



665 McKinney Avenue
Midway, Kentucky 40347
859-846-4900
astenvironmental.com

October 22, 2014

Mr. Steve Fleming, P.E.
Safety Kleen
4120 Thunderbird Lane
Fairfield, OH 45014

RE: Summary Report for BOS 200® Injections at the Safety Kleen facility located at 60 Seabro Avenue in North Amityville, NY.

Dear Mr. Fleming,

AST Environmental, Inc. (AST) appreciates the opportunity to have provided the injection services at the above referenced site. This letter report provides a summary of the BOS 200® (BOS) injection activities conducted on September 30th through October 10th, 2014.

The scope was to perform BOS injections in four areas. The original design as proposed in the September 18, 2014 Injection Design Proposal is summarized below:

Area A

- Total Treatment Area: 410 ft²
- Number of Injection Points & Horizontal Spacing: 8 points on 7.5' centers
- Total Number of Injections and Vertical Spacing: 60 injections - 16'-30' vertical treatment zone
- BOS 200® Loadings & Total Amount per Area: 0.50 lbs. BOS 200®/ft³ or ~50 lbs. of BOS 200® per Injection (25 gallon shot volume) = 3,000 lbs. of BOS 200®
- Amount of Bacteria Concentrate: 6 gallons of bacteria concentrate

Area B

- Total Treatment Area: 1,915 ft²
- Number of Injection Points & Horizontal Spacing: 34 points on 7.5' centers
- Total Number of Injections and Vertical Spacing: 255 injections - 16'-30' vertical treatment zone
- BOS 200® Loadings & Total Amount (16'-24'): 0.50 lbs. BOS 200®/ft³ or ~50 lbs. of BOS 200® per Injection (25 gallon shot volume) = 7,650 lbs. of BOS 200®
- BOS 200® Loadings & Total Amount (25'-30'): 0.25 lbs. BOS 200®/ft³ or ~25 lbs. of BOS 200® per Injection (25 gallon shot volume) = 2,550 lbs. of BOS 200®
- Amount of Bacteria Concentrate: 21 gallons of bacteria concentrate

Area C

- Total Treatment Area: 655 ft²
- Number of Injection Points & Horizontal Spacing: 12 points on 7.5' centers
- Total Number of Injections and Vertical Spacing: 90 injections - 16'-30' vertical treatment zone

- BOS 200® Loadings & Total Amount per Area: 0.25 lbs. BOS 200®/ft³ or ~25 lbs. of BOS 200® per Injection (25 gallon shot volume) = 2,250 lbs. of BOS 200®
- Amount of Bacteria Concentrate: 5 gallons of bacteria concentrate

Area D

- Total Treatment Area: 3,295
- Number of Injection Points & Horizontal Spacing: 59 points on 7.5' centers
- Total Number of Injections and Vertical Spacing: 443 injections - 16'-30' vertical treatment zone
- BOS 200® Loadings & Total Amount per Area: 0.25 lbs. BOS 200®/ft³ or ~25 lbs. of BOS 200® per Injection (25 gallon shot volume) = 11,100 lbs. of BOS 200®
- Amount of Bacteria Concentrate: 23 gallons of bacteria concentrate

The details of the injections are provided in the attached Table 1. Photographs of the injection effort are included as Attachment A. AST took delivery of 14,600 lbs of BOS 200® upon arrival at the Safety Kleen site and 14,950 lbs of BOS 200® on October 2nd. The delivery receipts are provided as Photo 1 in Attachment A. The excess 3,000 lbs of BOS 200® were shipped back to AST's facility.

Summary of Field Activities:

On September 29th, 2014 AST personnel mobilized to the site and set up equipment for the injection effort to begin the next day. Figure 1 provides a layout of the injection points within the three injection areas and other pertinent features.

As detailed in Table 1, AST began injecting BOS on September 30th, 2014 in Area A. The BOS slurries (2 lbs of BOS 200®/gallon of prepared slurry) were prepared using AST's trailer mounted mixing and injection system. AST utilized a top down injection technique to ensure effective distribution within the subsurface during the injection efforts. Injection pressures were recorded as shown in Table 1. It is important to note that the injection pressures recorded in Table 1 represent injection system pressures. These values include all pressure losses due to fittings, hoses, valves, and injection tooling. A close approximation of the actual pressure seen at the injection tip outlet can be found by subtracting the system losses from the recorded value. For the components used during this injection event the system losses are approximately 60 psi. This calculation has been included in Table 1 under the column titled "Formation Pressure".

On September 30th, 2014 AST injected 2,155 pounds of BOS 200® into 6 points. Subsurface distribution was observed when groundwater rose in an injection well approximately 8 feet away from point A-4.

On October 1st and 2nd, 2014 AST injected 3,500 pounds of BOS 200® into 12 points and 2,075 pounds into 11 points respectively. Based on the site lithology, and the observed radius of influence during the first three days of injections, the injection slurry volume was increased from 25 gallons to 35 gallons. This increase in slurry volume helped achieve a more uniform distribution in the subsurface based on the observations made in the field. On October 3rd, 2,275 pounds of BOS 200® were injected into 12 points.

On October 4th, 2014 AST injected 2,230 pounds of BOS 200® into 12 points in area C, completing all injections around CB-3. On October 6th, 2014 it was deemed necessary to move the southernmost row of injection points due to the close proximity of overhead power and telecom lines. These points were shifted approximately 25 feet north, within the injection area. Points

within the immediate vicinity of two existing fuel oil tanks were also moved to allow for a factor of safety while injecting near these underground structures. The changes to these points are shown in Figure 1. On the 6th, 4,150 pounds of BOS 200® were injected into 13 points and area A was completed.

Over the next two days, AST injected 6,330 pounds of BOS 200® into 26 points. On October 9th, 2014 it was determined that the remaining points in area D would receive 20 pounds of BOS 200® per interval instead of the designed 25 pounds. This was done to account for the discrepancy in the way the points laid out on site and the way the points laid out on the design map. On October 10th, 2014 the final 880 pounds of BOS 200® were injected into the remaining 6 points in area D and the rest of the day was spent cleaning the site.

