--
SVE-7	04/04/13	-68.0	10	--
SVE-7	04/09/13	-68.0	10	--
SVE-7	04/15/13	-81.6	10	--
SVE-7	04/16/13	-81.6	10	--
SVE-7	04/18/13	-136.0	8	--
SVE-7	04/19/13	-122.4	10	--
SVE-7	04/21/13	-68.0	8	--
SVE-7	04/22/13	-68.0	10	1.9
SVE-7	05/14/13	-80.0	19	10.6
SVE-7	05/20/13	-95.0	23	--
SVE-7	05/28/13	-100.0	19	--
SVE-7	05/30/13	-100.0	13	--
SVE-7	06/04/13	-90.0	23	--
SVE-7	06/10/13	-80.0	23	--
SVE-7	06/12/13	-84.0	23	2.0
SVE-7	06/17/13	-90.0	23	--
SVE-7	06/18/13	-90.0	19	--
SVE-7	06/24/13	-100.0	23	--
SVE-7	07/01/13	-90.0	26	--
SVE-7	07/11/13	-68.0	23	1.1
SVE-7	07/15/13	-54.4	26	--
SVE-7	07/22/13	-68.0	18	--
SVE-7	07/30/13	-54.4	26	--
SVE-7	08/06/13	-68.0	--	--
SVE-7	08/12/13	-54.4	26	--
SVE-7	08/13/13	-54.4	19	0.3
SVE-7	08/19/13	-40.8	26	--
SVE-7	08/22/13	-47.6	19	--
SVE-7	08/26/13	-47.6	26	--
SVE-7	09/03/13	-40.8	26	--
SVE-7	09/10/13	-34.0	23	0.4

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-7	09/16/13	-68.0	32	--
SVE-7	09/23/13	-68.0	29	--
SVE-7	09/30/13	-68.0	30	--
SVE-7	10/15/13	-47.6	19	0
SVE-7	10/28/13	-40.8	27	--
SVE-7	11/04/13	-54.4	27	--
SVE-7	11/06/13	-54.4	19	5
SVE-7	12/02/13	-54.4	27	--
SVE-7	12/09/13	-54.4	27	--
SVE-7	12/11/13	-54.4	24	0.4
SVE-7	12/16/13	-54.4	27	--
SVE-7	12/23/13	-47.6	31	--
SVE-7	12/30/13	-54.4	31	--
SVE-7	01/06/14	-54	30	--
SVE-7	01/13/14	-68	30	--
SVE-7	01/16/14	-68	27	0.1
SVE-7	01/20/14	-68	30	--
SVE-7	01/26/14	-82	31	--
SVE-7	02/10/14	-122	24	--
SVE-7	02/12/14	-136	45	0
SVE-7	02/18/14	-136	19	--
SVE-7	02/24/14	-136	27	--
SVE-7	02/25/14	-136	14	--
SVE-7	02/25/14	-136	14	--
SVE-7	02/25/14	-136	14	--
SVE-7	02/27/14	-136	14	--
SVE-7	02/27/14	-82	14	--
SVE-7	03/03/14	-81.6	23.3	--
SVE-7	03/10/14	-88.4	11.6	0.6
SVE-7	03/11/14	-81.6	23.2	--
SVE-7	03/17/14	-81.6	23.2	--
SVE-7	04/14/14	-95.2	34.7	--
SVE-7	04/22/14	-68	46.2	--
SVE-7	04/29/14	-68	46.2	--
SVE-7	05/05/14	-54.4	45.9	--
SVE-7	05/12/14	-54.4	45.4	--
SVE-7	05/13/14	-68	22.8	0
SVE-7	05/14/14	-68	45.8	--
SVE-7	05/27/14	-54.4	34.1	--
SVE-7	06/02/14	-68	45.2	--
SVE-7	06/11/14	-43.5	6.8	0
SVE-7	06/16/14	-54.4	45.3	--
SVE-7	06/23/14	-68	56.5	--
SVE-7	07/07/14	-54.4	45.1	--
SVE-7	07/16/14	-54.4	204.3	0
SVE-7	07/21/14	-54.4	56.5	--
SVE-7	07/25/14	-68	45.3	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-7	08/04/14	-54.4	56.8	--
SVE-7	08/11/14	-68	55.6	--
SVE-7	08/13/14	-68	29.4	1.7
SVE-7	08/18/14	-68	56.2	--
SVE-7	08/29/14	-54.4	56.6	--
SVE-7	09/08/14	-68	56.1	--
SVE-7	09/15/14	-68	56.9	--
SVE-7	09/17/14	-61.2	34.1	0
SVE-7	10/01/14	-54.4	34.1	--
SVE-7	10/10/14	-68	45.4	--
SVE-7	10/15/14	-68	34.2	51.7
SVE-7	11/04/14	-54.4	45.8	--
SVE-7	11/12/14	-68	46.1	0.1
SVE-7	11/21/14	-54.4	46.3	--
SVE-7	11/24/14	-68	46.3	--
SVE-7	12/03/14	-68	57.9	--
SVE-7	12/16/14	-68	46.3	0.1
SVE-7	01/15/15	-54.4	34.9	--
SVE-7	01/22/15	-61.2	46.5	0
SVE-7	01/30/15	-61.2	46.5	--
SVE-7	02/05/15	-61.2	46.8	--
SVE-7	02/13/15	-61.2	46.5	--
SVE-7	02/20/15	-95.2	105.2	--
SVE-8	03/09/12	-95.2	30	34.2 <sup>1</sup>
SVE-8	03/09/12	-95.2	30	7.2 <sup>2</sup>
SVE-8	03/10/12	-95.2	31	4.3
SVE-8	03/11/12	-88.4	33	6.7
SVE-8	03/16/12	-88.4	32	2.4
SVE-8	03/23/12	-95.2	35	--
SVE-8	03/23/12	-95.2	35	2.5
SVE-8 <sup>3</sup>	03/29/12	-68.0	29	--
SVE-8 <sup>4</sup>	03/29/12	-74.8	35	--
SVE-8	03/30/12	-81.6	37	2.9
SVE-8	04/11/12	-81.6	27	2
SVE-8	04/16/12	-81.6	25	--
SVE-8	04/23/12	-81.6	25	--
SVE-8	04/30/12	-81.6	40	--
SVE-8	05/07/12	-81.6	25	--
SVE-8	05/09/12	-81.6	27	0.5
SVE-8	05/14/12	-81.6	27	--
SVE-8	05/21/12	-81.6	38	--
SVE-8	05/30/12	-81.6	38	--
SVE-8	06/04/12	-95.2	35	--
SVE-8	06/11/12	-81.6	35	--
SVE-8	06/12/12	-74.8	28	3.4