Table 1 summarizes a total of 111 injection points and 26,550 pounds of BOS injected. Once injections were completed and the tooling string was removed, each borehole was plugged with hydrated bentonite and covered with asphalt patch or concrete to match the existing surrounding surface.

Pre and Post-injection performance monitoring samples were collected from GT-1, GT-5, VE-1R and AST's temporary RDC wells. These samples were analyzed for mineral spirits, volatile organic compounds and anions. The wells within the injection areas had to be redeveloped prior to post-injection sampling to remove BOS 200® from the wells. Approximately 10-20 gallons groundwater was purged from each well. Immediately following the injection event, all temporary RDC wells were pulled and the holes were plugged with hydrated bentonite and covered with asphalt patch or concrete to match the existing surrounding surface.

If you have any questions or wish to discuss the information provided herein, please call me at (859) 608-1811 or email me at nthacker@astenv.com

Sincerely,
AST Environmental, Inc.

A handwritten signature in dark ink, appearing to read 'N. Thacker', with a stylized, flowing script.

Nathan Thacker
Project Manager

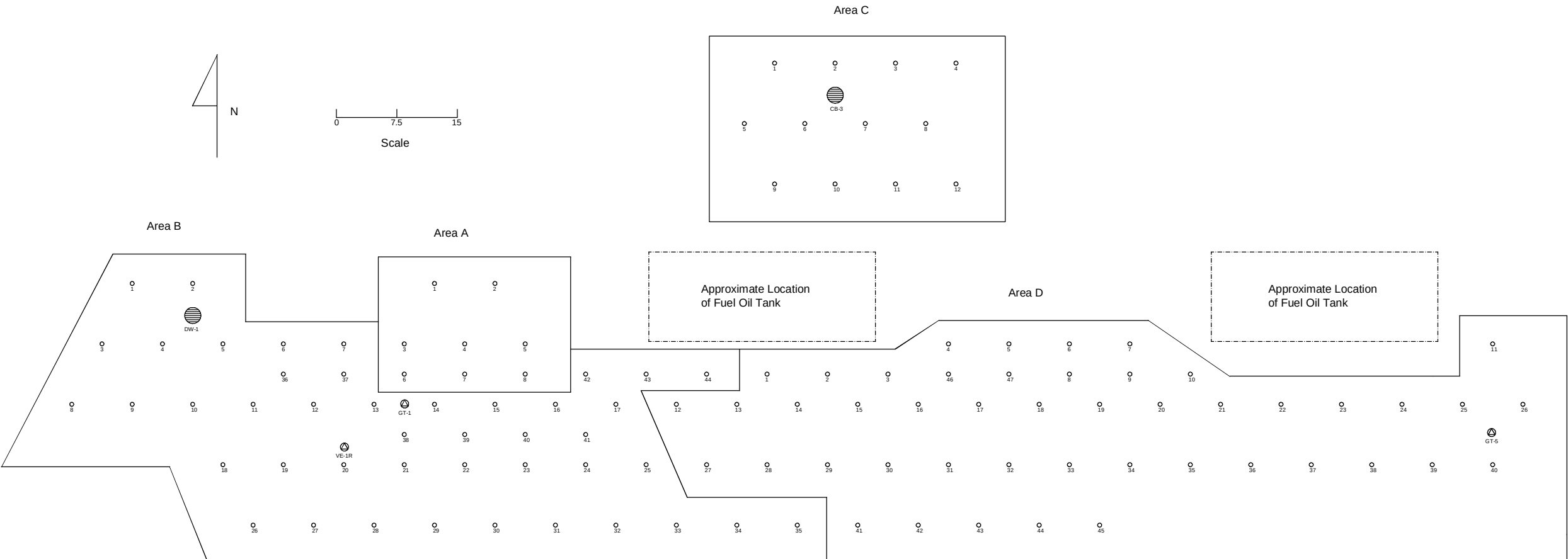


Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
09/30/14	A-1	10:07	300	240	50	17	
		10:09	800	740	50	19	
		10:12	420	360	50	21	
		10:28	340	280	50	23	
		10:33	320	260	50	25	Daylighting up rods
		10:36	320	260	50	27	
		10:38	280	220	50	29	
09/30/14	A-2	10:53	240	180	50	16	
		10:56	400	340	50	18	
		10:58	300	240	50	20	
		11:00	320	260	50	22	
		11:02	300	240	50	24	Daylighting up rods
		11:06	300	240	50	26	
		11:08	380	320	50	28	
		11:10	380	320	50	30	
09/30/14	A-3	11:26	420	360	50	17	Daylighting up rods
		11:33	460	400	50	19	Daylighting 3' SW
		11:35	300	240	50	21	
		11:37	460	400	50	23	
		11:39	400	340	50	25	
		11:40	800	740	30	27	Daylighting up rods
		11:43	700	640	50	29	Daylighting 3' SW
09/30/14	A-4	12:25	220	160	50	16	
		12:28	460	400	50	18	
		12:29	320	260	50	20	
		12:32	320	260	50	22	Daylighting up rods
		12:34	480	420	50	24	
		12:42	400	340	50	26	Daylighting out of injection well 8' NW
		12:44	440	380	50	28	
		12:46	800	740	50	30	Daylighting up rods
09/30/14	A-5	13:01	440	380	50	17	
		13:03	360	300	50	19	
		13:06	300	240	50	21	
		13:08	300	240	50	23	
		13:10	500	440	50	25	
		13:13	440	380	50	27	
		13:22	460	400	50	29	
09/30/14	B-22	13:32	620	560	50	16	
		13:34	520	460	50	18	
		13:36	420	360	50	20	
		13:38	380	320	50	22	
		13:40	600	540	50	24	
		13:42	280	220	25	26	
		13:45	560	500	25	28	
		13:49	620	560	25	30	
					2155.0	Total BOS 200 used 09/30/14 (lbs)	
10/01/14	B-21	07:46	300	240	50	17	
		07:49	440	380	50	19	
		07:51	440	380	50	21	
		07:53	420	360	50	23	
		07:56	580	520	25	25	
		07:59	800	740	25	27	
		08:02	320	260	25	29	
10/01/14	B-20	08:15	380	320	50	16	
		08:33	360	300	50	18	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		08:35	240	180	50	20	
		08:37	280	220	50	22	
		08:39	300	240	50	24	
		08:41	320	260	25	26	
		09:12	400	340	25	28	
		09:14	380	320	25	30	
10/01/14	B-15	09:30	380	320	50	17	
		09:32	540	480	50	19	
		09:35	500	440	50	21	Daylighting up rods
		09:37	420	360	50	23	Daylighting up rods
		09:40	460	400	25	25	
		09:43	480	420	25	27	
		09:45	420	360	25	29	
10/01/14	B-14	09:57	320	260	20	16	
		10:00	360	300	10	18	
		10:03	340	280	50	20	
		10:06	360	300	50	22	
		10:08	520	460	50	24	
		10:11	580	520	25	26	
		10:13	320	260	25	28	
		10:16	340	280	25	30	
10/01/14	B-13	10:31	360	300	50	17	
		10:33	460	400	50	19	
		10:54	360	300	50	21	
		10:57	320	260	50	23	
		10:59	260	200	25	25	
		11:02	300	240	25	27	
		11:04	260	200	25	29	
10/01/14	B-12	11:36	400	340	50	16	
		11:38	700	640	50	18	
		11:41	600	540	50	20	
		11:45	520	460	50	22	
		11:47	440	380	50	24	
		11:49	380	320	25	26	
		11:51	420	360	10	28	
		11:53	440	380	10	30	
10/01/14	B-11	12:47	540	480	50	17	
		12:50	520	460	50	19	
		12:52	640	580	50	21	
		12:54	760	700	50	23	
		12:57	700	640	25	25	
		12:59	600	540	25	27	
		13:01	800	740	25	29	
10/01/14	B-10	13:25	540	480	50	16	
		15:10	300	240	50	18	Daylighting up rods
		15:12	320	260	50	20	
		15:14	340	280	50	22	
		15:16	340	280	50	24	
		15:19	380	320	25	26	
		15:21	440	380	25	28	
		15:23	400	340	25	30	
10/01/14	B-9	14:23	440	380	50	17	
		14:25	420	360	50	19	
		14:28	760	700	50	21	
		14:30	680	620	50	23	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		14:32	380	320	25	25	
		14:49	300	240	25	27	
		14:51	280	220	25	29	
10/01/14	B-18	15:45	340	280	50	16	
		15:47	420	360	50	18	
		15:49	400	340	50	20	
		15:52	360	300	50	22	
		15:54	360	300	50	24	
		15:57	300	240	25	26	
		15:59	400	340	25	28	
		16:01	360	300	25	30	
10/01/14	B-19	16:24	800	740	50	17	
		16:26	320	260	50	19	
		16:28	380	320	50	21	
		16:29	380	320	50	23	
		16:32	300	240	25	25	
		16:35	280	220	25	27	
		16:37	280	220	25	29	
10/01/14	B-8	16:54	320	260	50	16	
		16:56	400	340	50	18	
		16:58	300	240	50	20	
		17:00	380	320	50	22	
		17:02	360	300	50	24	
		17:05	360	300	25	26	
		17:07	360	300	25	28	
		17:09	380	320	25	30	
					3500.0	Total BOS 200 used 10/01/14 (lbs)	
10/02/14	D-40	10:03	260	200	25	16	
		10:06	280	220	25	18	
		10:17	600	540	25	20	
		10:20	580	520	25	22	
		10:22	800	740	25	24	
		10:24	760	700	25	26	
		10:45	380	320	25	28	
		10:47	440	380	25	30	
10/02/14	D-39	11:01	280	220	25	17	
		11:03	280	220	25	19	
		11:06	640	580	25	21	
		11:08	460	400	25	23	
		11:10	420	360	25	25	
		11:13	460	400	25	27	
		11:16	640	580	25	29	
10/02/14	D-38	11:40	280	220	25	16	
		11:42	540	480	25	18	
		11:44	440	380	25	20	
		11:46	460	400	25	22	
		11:48	440	380	25	24	
		11:50	520	460	25	26	
		11:52	400	340	25	28	
		11:54	480	420	25	30	
10/02/14	D-37	12:37	340	280	25	17	
		12:39	560	500	25	19	
		12:42	540	480	25	21	
		12:43	620	560	25	23	
		12:45	540	480	25	25	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		12:48	400	340	25	27	
		12:50	540	480	25	29	
10/02/14	D-36	13:12	260	200	25	16	
		13:14	280	220	25	18	
		13:16	300	240	25	20	
		13:18	380	320	25	22	
		13:20	520	460	25	24	
		13:22	540	480	25	26	
		13:24	620	560	25	28	
		13:26	640	580	25	30	
10/02/14	D-23	13:45	420	360	25	17	
		13:47	720	660	25	19	
		14:07	420	360	25	21	
		14:09	440	380	25	23	
		14:12	600	540	25	25	
		14:46	800	740	25	27	
		14:49	800	740	25	29	
10/02/14	D-24	15:11	260	200	25	16	
		15:13	380	320	25	18	
		15:15	700	640	25	20	
		15:17	560	500	25	22	
		15:19	560	500	25	24	
		15:21	580	520	25	26	
		15:26	680	620	25	28	
		15:28	760	700	25	30	
10/02/14	D-25	15:41	380	320	25	17	
		15:43	440	380	25	19	
		15:49	800	740	25	21	
		15:51	420	360	25	23	
		15:53	640	580	25	25	Daylighting out of D-39
		15:56	580	520	25	27	
		15:58	540	480	25	29	
10/02/14	D-26	16:14	200	140	25	16	
		16:16	360	300	25	18	
		16:18	520	460	25	20	
		16:20	520	460	25	22	
		16:23	640	580	25	24	
		16:25	680	620	25	26	
		16:27	620	560	25	28	
		16:29	760	700	25	30	
10/02/14	D-11	16:47	340	280	25	17	
		16:49	420	360	25	19	
		16:51	640	580	25	21	
		16:55	800	740	25	23	
		16:57	780	720	25	25	
		17:00	640	580	25	27	Daylighting out of D-25
		17:08	600	540	25	29	Daylighting out of D-25
10/02/14	D-4	17:29	280	220	25	16	
		17:31	360	300	25	18	Daylighting up rods
		17:41	760	700	25	20	
		17:43	700	640	25	22	
		17:45	680	620	25	24	
		17:48	760	700	25	26	
		17:50	540	480	25	28	
		17:52	580	520	25	30	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
					2075.0	Total BOS 200 used 10/02/14 (lbs)	
10/03/14	D-12	09:47	420	360	25	16	
		09:49	380	320	25	18	
		09:51	600	540	25	20	
		09:53	460	400	25	22	
		09:56	540	480	25	24	
		09:58	400	340	25	26	
		10:00	520	460	25	28	
		10:04	800	740	25	30	
10/03/14	D-13	10:18	280	220	25	17	
		10:20	480	420	25	19	
		10:23	440	380	25	21	
		10:26	560	500	25	23	
		10:28	640	580	25	25	
		10:31	660	600	25	27	
		10:34	560	500	25	29	