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-8	06/14/12	-68.0	27	--
SVE-8	06/18/12	-40.8	18	--
SVE-8	06/25/12	-54.4	20	--
SVE-8	07/02/12	-54.4	18	--
SVE-8	07/09/12	-54.4	20	--
SVE-8	07/10/12	-53.0	24	4.3
SVE-8	07/16/12	-54.4	22	--
SVE-8	07/23/12	-54.4	20	--
SVE-8	07/30/12	-54.4	20	--
SVE-8	08/06/12	-54.4	18	--
SVE-8	08/14/12	-54.4	27	23.24 <sup>6</sup>
SVE-8	08/20/12	-54.4	25	--
SVE-8	08/27/12	-54.4	22	--
SVE-8	09/04/12	-54.4	22	--
SVE-8	09/10/12	-54.4	25	--
SVE-8	09/12/12	-54.4	21	1.95
SVE-8	09/17/12	-54.4	22	--
SVE-8	09/24/12	-40.8	22	--
SVE-8	10/01/12	-40.8	25	--
SVE-8	10/08/12	-40.8	22	--
SVE-8	10/16/12	-68.0	40	0
SVE-8	10/22/12	-68.0	30	--
SVE-8	10/29/12	-68.0	32	--
SVE-8	11/05/12	-68.0	30	--
SVE-8	11/12/12	-68.0	30	--
SVE-8	11/14/12	-68.0	30	0
SVE-8	11/19/12	-68.0	30	--
SVE-8	11/26/12	-68.0	32	--
SVE-8	12/03/12	-68.0	30	--
SVE-8	12/10/12	-68.0	30	--
SVE-8	12/14/12	-74.8	30	--
SVE-8	12/17/12	-74.8	30	--
SVE-8	01/02/13	--	22	--
SVE-8	01/07/13	-122.4	-8	--
SVE-8	01/16/13	-40.8	18	0
SVE-8	01/21/13	-129.2	18	--
SVE-8	01/28/13	-136.0	10	--
SVE-8	02/04/13	-136.0	0	--
SVE-8	02/11/13	-81.6	0	--
SVE-8	02/15/13	-108.8	10	6.8
SVE-8	02/18/13	-95.2	10	--
SVE-8	02/22/13	-20.4	17	--
SVE-8	02/24/13	-122.4	0	--
SVE-8	03/04/13	-95.2	15	--
SVE-8	03/13/13	-108.8	18	6.2
SVE-8	03/18/13	-108.8	NM	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-8	03/25/13	-95.2	NM	--
SVE-8	04/01/13	-102.0	20	--
SVE-8	04/02/13	-95.2	35	--
SVE-8	04/04/13	-81.6	35	--
SVE-8	04/09/13	-122.4	11	--
SVE-8	04/15/13	-95.2	15	--
SVE-8	04/16/13	-81.6	25	--
SVE-8	04/18/13	-108.8	8	--
SVE-8	04/19/13	-108.8	20	--
SVE-8	04/21/13	-81.6	25	--
SVE-8	04/22/13	-81.6	25	1.3
SVE-8	05/14/13	-76.0	23	9.7
SVE-8	05/20/13	-90.0	0	--
SVE-8	05/28/13	-92.0	13	--
SVE-8	05/30/13	-100.0	13	--
SVE-8	06/04/13	-94.0	23	--
SVE-8	06/10/13	-88.0	13	--
SVE-8	06/12/13	-88.0	23	1.7
SVE-8	06/17/13	-90.0	26	--
SVE-8	06/18/13	-88.0	23	--
SVE-8	06/24/13	-100.0	26	--
SVE-8	07/01/13	-88.0	26	--
SVE-8	07/11/13	-68.0	26	1.1
SVE-8	07/15/13	-68.0	29	--
SVE-8	07/22/13	-68.0	13	--
SVE-8	07/30/13	-54.4	23	--
SVE-8	08/06/13	-54.4	--	--
SVE-8	08/12/13	-54.4	0	--
SVE-8	08/13/13	-54.4	9	0.3
SVE-8	08/19/13	-40.8	0	--
SVE-8	08/22/13	-47.6	13	--
SVE-8	08/26/13	-47.6	18	--
SVE-8	09/03/13	-34.0	23	--
SVE-8	09/10/13	-40.8	18	0.4
SVE-8	09/16/13	-54.4	29	--
SVE-8	09/23/13	-54.4	32	--
SVE-8	09/30/13	-54.4	32	--
SVE-8	10/15/13	-47.6	13	4.4
SVE-8	10/28/13	-54.4	23	--
SVE-8	11/04/13	-54.4	19	--
SVE-8	11/06/13	-54.4	0	5.3
SVE-8	12/02/13	-54.4	27	--
SVE-8	12/09/13	-54.4	27	--
SVE-8	12/11/13	-54.4	27	0.4
SVE-8	12/16/13	-54.4	27	--
SVE-8	12/23/13	-61.2	27	--
SVE-8	12/30/13	-68.0	31	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-8	01/06/14	-54	30	--
SVE-8	01/13/14	-68	19	--
SVE-8	01/16/14	-68	0	0.5
SVE-8	01/20/14	-68	23	--
SVE-8	01/26/14	-82	24	--
SVE-8	02/10/14	-136	19	--
SVE-8	02/12/14	-136	0	0
SVE-8	02/18/14	-136	19	--
SVE-8	02/24/14	-136	27	--
SVE-8	02/25/14	-136	0	--
SVE-8	02/25/14	-136	0	--
SVE-8	02/25/14	-136	0	--
SVE-8	02/27/14	-136	0	--
SVE-8	02/27/14	-82	0	--
SVE-8	03/03/14	-81.6	23.3	--
SVE-8	03/10/14	-95.2	0	0.7
SVE-8	03/11/14	-81.6	23.2	--
SVE-8	03/17/14	-81.6	23.2	--
SVE-8	04/14/14	-95.2	23.2	--
SVE-8	04/22/14	-68	34.7	--
SVE-8	04/29/14	-68	34.7	--
SVE-8	05/05/14	-68	45.9	--
SVE-8	05/12/14	-68	45.4	--
SVE-8	05/13/14	-68	0	4
SVE-8	05/14/14	-68	45.8	--
SVE-8	05/27/14	-54.4	34.1	--
SVE-8	06/02/14	-68	45.2	--
SVE-8	06/11/14	-62.5	6.8	0
SVE-8	06/16/14	-54.4	34	--
SVE-8	06/23/14	-61.2	45.2	--
SVE-8	07/07/14	-47.6	45.1	--
SVE-8	07/16/14	-57.1	27.2	0
SVE-8	07/21/14	-54.4	45.2	--
SVE-8	07/25/14	-68	45.3	--
SVE-8	08/04/14	-54.4	45.4	--
SVE-8	08/11/14	-61.2	44.5	--
SVE-8	08/13/14	-68	36.2	1.4
SVE-8	08/18/14	-54.4	45	--
SVE-8	08/29/14	-68	56.6	--
SVE-8	09/08/14	-68	56.1	--
SVE-8	09/15/14	-68	56.9	--
SVE-8	09/17/14	-68	56.8	0
SVE-8	10/01/14	-61.2	34.1	--
SVE-8	10/10/14	-68	56.8	--
SVE-8	10/15/14	-68	79.8	26.7
SVE-8	11/04/14	-54.4	91.7	--
SVE-8	11/12/14	-68	115.2	0.1