10/03/14	D-14	10:48	400	340	25	16	
		10:50	500	440	25	18	
		10:53	700	640	25	20	
		10:56	460	400	25	22	
		10:58	600	540	25	24	
		11:00	540	480	25	26	
		11:03	700	640	25	28	
		11:06	600	540	25	30	
10/03/14	D-15	11:22	540	480	25	17	
		11:25	440	380	25	19	
		11:27	540	480	25	21	
		11:30	600	540	25	23	
		11:33	600	540	25	25	
		11:36	700	640	25	27	
		11:38	800	740	25	29	
10/03/14	D-16	11:52	600	540	25	16	
		11:55	540	480	25	18	
		11:57	540	480	25	20	
		12:00	600	540	25	22	
		12:02	480	420	25	24	
		12:04	460	400	25	26	
		12:07	440	380	25	28	
		12:10	480	420	25	30	
10/03/14	D-17	12:58	400	340	25	17	
		13:01	520	460	25	19	
		13:04	580	520	25	21	
		13:06	400	340	25	23	
		13:08	460	400	25	25	
		13:12	520	460	25	27	
		13:14	460	400	25	29	
10/03/14	D-18	13:32	440	380	25	16	
		13:35	440	380	25	18	
		13:37	360	300	25	20	
		13:40	420	360	25	22	
		13:42	480	420	25	24	
		13:44	400	340	25	26	
		13:47	580	520	25	28	
		13:50	620	560	25	30	
10/03/14	D-19	14:14	800	740	25	17	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		14:16	320	260	25	19	
		14:20	480	420	25	21	
		14:23	460	400	25	23	
		14:25	320	260	25	25	
		14:27	340	280	25	27	
		14:30	360	300	25	29	
10/03/14	D-20	14:48	380	320	25	16	
		14:51	380	320	25	18	
		14:54	420	360	25	20	
		14:57	380	320	25	22	
		14:59	380	320	25	24	
		15:03	440	380	25	26	
		15:05	420	360	25	28	
		15:09	460	400	25	30	
10/03/14	D-8	15:36	400	340	25	16	
		15:40	800	740	25	18	
		15:43	420	360	25	20	
		15:47	680	620	25	22	
		15:50	340	280	25	24	
		15:53	380	320	25	26	
		15:56	400	340	25	28	
		15:59	480	420	25	30	
10/03/14	D-7	16:15	400	340	25	17	
		16:18	300	240	25	19	
		16:22	300	240	25	21	
		16:24	300	240	25	23	
		16:28	360	300	25	25	
		16:30	380	320	25	27	
		16:34	320	260	25	29	
10/03/14	D-6	16:51	320	260	25	16	
		16:56	800	740	25	18	
		16:59	320	260	25	20	
		17:01	320	260	25	22	
		17:04	350	290	25	24	
		17:07	380	320	25	26	
		17:11	380	320	25	28	
		17:15	300	240	25	30	
					2275.0	Total BOS 200 used 10/03/14 (lbs)	
10/04/14	C-4	06:34	300	240	25	16	
		06:37	270	210	25	18	
		06:40	320	260	25	20	
		06:43	300	240	25	22	
		06:46	380	320	25	24	
		06:48	340	280	25	26	
		06:51	300	240	25	28	
		06:54	380	320	25	30	
10/04/14	C-3	07:11	200	140	25	17	
		07:15	460	400	25	19	
		07:18	300	240	25	21	
		07:21	500	440	25	23	
		07:24	620	560	25	25	
		07:26	320	260	25	27	
		07:29	300	240	25	29	
10/04/14	C-2	07:44	400	340	25	16	
		07:47	420	360	25	18	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		07:50	420	360	25	20	
		07:52	320	260	25	22	
		07:55	250	190	25	24	
		07:58	280	220	25	26	
		08:00	260	200	25	28	
		08:03	240	180	25	30	
10/04/14	C-1	08:16	240	180	25	17	
		08:19	260	200	25	19	
		08:22	440	380	25	21	
		08:25	300	240	25	23	
		08:27	210	150	25	25	
		08:30	300	240	25	27	
		08:33	260	200	25	29	
10/04/14	C-8	08:58	820	760	25	16	
		09:03	800	740	25	18	
		09:07	780	720	25	20	
		09:11	760	700	25	22	
		09:14	760	700	25	24	
		09:18	680	620	25	26	
		09:20	580	520	25	28	
		09:22	620	560	25	30	
10/04/14	C-7	09:36	300	240	25	17	
		09:38	300	240	25	19	Daylighting up rods
		09:41	300	240	25	21	
		09:44	260	200	25	23	Daylighting up rods
		09:47	290	230	25	25	
		09:49	820	760	15	27	Daylighting up rods
		09:52	360	300	25	29	
10/04/14	C-6	10:06	520	460	25	16	
		10:08	540	480	25	18	
		10:10	280	220	25	20	
		10:13	280	220	25	22	
		10:15	300	240	25	24	
		10:18	420	360	25	26	
		10:21	400	340	25	28	
		10:24	300	240	25	30	
10/04/14	C-5	10:37	380	320	25	17	
		10:39	300	240	25	19	
		10:42	380	320	25	21	
		10:44	400	340	25	23	
		10:47	580	520	25	25	
		10:50	380	320	25	27	
		10:52	380	320	25	29	
10/04/14	C-12	11:09	700	640	25	16	
		11:15	800	740	25	18	
		11:17	500	440	25	20	
		11:21	520	460	25	22	Daylighting 2' N
		11:22	460	400	25	24	
		11:26	400	340	25	26	
		11:28	400	340	25	28	
		11:31	400	340	25	30	
10/04/14	C-11	11:44	350	290	15	17	Daylighting up rods
		11:47	380	320	25	19	Daylighting up rods
		11:49	400	340	25	21	
		11:51	380	320	25	23	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		11:54	320	260	25	25	
		11:57	300	240	25	27	
		11:59	360	300	25	29	
10/04/14	C-10	12:13	560	500	25	16	
		12:16	400	340	25	18	
		12:18	400	340	25	20	
		12:21	380	320	25	22	
		12:24	760	700	25	24	
		12:27	460	400	25	26	
		12:30	500	440	25	28	
		12:33	400	340	25	30	
10/04/14	C-9	12:49	800	740	25	17	
		12:53	360	300	25	19	
		12:55	480	420	25	21	
		12:58	400	340	25	23	
		13:01	420	360	25	25	
		13:02	460	400	25	27	
		13:07	440	380	25	29	
					2230.0	Total BOS 200 used 10/04/14 (lbs)	
10/06/14	B-40	09:38	220	160	50	16	
		09:40	800	740	50	18	
		09:43	700	640	50	20	
		09:46	660	600	50	22	
		09:48	660	600	50	24	
		09:51	640	580	25	26	
		09:54	540	480	25	28	
		09:56	520	460	25	30	
10/06/14	B-39	10:09	300	240	50	17	
		10:12	760	700	50	19	
		10:15	800	740	50	21	
		10:17	460	400	50	23	
		10:22	680	620	25	25	
		10:24	560	500	25	27	
		10:27	600	540	25	29	
10/06/14	B-38	10:41	800	740	50	16	
		10:43	800	740	50	18	Daylighting out of injection well 3' W
		10:46	620	560	25	20	Daylighting out of injection well 3' W
		10:48	480	420	25	22	Daylighting out of injection well 3' W
		10:50	460	400	25	24	Daylighting out of injection well 3' W
		10:53	600	540	50	26	
		10:55	520	460	50	28	
		10:58	460	400	50	30	
10/06/14	B-37	11:16	380	320	50	17	
		11:18	600	540	50	19	
		11:21	420	360	50	21	Daylighting 2' S
		11:23	460	400	50	23	Daylighting 2' S
		11:26	480	420	25	25	Daylighting 2' S
		11:28	420	360	25	27	Daylighting 2' S
		11:30	400	340	25	29	Daylighting 2' S
10/06/14	B-6	11:46	800	740	50	16	
		11:49	460	400	50	18	
		11:51	440	380	50	20	
		11:54	440	380	50	22	
		11:57	800	740	50	24	
		12:00	380	320	25	26	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		12:03	360	300	25	28	
		12:05	440	380	25	30	
10/06/14	B-5	12:30	240	180	50	17	
		12:32	260	200	50	19	
		12:35	280	220	50	21	
		13:12	400	340	50	23	
		13:15	320	260	25	25	
		13:18	320	260	25	27	
		13:20	400	340	25	29	
10/06/14	A-8	13:37	380	320	50	16	
		13:40	760	700	50	18	
		13:44	800	740	50	20	
		13:47	560	500	50	22	
		13:50	560	500	50	24	
		13:53	500	440	50	26	
		13:55	600	540	50	28	
		13:58	460	400	50	30	
10/06/14	A-7	14:12	400	340	50	17	
		14:15	580	520	50	19	
		14:18	460	400	50	21	
		14:20	480	420	50	23	
		14:23	380	320	50	25	
		14:26	380	320	50	27	
		14:28	320	260	50	29	
10/06/14	A-6	14:43	300	240	50	16	
		14:45	360	300	50	18	
		14:49	360	300	50	20	
		14:51	360	300	50	22	
		14:54	380	320	50	24	
		14:57	320	260	50	26	Daylighting up rods
		15:00	320	260	50	28	Daylighting up rods
		15:02	240	180	50	30	
10/06/14	B-2	15:22	800	740	50	16	
		15:25	300	240	50	18	
		15:28	300	240	50	20	
		15:31	300	240	50	22	
		15:34	320	260	50	24	
		15:37	320	260	25	26	
		15:39	300	240	25	28	
		15:42	660	600	25	30	
10/06/14	B-1	15:57	800	740	50	17	
		16:00	260	200	50	19	
		16:04	400	340	50	21	
		16:07	380	320	50	23	
		16:11	320	260	25	25	
		16:13	240	180	25	27	
		16:16	240	180	25	29	
10/06/14	B-3	16:29	800	740	50	17	
		16:32	320	260	50	19	
		16:36	420	360	50	21	
		16:39	300	240	50	23	
		16:43	260	200	25	25	
		16:47	800	740	25	27	
		16:51	260	200	25	29	
10/06/14	B-4	17:08	180	120	50	16	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		17:11	280	220	50	18	
		17:14	360	300	50	20	
		17:17	300	240	50	22	
		17:19	300	240	50	24	
		17:22	280	220	25	26	
		17:24	360	300	25	28	
		17:27	240	180	25	30	
					4150.0	Total BOS 200 used 10/06/14 (lbs)	
10/07/14	D-35	09:44	340	280	25	17	
		09:46	800	740	25	19	
		09:49	700	640	25	21	
		09:51	520	460	25	23	
		09:53	500	440	25	25	
		09:56	740	680	25	27	
		09:58	580	520	25	29	
10/07/14	D-34	10:15	520	460	25	16	
		10:17	580	520	25	18	
		10:20	800	740	25	20	
		10:23	460	400	25	22	
		10:25	560	500	25	24	
		10:28	440	380	25	26	
		10:30	520	460	25	28	
		10:32	540	480	25	30	
10/07/14	D-33	10:47	800	740	25	17	
		11:01	220	160	25	19	
		11:04	440	380	25	21	
		11:06	360	300	25	23	
		11:08	300	240	25	25	