Notes on Page 35.

**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-8	11/21/14	-54.4	115.8	--
SVE-8	11/24/14	-68	138.9	--
SVE-8	12/03/14	-68	127.3	--
SVE-8	12/16/14	-68	104.2	0.1
SVE-8	01/15/15	-61.2	93.1	--
SVE-8	01/22/15	-61.2	104.7	0
SVE-8	01/30/15	-61.2	104.7	--
SVE-8	02/05/15	-61.2	105.2	--
SVE-8	02/13/15	-54.4	104.7	--
SVE-8	02/20/15	-95.2	35.1	--
SVE-9	03/09/12	-129.2	13	196.1 <sup>1</sup>
SVE-9	03/09/12	-122.4	15	172.1 <sup>2</sup>
SVE-9	03/10/12	-122.4	15	144.5
SVE-9	03/11/12	-122.4	15	131.2
SVE-9	03/16/12	-122.4	15	26.3
SVE-9	03/23/12	-129.2	17	--
SVE-9	03/23/12	-136.0	17	29.7
SVE-9 <sup>3</sup>	03/29/12	-95.2	13	--
SVE-9 <sup>4</sup>	03/29/12	-115.6	17	--
SVE-9	03/30/12	-122.4	17	30.6
SVE-9	04/11/12	-115.6	13	5
SVE-9	04/16/12	-122.4	7	--
SVE-9	04/23/12	-122.4	4	--
SVE-9	04/30/12	-122.4	22	--
SVE-9	05/07/12	-122.4	8	--
SVE-9	05/09/12	-108.8	13	4.3
SVE-9	05/14/12	-108.8	10	--
SVE-9	05/21/12	-108.8	25	--
SVE-9	05/30/12	-108.8	25	--
SVE-9	06/04/12	-108.8	22	--
SVE-9	06/11/12	-108.8	22	--
SVE-9	06/12/12	-108.8	18	6.9
SVE-9	06/14/12	-98.6	17	--
SVE-9	06/18/12	-81.6	12	--
SVE-9	06/25/12	-81.6	14	--
SVE-9	07/02/12	-81.6	12	--
SVE-9	07/09/12	-81.6	15	--
SVE-9	07/10/12	-74.8	17	12
SVE-9	07/16/12	-81.6	15	--
SVE-9	07/23/12	-81.6	15	--
SVE-9	07/30/12	-81.6	13	--
SVE-9	08/06/12	-81.6	12	--
SVE-9	08/14/12	-77.5	20	28.9 <sup>6</sup>
SVE-9	08/20/12	-81.6	15	--

Notes on Page 35.



**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-9	08/27/12	-68.0	15	--
SVE-9	09/04/12	-68.0	15	--
SVE-9	09/10/12	-68.0	15	--
SVE-9	09/12/12	-74.8	14	1.76
SVE-9	09/17/12	-68.0	12	--
SVE-9	09/24/12	-68.0	12	--
SVE-9	10/01/12	-68.0	12	--
SVE-9	10/08/12	-68.0	12	--
SVE-9	10/16/12	-95.2	20	0.2
SVE-9	10/22/12	-95.2	15	--
SVE-9	10/29/12	-95.2	20	--
SVE-9	11/05/12	-95.2	20	--
SVE-9	11/12/12	-95.2	20	--
SVE-9	11/14/12	-95.2	17	0.6
SVE-9	11/19/12	-95.2	17	--
SVE-9	11/26/12	-95.2	17	--
SVE-9	12/03/12	-95.2	15	--
SVE-9	12/10/12	-95.2	17	--
SVE-9	12/14/12	-108.8	18	--
SVE-9	12/17/12	-95.2	20	--
SVE-9	12/18/12	-108.8	17	2.7
SVE-9	01/02/13	--	10	--
SVE-9	01/07/13	-149.5	0	--
SVE-9	01/16/13	-136.0	8	0
SVE-9	01/21/13	-142.7	NM	--
SVE-9	01/28/13	-68.0	NM	--
SVE-9	02/04/13	-163.1	0	--
SVE-9	02/11/13	-95.2	0	--
SVE-9	02/15/13	-95.2	17	11.7
SVE-9	02/18/13	-81.6	NM	--
SVE-9	02/22/13	-115.6	9	--
SVE-9	02/24/13	-136.0	10	--
SVE-9	03/04/13	-108.8	10	--
SVE-9	03/13/13	-95.2	18	8.6
SVE-9	03/18/13	-108.8	24	--
SVE-9	03/25/13	-95.2	25	--
SVE-9	04/01/13	-122.4	18	--
SVE-9	04/02/13	-122.4	25	--
SVE-9	04/04/13	-108.8	23	--
SVE-9	04/09/13	-136.0	23	--
SVE-9	04/15/13	-122.4	18	--
SVE-9	04/16/13	-108.8	25	--
SVE-9	04/18/13	-122.4	22	--
SVE-9	04/19/13	-122.4	20	--
SVE-9	04/21/13	-108.8	20	--

Notes on Page 35.