		11:11	460	400	25	27	
		11:14	460	400	25	29	
10/07/14	D-32	11:27	320	260	25	16	
		11:29	380	320	25	18	
		11:31	420	360	25	20	
		11:34	380	320	25	22	
		11:36	400	340	25	24	
		11:42	560	500	25	26	
		11:44	480	420	25	28	
		11:46	440	380	25	30	
10/07/14	D-31	12:29	440	380	25	17	
		12:32	380	320	25	19	
		12:35	760	700	25	21	
		12:38	440	380	25	23	
		12:40	380	320	25	25	
		12:42	440	380	25	27	
		12:44	720	660	25	29	
10/07/14	D-30	12:55	480	420	25	16	
		12:59	800	740	25	18	
		13:01	460	400	25	20	
		13:03	700	640	25	22	
		13:05	520	460	25	24	
		13:07	760	700	25	26	
		13:11	800	740	25	28	
		13:13	640	580	25	30	
10/07/14	D-29	13:27	720	660	25	17	
		13:30	760	700	25	19	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		13:32	600	540	25	21	
		13:35	620	560	25	23	
		13:37	660	600	25	25	Daylighting up rods
		13:39	520	460	25	27	
		13:42	420	360	25	29	Daylighting up rods
10/07/14	D-28	13:53	400	340	25	16	
		13:56	740	680	25	18	
		13:58	740	680	25	20	
		14:01	740	680	25	22	
		14:03	600	540	25	24	
		14:06	560	500	25	26	
		14:08	560	500	25	28	
		14:10	560	500	25	30	
10/07/14	D-27	14:23	340	280	25	17	Daylighting up rods
		14:26	540	480	25	19	
		14:28	660	600	25	21	
		14:30	500	440	25	23	
		14:33	400	340	25	25	
		14:35	540	480	25	27	
		14:38	400	340	25	29	
10/07/14	B-44	14:50	280	220	50	16	
		14:53	700	640	50	18	
		14:55	500	440	50	20	
		14:57	540	480	50	22	
		15:00	440	380	50	24	
		15:03	460	400	25	26	
		15:05	440	380	25	28	
		15:08	480	420	25	30	
10/07/14	D-2	15:22	400	340	25	16	
		15:25	380	320	25	18	
		15:27	340	280	25	20	
		15:29	560	500	25	22	
		15:31	380	320	25	24	Daylighting up rods
		15:34	380	320	25	26	
		15:36	400	340	25	28	
		15:39	420	360	25	30	
10/07/14	D-46	15:54	260	200	25	16	
		15:56	420	360	25	18	
		15:59	420	360	25	20	Daylighting up rods
		16:03	460	400	25	22	
		16:06	360	300	25	24	
		16:11	800	740	25	26	
		16:14	380	320	25	28	Daylighting up rods
		16:17	800	740	25	30	Daylighting up rods
10/07/14	D-47	16:41	220	160	25	17	
		16:44	800	740	25	19	Daylighting up rods
		16:47	420	360	25	21	
		16:50	520	460	25	23	
		16:53	520	460	25	25	
		16:56	440	380	25	27	
		16:58	400	340	25	29	
					2575.0	Total BOS 200 used 10/07/14 (lbs)	
10/08/14	B-7	07:34	260	200	50	17	
		07:37	760	700	28	19	
		07:41	440	380	50	21	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		07:43	700	640	20	23	
		07:45	420	360	20	25	
		07:47	440	380	50	27	
		07:50	680	620	50	29	
10/08/14	B-36	08:22	800	740	50	16	
		08:25	440	380	50	18	
		08:28	460	400	28	20	Daylighting out of RDC-9
		08:30	480	420	28	22	Daylighting out of RDC-9
		08:32	460	400	14	24	Daylighting out of RDC-9
		08:35	840	780	14	26	Daylighting out of RDC-9
		08:36	600	540	14	28	Daylighting out of RDC-9
		08:39	380	320	14	30	Daylighting out of RDC-9
10/08/14	B-26	09:02	360	300	50	16	
		09:05	660	600	50	18	
		09:07	600	540	50	20	
		09:10	520	460	50	22	
		09:13	580	520	50	24	
		09:15	480	420	25	26	
		09:18	540	480	25	28	
		09:20	540	480	25	30	
10/08/14	B-27	09:38	260	200	50	17	
		09:40	520	460	50	19	
		09:43	620	560	50	21	
		09:45	540	480	50	23	
		09:48	500	440	25	25	
		09:50	500	440	25	27	
		09:52	500	440	25	29	
10/08/14	B-28	10:09	240	180	50	16	
		10:11	560	500	50	18	
		10:14	580	520	50	20	Daylighting up rods
		10:17	640	580	50	22	
		10:19	440	380	50	24	
		10:22	620	560	25	26	
		10:25	540	480	25	28	
		10:27	440	380	25	30	
10/08/14	B-29	10:55	220	160	50	17	
		10:57	560	500	50	19	
		11:01	460	400	50	21	
		11:03	560	500	50	23	
		11:06	580	520	25	25	
		11:09	480	420	25	27	
		11:11	560	500	25	29	
10/08/14	B-30	11:35	260	200	50	16	
		11:37	620	560	50	18	
		11:40	580	520	50	20	
		11:42	480	420	50	22	
		11:44	420	360	50	24	
		11:47	440	380	25	26	Daylighting up rods
		11:49	580	520	25	28	
		11:52	620	560	25	30	
10/08/14	B-31	12:52	340	280	50	17	
		12:54	480	420	50	19	Daylighting up rods
		12:56	520	460	50	21	
		13:00	740	680	50	23	
		13:03	400	340	25	25	Daylighting up rods