**Table 2**  
**Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-9	04/22/13	-108.8	20	2.7
SVE-9	05/14/13	-82.0	23	10.2
SVE-9	05/20/13	--	23	--
SVE-9	05/28/13	--	27	--
SVE-9	05/30/13	--	26	--
SVE-9	06/04/13	--	23	--
SVE-9	06/10/13	--	23	--
SVE-9	06/12/13	--	23	1.2
SVE-9	06/17/13	--	26	--
SVE-9	06/18/13	--	26	--
SVE-9	06/24/13	--	23	--
SVE-9	07/01/13	--	23	--
SVE-9	07/11/13	-74.8	23	2
SVE-9	07/15/13	-81.6	26	--
SVE-9	07/22/13	-81.6	23	--
SVE-9	07/30/13	-27.2	26	--
SVE-9	08/06/13	-40.8	--	--
SVE-9	08/12/13	-40.8	26	--
SVE-9	08/13/13	-40.8	23	0.6
SVE-9	08/19/13	-34.0	0	--
SVE-9	08/22/13	-40.8	19	--
SVE-9	08/26/13	-27.2	26	--
SVE-9	09/03/13	-13.6	26	--
SVE-9	09/10/13	-40.8	23	2
SVE-9	09/16/13	-27.2	26	--
SVE-9	09/23/13	-27.2	26	--
SVE-9	09/30/13	-27.2	19	--
SVE-9	10/15/13	-17.0	19	0
SVE-9	10/28/13	-27.2	19	--
SVE-9	11/04/13	-27.2	19	--
SVE-9	11/06/13	-13.6	23	1.1
SVE-9	12/02/13	-40.8	27	--
SVE-9	12/09/13	-27.2	27	--
SVE-9	12/11/13	-27.2	24	0.7
SVE-9	12/16/13	-27.2	19	--
SVE-9	12/23/13	-40.8	19	--
SVE-9	12/30/13	-40.8	19	--
SVE-9	01/06/14	-34	24	--
SVE-9	01/13/14	-68	19	--
SVE-9	01/16/14	-54	0	0.8
SVE-9	01/20/14	-54	19	--
SVE-9	01/26/14	-41	24	--
SVE-9	02/10/14	-95	19	--
SVE-9	02/12/14	-109	0	0
SVE-9	02/18/14	-109	19	--
SVE-9	02/24/14	-109	27	--

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-9	02/25/14	-109	10	--
SVE-9	02/25/14	-109	10	--
SVE-9	02/25/14	-109	10	--
SVE-9	02/27/14	-82	43	--
SVE-9	02/27/14	-54	14	--
SVE-9	03/03/14	-68	23.3	--
SVE-9	03/10/14	-81.6	0	0
SVE-9	03/11/14	-81.6	23.2	--
SVE-9	03/17/14	-68	23.2	--
SVE-9	04/14/14	-68	23.2	--
SVE-9	04/22/14	-54.4	23.1	--
SVE-9	04/29/14	-68	46.2	--
SVE-9	05/05/14	-54.4	45.9	--
SVE-9	05/12/14	-54.4	45.4	--
SVE-9	05/13/14	-54.4	22.8	0
SVE-9	05/14/14	-54.4	45.8	--
SVE-9	05/27/14	-40.8	34.1	--
SVE-9	06/02/14	-68	45.2	--
SVE-9	06/11/14	-17	15.9	0
SVE-9	06/16/14	-40.8	34	--
SVE-9	06/23/14	-54.4	22.6	--
SVE-9	07/07/14	-40.8	33.9	--
SVE-9	07/16/14	-27.2	28.4	0
SVE-9	07/21/14	-40.8	45.2	--
SVE-9	07/25/14	-40.8	34	--
SVE-9	08/04/14	-54.4	45.4	--
SVE-9	08/11/14	-54.4	44.5	--
SVE-9	08/13/14	-34	33.9	2.5
SVE-9	08/18/14	-54.4	45	--
SVE-9	08/29/14	-54.4	45.3	--
SVE-9	09/08/14	-54.4	44.9	--
SVE-9	09/15/14	-40.8	56.9	--
SVE-9	09/17/14	-27.2	34.1	0.2
SVE-9	10/01/14	-34	34.1	--
SVE-9	10/10/14	-54.4	22.7	--
SVE-9	10/15/14	-54.4	34.2	26.8
SVE-9	11/04/14	-27.2	34.4	--
SVE-9	11/12/14	-68	23	0.2
SVE-9	11/21/14	-40.8	46.3	--
SVE-9	11/24/14	-61.2	46.3	--
SVE-9	12/03/14	-40.8	23.2	--
SVE-9	12/16/14	-102	34.7	0.1
SVE-9	01/15/15	-27.2	46.5	--
SVE-9	01/22/15	-20.4	46.5	0.4

Notes on Page 35.

**Table 2  
Extraction Well Manifold Monitoring Data**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Well ID	Date	System Manifold		
		Vacuum (in H <sub>2</sub> O)	Flow Rate (cfm)	VOCs (ppm)
SVE-9	01/30/15	-6.8	34.9	--
SVE-9	02/05/15	-13.6	35.1	--
SVE-9	02/13/15	-54.4	46.5	--
SVE-9	02/20/15	-27.2	0	--

**General Notes:**

Start system at 1:15 pm on March 9, 2012.

Vacuum measured with inline vacuum gauge in units of in Hg. Vacuum converted to in H<sub>2</sub>O for comparison.

Extraction well flow rate measured with inline air flow meter.

VOCs measured with a PID (calibrated to 100 ppm isobutylene).

System flow and vacuum variable due to freezing conditions at the influent lines starting 1/7/2013. System flow balanced by opening make-up air valve.

Interim system was shut down 4/29/2013. The permanent SVE system was started 5/13/2013.

Initial permanent system readings recorded 5/14/2013 after optimization.

**Acronyms and Abbreviations:**

<sup>1</sup> = Vacuum measured at well head at 12:55 pm.

<sup>2</sup> = Vacuum measured at well head at 5:30 pm.

<sup>3</sup> = System restarted with make-up air valve open 100 percent to reduce backpressure on blower.

<sup>4</sup> = Make-up air valve closed to 50% open to continue operation of system consistent with previous settings.

<sup>5</sup> = Vacuum measured at well head indicates influence is still being achieved at this well.

<sup>6</sup> = PID results were analyzed from tedlar bag approximately 4 hours after collection due to instrument malfunction.

<sup>7</sup> = Gauge reading above calibrated range.

-- = Not monitored.

cfm = Cubic feet per minute.

in Hg = Inches of mercury.

in H<sub>2</sub>O = Inches of water column.

NM = Not measured.

PID = Photoionization detector.

ppm = Parts per million.

VOCs = Volatile organic compounds reported as isobutylene.

**Table 3  
Estimate of Post-Carbon Emissions**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Date	Total VOC Concentration <sup>1</sup>	System Flow Rate	Emission Rate <sup>2</sup>
	µg/m <sup>3</sup>	cfm	lb/hr
3/9/2012 <sup>3</sup>	16.03	450	--
3/10/2012	43.89	450	7.39E-05
3/11/2012	47.07	450	7.93E-05
3/16/2012	154.42	450	2.60E-04
3/23/2012	418.29	450	7.05E-04
3/30/2012 <sup>4</sup>	887.68	450	1.50E-03
4/11/2012	101.77	450	1.71E-04
5/9/2012	1,250.95	450	2.11E-03
6/12/2012	775.20	450	1.31E-03
7/10/2012	395.50	450	6.66E-04
8/14/2012	596.70	450	1.01E-03
9/16/2012	514.65	450	8.67E-04
10/16/2012 <sup>4</sup>	495.70	450	8.35E-04
11/14/2012 <sup>4</sup>	1,453.20	275	1.50E-03
12/18/2012 <sup>4</sup>	425.11	275	4.38E-04
1/16/2013	445.23	275	4.58E-04
2/15/2013	148.94	275	1.53E-04
3/13/2013	241.10	275	2.48E-04
4/23/2013	266.75	275	2.75E-04
5/14/2013	328.10	192	2.36E-04
6/13/2013	1,037.40	223	8.66E-04
7/15/2013	64.41	223	5.38E-05
8/13/2013	35.29	222	2.93E-05
9/10/2013	20.11	230	1.73E-05
10/15/2013	434.02	230	3.74E-04
11/6/2013	103.16	225	8.69E-05
12/11/2013	732.35	241	6.61E-04
1/16/2014	252.13	245	2.31E-04
2/12/2014	32.09	184	2.21E-05
3/10/2014	158.04	218	1.29E-04
4/10/2014	206.14	236	1.82E-04
5/13/2014	314.25	232	2.73E-04
6/11/2014	230.28	235	2.03E-04
7/16/2014	550.70	235	4.84E-04
8/13/2014	1,164.65	235	1.02E-03
9/17/2014	4,369.50	237	3.88E-03
10/16/2014	746.00	230	6.42E-04
11/12/2014	398.80	236	3.52E-04
12/16/2014	469.25	231	4.06E-04
1/22/2015	279.85	233	2.44E-04
2/20/2015	270.05	238	2.41E-04

**Average Emission Rate = 5.82E-04 lb/hr**

**NR 445 Emission Threshold = 5.7 lb/hr**

Notes on Page 2.

**Table 3**  
**Estimate of Post-Carbon Emissions**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

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**General Notes:**

<sup>1</sup> = Total VOC concentration was based on the sum of all detected analyte concentrations in post-carbon effluent samples for dates shown. When compounds are not detected above the laboratory reporting limit, emissions are calculated using 1/2 the reporting limit.

<sup>2</sup> = Emission rates were determined using the following equation:

$$\text{Emission Rate} = \text{Conc.} * \text{Flow Rate} * 60 \text{ min/hr} * (1 \text{ m}^3/35.31 \text{ ft}^3) * (1 \text{ lb}/4.54 \times 10^8 \text{ } \mu\text{g})$$

<sup>3</sup> = SVE system began operation on 3/9/2012.

<sup>4</sup> = System flow rate optimized 10/16/2012 by closing make-up air valve.

Interim system was shut down 4/29/2013. The permanent system was started 5/13/2013.

The initial permanent system sample was collected 5/14/2013 after system optimization.

**Acronyms and Abbreviations:**

cfm = Cubic feet per minute.

lb/hr = Pounds per hour.

$\mu\text{g}/\text{m}^3$  = Micrograms per cubic meter.

VOCs = Volatile organic compound.