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		13:07	800	740	25	27	
		13:10	480	420	25	29	
10/08/14	B-32	13:31	280	220	50	16	
		13:36	440	380	50	18	
		13:38	440	380	50	20	
		13:40	640	580	50	22	
		13:42	460	400	50	24	Daylighting up rods
		13:45	460	400	25	26	
		13:48	440	380	25	28	
		13:50	480	420	25	30	
10/08/14	B-33	14:14	300	240	50	17	
		14:17	760	700	50	19	
		14:20	540	480	50	21	
		14:23	760	700	50	23	
		14:27	800	740	25	25	
		14:31	440	380	25	27	
		14:44	400	340	25	29	
10/08/14	B-34	14:58	400	340	50	16	
		15:01	700	640	50	18	
		15:04	720	660	50	20	
		15:08	600	540	50	22	
		15:11	540	480	50	24	
		15:14	440	380	25	26	
		15:25	800	740	25	28	
		15:29	800	740	25	30	
10/08/14	B-35	15:57	500	440	50	17	
		16:00	800	740	50	19	
		16:03	620	560	50	21	
		16:07	800	740	50	23	
		16:10	760	700	25	25	
		16:14	740	680	25	27	
		16:16	560	500	25	29	
10/08/14	B-23	16:50	800	740	50	17	
		16:53	460	400	50	19	Daylighting up rods
		16:57	600	540	50	21	
		17:00	520	460	50	23	
		17:02	500	440	25	25	
		17:06	720	660	25	27	
		17:09	760	700	25	29	
					3755.0	Total BOS 200 used 10/08/14 (lbs)	
10/09/14	B-41	07:41	440	380	50	17	
		07:44	540	480	50	19	
		07:47	620	560	50	21	
		07:49	720	660	50	23	
		07:52	440	380	25	25	
		07:55	620	560	25	27	
		07:57	440	380	25	29	
10/09/14	B-16	08:14	480	420	50	16	
		08:16	580	520	50	18	
		08:19	620	560	50	20	
		08:22	720	660	50	22	
		08:24	540	480	50	24	
		08:27	520	460	25	26	
		08:30	420	360	25	28	
		08:32	440	380	25	30	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
10/09/14	B-42	08:49	380	320	50	16	
		08:51	480	420	50	18	
		08:54	800	740	50	20	Daylighting up rods
		08:58	800	740	50	22	
		09:27	280	220	50	24	
		09:29	400	340	25	26	
		09:32	680	620	25	28	
		09:35	580	520	25	30	
10/09/14	B-24	09:50	260	200	50	16	
		09:52	500	440	50	18	
		09:54	640	580	50	20	Daylighting up rods
		09:56	540	480	50	22	
		09:59	680	620	50	24	
		10:01	700	640	25	26	
		10:04	540	480	25	28	
		10:06	580	520	25	30	
10/09/14	B-17	10:24	620	560	50	17	
		10:26	620	560	50	19	
		10:28	660	600	50	21	
		10:31	800	740	50	23	Daylighting up rods
		10:33	600	540	25	25	
		10:36	700	640	25	27	
		10:39	640	580	25	29	
10/09/14	B-43	11:02	500	440	50	17	
		11:05	500	440	50	19	
		11:08	540	480	50	21	
		11:10	600	540	50	23	
		11:14	620	560	25	25	
		11:17	560	500	25	27	
		11:20	740	680	25	29	
10/09/14	B-25	11:41	540	480	50	17	
		11:43	760	700	50	19	
		11:46	720	660	50	21	
		11:49	720	660	50	23	
		11:51	600	540	25	25	
		11:59	420	360	25	27	
		12:02	580	520	25	29	
10/09/14	D-44	13:02	520	460	20	16	
		13:05	580	520	20	18	
		13:08	740	680	20	20	
		13:10	800	740	20	22	
		13:12	560	500	20	24	
		13:15	560	500	20	26	
		13:18	660	600	20	28	
		13:20	600	540	20	30	
10/09/14	D-43	13:38	520	460	20	17	Daylighting up rods
		13:40	640	580	20	19	
		13:43	640	580	20	21	
		13:46	640	580	20	23	
		13:49	620	560	20	25	
		13:51	600	540	20	27	
		13:54	460	400	20	29	
10/09/14	D-42	14:30	520	460	20	16	
		14:34	480	420	20	18	
		14:37	440	380	20	20	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		14:40	520	460	20	22	
		14:43	380	320	20	24	
		14:46	560	500	20	26	
		14:51	740	680	20	28	
		14:54	800	740	20	30	
10/09/14	D-41	15:16	320	260	20	17	
		15:18	520	460	20	19	
		15:22	360	300	20	21	
		15:24	520	460	20	23	
		15:27	420	360	20	25	Daylighting 12' SW
		15:30	460	400	20	27	Daylighting 12' SW
		15:32	460	400	20	29	Daylighting 12' SW
10/09/14	D-45	16:05	640	580	20	17	
		16:08	500	440	20	19	
		16:12	600	540	20	21	
		16:14	480	420	20	23	
		16:17	620	560	20	25	
		16:21	660	600	20	27	
		16:24	560	500	20	29	
10/09/14	D-1	16:48	560	500	20	17	
		16:51	460	400	20	19	
		16:55	500	440	20	21	
		16:58	440	380	20	23	
		17:00	500	440	20	25	
		17:03	460	400	20	27	
		17:12	560	500	20	29	
					2955.0	Total BOS 200 used 10/09/14 (lbs)	
10/10/14	D-21	07:38	540	480	20	17	
		07:43	360	300	20	19	Daylighting up rods
		07:47	480	420	20	21	
		07:50	420	360	20	23	
		07:53	480	420	20	25	
		07:56	440	380	20	27	
		07:59	740	680	20	29	
10/10/14	D-10	08:21	380	320	20	16	
		08:24	420	360	20	18	
		08:27	420	360	20	20	
		08:31	540	480	20	22	
		08:34	540	480	20	24	
		08:38	780	720	20	26	
		08:41	800	740	20	28	
		08:44	520	460	20	30	
10/10/14	D-9	09:13	380	320	20	17	
		09:18	420	360	20	19	
		09:23	420	360	20	21	
		09:26	260	200	20	23	
		09:29	440	380	20	25	
		09:32	240	180	20	27	
		09:36	360	300	20	29	
10/10/14	D-5	10:02	540	480	20	17	
		10:05	760	700	20	19	
		10:08	560	500	20	21	
		10:13	380	320	20	23	
		10:17	460	400	20	25	
		10:20	720	660	20	27	