**Table 4**  
**Estimate of Post-Carbon Emissions of Tetrachloroethene**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Date	Total PCE Concentration <sup>1</sup>	System Flow Rate	Emission Rate <sup>2</sup>	Percent of NR 445 Emission Threshold <sup>4</sup>
	µg/m <sup>3</sup>	cfm	lb/hr	%
3/9/2012 <sup>3</sup>	0.19	450	--	--
3/10/2012	0.38	450	6.32E-07	1.78E-06
3/11/2012	0.38	450	6.32E-07	1.78E-06
3/16/2012	93	450	1.57E-04	4.42E-04
3/23/2012	260	450	4.38E-04	1.24E-03
3/30/2012	660	450	1.11E-03	3.14E-03
4/11/2012	1.1	450	1.85E-06	5.23E-06
5/9/2012	240	450	4.04E-04	1.14E-03
6/12/2012	4.7	450	7.92E-06	2.24E-05
7/10/2012	1.4	450	2.27E-06	6.42E-06
8/14/2012	3.4	450	5.73E-06	1.62E-05
9/16/2012	13	450	2.19E-05	6.19E-05
10/16/2012 <sup>5</sup>	280	450	4.72E-04	1.33E-03
11/14/2012 <sup>5</sup>	1200	275	1.24E-03	3.49E-03
12/18/2012 <sup>5</sup>	240	275	2.47E-04	6.98E-04
1/16/2013	280	275	2.88E-04	8.14E-04
2/15/2013	30	275	3.09E-05	8.72E-05
3/13/2013	74	275	7.62E-05	2.15E-04
4/23/2013	4	275	4.32E-06	1.22E-05
5/14/2013	280	192	2.01E-04	5.68E-04
6/13/2013	920	223	7.68E-04	2.17E-03
7/15/2013	15	223	1.21E-05	3.42E-05
8/13/2013	4	222	3.37E-06	9.51E-06
9/10/2013	4	230	3.49E-06	9.85E-06
10/15/2013	250	230	2.15E-04	6.08E-04
11/6/2013	10	225	8.42E-06	2.38E-05
12/11/2013	480	241	4.33E-04	1.22E-03
1/16/2014	130	245	1.19E-04	3.37E-04
2/12/2014	18	184	1.24E-05	3.50E-05
3/10/2014	87	218	7.10E-05	2.01E-04
4/10/2014	110	236	9.72E-05	2.74E-04
5/13/2014	150	232	1.30E-04	3.68E-04
6/11/2014	5	235	4.31E-06	1.22E-05
7/16/2014	20	235	1.76E-05	4.97E-05
8/13/2014	3	235	2.77E-06	7.83E-06
9/17/2014	17	237	1.51E-05	4.26E-05
10/16/2014	9	230	7.32E-06	2.07E-05
11/12/2014	76	236	6.71E-05	1.90E-04
12/16/2014	88	231	7.61E-05	2.15E-04
1/22/2015	65	233	5.67E-05	1.60E-04
2/20/2015	3	238	2.32E-06	6.54E-06

**Average Emission Rate = 1.71E-04 lb/hr**

**NR 445 Emission Threshold = 35.4 lb/hr**

Notes on Page 2.

**Table 4**  
**Estimate of Post-Carbon Emissions of Tetrachloroethene**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

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**General Notes:**

<sup>1</sup> = VOC concentration was based on the detected analyte concentration in post-carbon effluent samples for dates shown. When compound was not detected above the laboratory reporting limit, emissions were calculated using 1/2 the reporting limit.

<sup>2</sup> = Emission rates were determined using the following equation:

$$\text{Emission Rate} = \text{Conc.} * \text{Flow Rate} * 60 \text{ min/hr} * (1 \text{ m}^3/35.31 \text{ ft}^3) * (1 \text{ lb}/4.54 \times 10^8 \text{ } \mu\text{g})$$

<sup>3</sup> = SVE system began operation on 3/9/2012.

<sup>4</sup> = Post-carbon emissions presented as a percentage of the threshold level using the following equation:

$$\text{Percent of Threshold} = (\text{Emission rate} / \text{NR 445 Emission Threshold}) * 100$$

<sup>5</sup> = System flow rate optimized 10/16/2012 by closing make-up air valve.

System flow variable due to freezing conditions at the influent lines starting 1/7/2013. System flow balanced by opening make-up air valve.

Interim system was shut down 4/29/2013. The permanent system was started 5/13/2013.

The initial permanent system sample was collected 5/14/2013 after system optimization.

**Acronyms and Abbreviations:**

lb/yr = Pounds per year.

lb/hr = Pounds per hour.

$\mu\text{g}/\text{m}^3$  = Micrograms per cubic meter.

VC = Vinyl Chloride.



**Table 5  
Estimate of Post-Carbon Emissions of Trichloroethene**

**Soil Vapor Extraction System Progress Report  
Madison-Kipp Corporation  
Madison, Wisconsin**

Date	Total TCE Concentration <sup>1</sup>	System Flow Rate	Emission Rate <sup>2</sup>	Percent of NR 445 Emission Threshold <sup>4</sup>
	µg/m <sup>3</sup>	cfm	lb/hr	%
3/9/2012 <sup>3</sup>	0.41	450	--	--
3/10/2012	0.80	450	1.35E-06	2.40E-06
3/11/2012	0.80	450	1.35E-06	2.40E-06
3/16/2012	1.1	450	1.85E-06	3.30E-06
3/23/2012	6.5	450	1.09E-05	1.95E-05
3/30/2012	24	450	4.04E-05	7.21E-05
4/11/2012	0.3	450	5.56E-07	9.91E-07
5/9/2012	16	450	2.69E-05	4.80E-05
6/12/2012	47	450	7.92E-05	1.41E-04
7/10/2012	19	450	3.20E-05	5.70E-05
8/14/2012	41	450	6.91E-05	1.23E-04
9/16/2012	43	450	7.24E-05	1.29E-04
10/16/2012 <sup>5</sup>	27	450	4.55E-04	8.11E-04
11/14/2012 <sup>5</sup>	59	275	6.07E-04	1.08E-03
12/18/2012 <sup>5</sup>	21	275	2.16E-04	3.85E-04
1/16/2013	25	275	2.57E-04	4.59E-04
2/15/2013	4	275	4.53E-05	8.07E-05
3/13/2013	7	275	7.20E-05	1.28E-04
4/23/2013	7	275	7.10E-05	1.27E-04
5/14/2013	10	192	7.19E-05	1.28E-04
6/13/2013	40	223	3.34E-04	5.95E-04
7/15/2013	1	223	4.59E-06	8.18E-06
8/13/2013	1	222	4.57E-06	8.15E-06
9/10/2013	1	230	4.73E-07	8.44E-07
10/15/2013	17	230	1.46E-05	2.61E-05
11/6/2013	1	225	1.01E-06	1.80E-06
12/11/2013	32	241	2.89E-05	5.15E-05
1/16/2014	10	245	9.08E-06	1.62E-05
2/12/2014	2	184	1.52E-06	2.70E-06
3/10/2014	11	218	8.98E-06	1.60E-05
4/10/2014	9	236	7.51E-06	1.34E-05
5/13/2014	8	232	7.29E-06	1.30E-05
6/11/2014	1	235	1.23E-06	2.19E-06
7/16/2014	5	235	4.57E-06	8.15E-06
8/13/2014	3	235	2.20E-06	3.92E-06
9/17/2014	37	237	3.28E-05	5.85E-05
10/16/2014	15	230	1.29E-05	2.30E-05
11/12/2014	33	236	2.91E-05	5.20E-05
12/16/2014	14	231	1.21E-05	2.16E-05
1/22/2015	14	233	1.22E-05	2.18E-05
2/20/2015	4	238	3.92E-06	6.99E-06

**Average Emission Rate = 6.66E-05 lb/hr**

**NR 445 Emission Threshold = 56.1 lb/hr**

**Table 5**  
**Estimate of Post-Carbon Emissions of Trichloroethene**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

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Notes on Page 2.

**General Notes:**

<sup>1</sup> = VOC concentration was based on the detected analyte concentration in post-carbon effluent samples for dates shown. When compound was not detected above the laboratory reporting limit, emissions were calculated using 1/2 the reporting limit.

<sup>2</sup> = Emission rates were determined using the following equation:

$$\text{Emission Rate} = \text{Conc.} * \text{Flow Rate} * 60 \text{ min/hr} * (1 \text{ m}^3/35.31 \text{ ft}^3) * (1 \text{ lb}/4.54 \times 10^8 \text{ } \mu\text{g})$$

<sup>3</sup> = SVE system began operation on 3/9/2012.

<sup>4</sup> = Post-carbon emissions presented as a percentage of the threshold level using the following equation:

$$\text{Percent of Threshold} = (\text{Emission rate} / \text{NR 445 Emission Threshold}) * 100$$

<sup>5</sup> = System flow rate optimized 10/16/2012 by closing make-up air valve.

System flow variable due to freezing conditions at the influent lines starting 1/7/2013. System flow balanced by opening make-up air valve.

Interim system was shut down 4/29/2013. The permanent system was started 5/13/2013.

The initial permanent system sample was collected 5/14/2013 after system optimization.

**Acronyms and Abbreviations:**

lb/yr = Pounds per year.

lb/hr = Pounds per hour.

$\mu\text{g}/\text{m}^3$  = Micrograms per cubic meter.

VC = Vinyl Chloride.

**Table 6**  
**Estimate of Post-Carbon Emissions of Cis-1,2-Dichloroethene**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Date	Total cis-1,2-DCE Concentration <sup>1</sup>	System Flow Rate	Emission Rate <sup>2</sup>	Percent of NR 445 Emission Threshold <sup>3</sup>
	µg/m <sup>3</sup>	cfm	lb/hr	%
3/9/2012	0.14	450	--	--
3/10/2012	0.28	450	4.72E-07	2.84E-07
3/11/2012	0.28	450	4.72E-07	2.84E-07
3/16/2012	2.0	450	3.37E-06	2.03E-06
3/23/2012	57	450	9.60E-05	5.78E-05
3/30/2012	69	450	1.16E-04	7.00E-05
4/11/2012	75	450	1.26E-04	7.61E-05
5/9/2012	930	450	1.57E-03	9.44E-04
6/12/2012	720	450	1.21E-03	7.31E-04
7/10/2012	260	450	4.38E-04	2.64E-04
8/14/2012	460	450	7.75E-04	4.67E-04
9/16/2012	420	450	7.07E-04	4.26E-04
10/16/2012 <sup>4</sup>	170	450	2.86E-04	1.72E-04
11/14/2012 <sup>4</sup>	130	275	1.34E-04	8.06E-05
12/18/2012 <sup>4</sup>	130	275	1.34E-04	8.06E-05
1/16/2013	110	275	1.13E-04	6.82E-05
2/15/2013	90	275	9.26E-05	5.58E-05
3/13/2013	100	275	1.03E-04	6.20E-05
4/23/2013	240	275	2.47E-04	1.49E-04
5/14/2013	8	192	5.46E-06	3.29E-06
6/13/2013	24	223	2.00E-05	1.21E-05
7/15/2013	0.4	223	3.30E-07	1.99E-07
8/13/2013	0.4	222	3.28E-07	1.98E-07
9/10/2013	20	230	1.73E-05	1.04E-05
10/15/2013	434	230	3.74E-04	2.25E-04
11/6/2013	79	225	6.65E-05	4.01E-05
12/11/2013	58	241	5.23E-05	3.15E-05
1/16/2014	92	245	8.44E-05	5.08E-05
2/12/2014	3	184	1.72E-06	1.04E-06
3/10/2014	26	218	2.12E-05	1.28E-05
4/10/2014	13	236	1.15E-05	6.92E-06
5/13/2014	42	232	3.65E-05	2.20E-05
6/11/2014	180	235	1.58E-04	9.54E-05
7/16/2014	460	235	4.05E-04	2.44E-04
8/13/2014	1,100	235	9.68E-04	5.83E-04
9/17/2014	4,000	237	3.55E-03	2.14E-03
10/16/2014	580	230	4.99E-04	3.01E-04
11/12/2014	240	236	2.12E-04	1.28E-04
12/16/2014	310	231	2.68E-04	1.61E-04
1/22/2015	140	233	1.22E-04	7.35E-05
2/20/2015	210	238	1.87E-04	1.13E-04

**Average Emission Rate = 3.30E-04 lb/hr**

**NR 445 Emission Threshold = 166 lb/hr**

Notes on Page 2.

**Table 6**  
**Estimate of Post-Carbon Emissions of Cis-1,2-Dichloroethene**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

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**General Notes:**

<sup>1</sup> = VOC concentration was based on the detected analyte concentration in post-carbon effluent samples for dates shown. When compound was not detected above the laboratory reporting limit, emissions were calculated using 1/2 the reporting limit.