Table 1 - BOS 200 Injection Details - Safety Kleen - North Amityville, NY

Date	Injection Point ID	Time	PSIG	Formation Pressure	lbs of BOS 200 Injected	Depth Interval (ft bgs)	Notes
		10:23	460	400	20	29	
10/10/14	D-3	10:53	320	260	20	17	
		10:56	420	360	20	19	
		11:01	460	400	20	21	
		11:04	380	320	20	23	
		11:06	360	300	20	25	
		11:10	340	280	20	27	
		11:14	800	740	20	29	
10/10/14	D-22	11:37	340	280	20	16	
		11:39	380	320	20	18	
		11:42	380	320	20	20	
		11:46	380	320	20	22	
		11:48	400	340	20	24	
		11:51	400	340	20	26	
		11:55	800	740	20	28	
		11:58	420	360	20	30	
					880.0	Total BOS 200 used 10/10/14 (lbs)	
					26550.0	Total BOS 200 Injected	

Attachment A – Photographic Documentation

R/L CARRIERS		FREIGHT BILL NO. I555074118		DATE 09/26/14	PAGE 1/2
COPY NO. 1 BY ML6		REMIT TO: P.O. BOX 271 WILMINGTON, OH 45177-0271	B173-105	R/L CARRIERS 800-543-5589 R/L GLOBAL 888-706-3589 R/L TRUCKLOAD 877-510-9133 One Call-One Carrier • RLCarriers.com	
SERVICES BELOW MAY REQUIRE ADDITIONAL CHARGES: ☒ CHECK BOX & INITIAL		ORIGINATING TERMINAL	DESTINATION TERMINAL	LOADED ON	FREIGHT TERMS
☐ LIFTGATE ☐ INSIDE DELIVERY ☐ LIMITED ACCESS (RESIDENTIAL) ☐ SORT/SEGREGATE ☐ DETENTION (TIME IN TIME OUT)		SCR/AREA 145	LIS/AREA 49R	LIS 985290	PREPAID
B/L NO. 80571850		PICK-UP LE0287			
BILL TO	SHIPPER	CONSIGNEE			
CALG01	CALG21	570 546-3148			
CALGON CARBON CORP/LANDS	CALGON CARBON CORPORATION	AST ENVIRONMENTAL			
PO BOX 17701	214 RAILROAD STREET	60 SEABRO AVE			
JACKSONVILLE FL 32245	MUNCY PA 17756	AMITYVILLE NY 11701			
NO. PIECES	PRO. TYPE	DESCRIPTION OF ARTICLES	WEIGHT / LB	RATE	PREPAID
8		==> GUARANTEED AM SERVICE <== DATE: / / TIME: : ACTIVATED CARBON FUEL SURCHARGE 21.80% GUARANTEE DELIVERY BEFORE NOON SALES ORDER # 10412821 CUSTOMER NUMBER 8026947 BOL READS... C/O SAFETY KLEEN	14600		
CHARGES					Collect This Amount
R/L TRANSFER, INC. • GATOR FREIGHTWAYS, INC. • GREENWOOD MOTOR LINES, INC. • PARAMOUNT TRANSPORTATION SYSTEMS, INC. R/L CARRIERS CUSTOMER COPY					

R/L CARRIERS		FREIGHT BILL NO. I555074154		DATE 09/30/14	PAGE 1/2
COPY NO. 1 BY ML6		REMIT TO: P.O. BOX 271 WILMINGTON, OH 45177-0271	B173-221	R/L CARRIERS 800-543-5589 R/L GLOBAL 888-706-3589 R/L TRUCKLOAD 877-510-9133 One Call-One Carrier • RLCarriers.com	
SERVICES BELOW MAY REQUIRE ADDITIONAL CHARGES: ☒ CHECK BOX & INITIAL		ORIGINATING TERMINAL	DESTINATION TERMINAL	LOADED ON	FREIGHT TERMS
☐ LIFTGATE ☐ INSIDE DELIVERY ☐ LIMITED ACCESS (RESIDENTIAL) ☐ SORT/SEGREGATE ☐ DETENTION (TIME IN TIME OUT)		SCR/AREA 145	LIS/AREA 49R	LIS 348DPT	PREPAID
B/L NO. 80572152		PICK-UP LE0287			
BILL TO	SHIPPER	CONSIGNEE			
CALG01	CALG21	570 546-3148			
CALGON CARBON CORP/LANDS	CALGON CARBON CORPORATION	AST ENVIRONMENTAL			
PO BOX 17701	214 RAILROAD STREET	60 SEABRO AVE			
JACKSONVILLE FL 32245	MUNCY PA 17756	AMITYVILLE NY 11701			
NO. PIECES	PRO. TYPE	DESCRIPTION OF ARTICLES	WEIGHT / LB	RATE	PREPAID
8		ACTIVATED CARBON FUEL SURCHARGE 21.80% HAZARDOUS MATERIAL CHARGE CUSTOMER NUMBER 8026947 P O # RPI AST SFTY KLN AMT SALES ORDER # 10412821 BOL READS... ENVIRONMENTAL BOL READS... C/O SAFETY KLEEN ACCOUNT# 40100100 ORDER NUMBER 10412821 * ITEM # 000010 * SUN LOGISTIC LON PRO# LIS72885106	14950		
1					
CHARGES					Collect This Amount
R/L TRANSFER, INC. • GATOR FREIGHTWAYS, INC. • GREENWOOD MOTOR LINES, INC. • PARAMOUNT TRANSPORTATION SYSTEMS, INC. R/L CARRIERS CUSTOMER COPY					

Photo 1: Delivery bills for receipt of 29,550 lbs BOS 200® 9/29/14

Attachment A – Photographic Documentation



Photo 2 – Palletized BOS 200® 9/29/14



Photo 3 – Mixing and Injection System and Generator. 09/29/14

Attachment A – Photographic Documentation



Photo 4 – Injection grid. 09/29/14



Photo 5 – Driving rods to inject in Area B. 10/01/14

Attachment A – Photographic Documentation



Photo 6 – Injecting in Area B. 10/09/14