<sup>2</sup> = Emission rates were determined using the following equation:

$$\text{Emission Rate} = \text{Conc.} * \text{Flow Rate} * 60 \text{ min/hr} * (1 \text{ m}^3/35.31 \text{ ft}^3) * (1 \text{ lb}/4.54 \times 10^8 \text{ } \mu\text{g})$$

<sup>3</sup> = Post-carbon emissions presented as a percentage of the threshold level using the following equation:

$$\text{Percent of Threshold} = (\text{Emission rate} / \text{NR 445 Emission Threshold}) * 100$$

<sup>4</sup> = System flow rate optimized 10/16/2012 by closing make-up air valve.

System flow variable due to freezing conditions at the influent lines starting 1/7/2013. System flow balanced by opening make-up air valve.

Interim system was shut down 4/29/2013. The permanent system was started 5/13/2013.

The initial permanent system sample was collected 5/14/2013 after system optimization.

**Acronyms and Abbreviations:**

lb/yr = Pounds per year.

lb/hr = Pounds per hour.

$\mu\text{g}/\text{m}^3$  = Micrograms per cubic meter.

VC = Vinyl Chloride.

**Table 7**  
**Estimate of Post-Carbon Emissions of Vinyl Chloride**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

Date	Total VC Concentration <sup>1</sup>	System Flow Rate	Emission Rate <sup>2</sup>	Emission Rate <sup>2</sup>	Percent of NR 445 Emission Threshold <sup>4</sup>
	µg/m <sup>3</sup>	cfm	lb/hr	lb/yr	%
3/9/2012 <sup>3</sup>	0.19	450	--	--	--
3/10/2012	27	450	4.55E-05	0.398	0.05
3/11/2012	34	450	5.73E-05	0.502	0.06
3/16/2012	45	450	7.58E-05	0.664	0.08
3/23/2012	84	450	1.41E-04	1.239	0.15
3/30/2012	79	450	1.33E-04	1.166	0.14
4/11/2012	19	450	3.20E-05	0.280	0.03
5/9/2012	8	450	1.30E-05	0.114	0.01
6/12/2012	4	450	5.89E-06	0.052	0.01
7/10/2012	6	450	1.01E-05	0.089	0.01
8/14/2012	4	450	6.74E-06	0.059	0.01
9/16/2012	5	450	7.58E-06	0.066	0.01
10/16/2012 <sup>5</sup>	2	450	3.20E-06	0.028	0.00
11/14/2012 <sup>5</sup>	11	275	1.13E-05	0.099	0.01
12/18/2012 <sup>5</sup>	15	275	1.54E-05	0.135	0.02
1/16/2013	11	275	1.13E-05	0.099	0.01
2/15/2013	12	275	1.24E-05	0.108	0.01
3/13/2013	7	275	7.00E-06	0.061	0.01
4/23/2013	2	275	1.65E-06	0.014	0.00
5/14/2013	1	192	7.90E-07	0.007	0.00
6/13/2013	1	222	1.08E-06	0.009	0.00
7/15/2013	1	223	1.17E-06	0.010	0.00
8/13/2013	1	222	1.08E-06	0.009	0.00
9/10/2013	3	230	2.67E-06	0.023	0.00
10/15/2013	1	230	1.21E-06	0.011	0.00
11/6/2013	2	225	1.35E-06	0.012	0.00
12/11/2013	4	241	3.16E-06	0.028	0.00
1/16/2014	11	245	1.01E-05	0.088	0.01
2/12/2014	0	184	1.76E-07	0.002	0.00
3/10/2014	22	218	1.80E-05	0.157	0.02
4/10/2014	1	236	9.72E-07	0.009	0.00
5/13/2014	1	232	7.81E-07	0.007	0.00
6/11/2014	1	235	7.39E-07	0.006	0.00
7/16/2014	1	235	1.06E-06	0.009	0.00
8/13/2014	1	235	1.06E-06	0.009	0.00
9/17/2014	7	237	5.77E-06	0.051	0.01
10/16/2014	3	230	2.45E-06	0.021	0.00
11/12/2014	1	236	8.83E-07	0.008	0.00
12/16/2014	1	231	9.51E-07	0.008	0.00
1/22/2015	1	233	8.28E-07	0.007	0.00
2/20/2015	1	238	8.46E-07	0.007	0.00

**Average Emission Rate = -- 0.142 lb/yr**

**NR 445 Emission Threshold = -- 830 lb/yr**

Notes on Page 2.

**Table 7**  
**Estimate of Post-Carbon Emissions of Vinyl Chloride**

**Soil Vapor Extraction System Progress Report**  
**Madison-Kipp Corporation**  
**Madison, Wisconsin**

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**General Notes:**

<sup>1</sup> = VOC concentration was based on the detected analyte concentration in post-carbon effluent samples for dates shown. When compound was not detected above the laboratory reporting limit, emissions were calculated using 1/2 the reporting limit.

<sup>2</sup> = Emission rates were determined using the following equation:

$$\text{Emission Rate} = \text{Conc.} * \text{Flow Rate} * 60 \text{ min/hr} * (1 \text{ m}^3/35.31 \text{ ft}^3) * (1 \text{ lb}/4.54 \times 10^8 \text{ } \mu\text{g}) * 24 \text{ hr/day} * 365 \text{ days/yr}$$

<sup>3</sup> = SVE system began operation on 3/9/2012.

<sup>4</sup> = Post-carbon emissions presented as a percentage of the threshold level using the following equation:

$$\text{Percent of Threshold} = (\text{Emission rate} / \text{NR 445 Emission Threshold}) * 100$$

<sup>5</sup> = System flow rate optimized 10/16/2012 by closing make-up air valve.

System flow variable due to freezing conditions at the influent lines starting 1/7/2013. System flow balanced by opening make-up air valve.

Interim system was shut down 4/29/2013. The permanent system was started 5/13/2013.

The initial permanent system sample was collected 5/14/2013 after system optimization.

**Acronyms and Abbreviations:**

lb/yr = Pounds per year.

lb/hr = Pounds per hour.

$\mu\text{g}/\text{m}^3$  = Micrograms per cubic meter.

VC = Vinyl Chloride.