

**Sioux Permit Compliance Sampling - Pilot GW System**

CCR Action	Sulfate - NA		Barium -NA	Beryllium - NA	Boron- 2,000 ug/L	Lithium - 64.7 ug/L	Molybdenum - 100 ug/L	Selenium - 50 ug/L	Antimony - NA	Arsenic - 30 ug/L	Lead - 15 ug/L	Mercury - NA
	Sulfate mg/L	pH	Barium ug/L	Beryllium ug/L	Boron ug/L	Lithium ug/L	Molybdenum ug/L	Selenium ug/L	Antimony ug/L	Arsenic ug/L	Lead ug/L	Mercury ug/L
<b>Permit Limits</b>	<b>250</b>	<b>6.0 - 9.0</b>	<b>2,000</b>	<b>4</b>	<b>2,000</b>	<b>40</b>	<b>none specified</b>	<b>50</b>	<b>6</b>	<b>10</b>	<b>15</b>	<b>2</b>

NOTE: No compliance sampling during pilot. Treated waters were sent to the adjacent Low Volume Waste facility adjacent to the pilot location. See results SP801 of Set-Up data for effluent results during pilot study.

Date	Time	Location	Sulfate, Dissolved (mg/L)	Sulfate, Total (mg/L)	Arsenic (dissolved) (ug/L)	Arsenic (Total) (ug/L)	Molybdenum (Total) (ug/L)	Molybdenum (dissolved) (ug/L)	Boron (dissolved)(ug/L)	Boron (Total) ug/L	Chloride (mg/L)	Iron (total) ug/L	Iron (dissolved)(ug/L)	Alkalinity (total - mg/L)	TDS (mg/L)	Hardness (CaCO3 - mg/L)	Magnesium - Total (mg/L)	Calcium - Total (mg/L)
<b>Permit Limits</b>			<b>250 mg/L</b>		<b>10ug/L</b>			<b>no specific limit - must just report results</b>	<b>2,000 ug/L</b>	<b>2,000 ug/L</b>								
09/16/2021	3:25	SP001 - Influent	151	182	84.6	103	983											
	3:30	SP501 - Flocc	115	135	1.3	29.9	361											
	3:35	SP601B - 2nd Settle	142	135	0.6	4	85.7											
	3:40	CV703 - Post Sand	178	179	2.5	3.4	16.7											
09/29/2021	11:00	SP001 - Influent	167	164		122	948			4,660		1,110		250	478			
	11:10	SP501 - Flocc	128	116		111	751					85,600		0	680			
	11:20	SP601B - 2nd Settle	113	113		55.4	352					64,300		0	705			
	11:30	CV703 - Post Sand	148	130		4.1	21.4					398		64	776			
09/30/2021	11:45	SP001 - Influent	163	155	95.6	97.1	946		4,200	4,680	28	1,080	<40	250	478	368	28.8	99.8
	11:50	SP501 - Flocc	126	118	31.7	81	751		4,170	4,550	286	54,700	14,200	0	650	357	27.9	97
	11:55	SP601B - 2nd Settle	121	121	33.3	74.1	704		4,210	4,480	289	49,300	16,200	0	690	353	27.5	96
	12:00	CV703 - Post Sand	114	115	4.3	6.2	22.2		4,350	4,710	287	1,720	535	29	778	330	30.5	81.7
10/04/2021	11:00	SP001 - Influent	158	164		98.3	955	889	4,410	4,760	25	1,110	22.0 J	251	492	366		
		SP501 - Flocc	162	176		14.4	94	6.4 J	4,400	4,640	193			15	600	358		
	11:20	SP601A	159	203		27.4	203	9.7 J	4,430	4,650	216			2	608	356		
		SP601B - 2nd Settle	146	151		18.7	<10	<10	4,445	4,730	221	8,910	939	0	328	364		
	11:50	CV703 - Post Sand	147	167		2	<10.0	<10.0	4,420	4,590	231			7	584	326		
10/05/2021	10:40	SP001 - Influent	162	170	77.1	96.3	900	847	4,250	4,400	24	1,050	<40	246	456	350		
	10:45	SP501 - Flocc	132	141	10.8	34.2	212	12.1	4,270	4,440	245	16,200	3,500	0	632	352		
	10:50	SP601A	128	134	9.3	45.4	259	<10	4,290	4,430	245	19,200	3,010	0	624	350		
	10:55	SP601B - 2nd Settle	132	127	11.6	35.9	228	4.7 J	4,310	4,490	237	17,500	3,130	0	636	351		
	11:00	CV703 - Post Sand	125	136	0.9 J	3.1	13.6	<10	4,310	4,460	246	1,400	474	15	302	304		
10/12/2021	11:15	SP401	225	229		92.5	1,370	57.3	6,080	6,440	26	1,380	40	240	580	375		
	11:20	SP501		219		84.1	1,230			6,430	214	1,870		0				
	11:25	SP601A		208		74.2	1,020			6,380	207	2,680		0				
	11:30	SP601B		222		66.5	832			6,540	238	3,730		0				
	11:35	CV703		140		2.3	14.1			4,520	247	998						
10/14/2021	14:00	SP401	212	10:40	85	102	1,080	1,080	5,190	5,140	26	1,200	<40	246	568	380		
	14:05	SP501		197		98.8	993			5,070	250	39,100		0				
	14:10	SP601B		193		45.6	192			4,880	250	12,700		0				
	14:15	CV703		193		20.7	8.6 J			4,830	252	4,080						
	14:20	SP801	<10	<10	0.5 J	0.7 J	<10	<10	<20	<20	215	<40	<40	212	628	382		
10/25/2021	10:30	SP401	245	249		79.8	1,210	1,080	5,070	5,550	28	1,480	<40	247	636	446		
	10:35	SP501		221		76	1,230			5,550	272			0				
	10:40	SP601A		227		53.5	667			5,630	270	32,700		0				
	10:45	SP601B		213		42	470			5,620	258	26,400						
	10:50	CV703		223		10.3	12.3			5,670	266	7,590		0				
	10:55	SP801	183	194	1	1.2	<10	7.0 J	10,200	10,800 - sample taken from wrong port	275	4,910	4,280	0	794	442		
	12:00	EW-1		398		106	1,160			5,380	28	1,610		262				
	12:10	EW-2		577		19.6	7,250			28,600	20	39,500		138				
10/28/2021	12:00	SP001	238	242	69.6	101	980	938	4,460	4,830	29	1,430	420	252	602	433		
	12:05	SP501		210		96.8	1,090			4,780	241	50,400		0				
	12:05	SP601A		211		111	1,350			4,770	241	63,800		0				
	12:15	SP601B		220		41.9	385			4,900	237	19,700		0				
	12:20	CV703		204		8.8	98.7			4,910	235	5,860		20				
	12:25	SP801	113	115	<10	10	<10	<10	9.5 J	9.2 J	187	30 J	<40	1,370	1,620	467		

Date	Time	Location	Sulfate, Dissolved (mg/L)	Sulfate, Total (mg/L)	Arsenic (dissolved) (ug/L)	Arsenic (Total) (ug/L)	Molybdenum (Total) (ug/L)	Molybdenum (dissolved) (ug/L)	Boron (dissolved)(ug/L)	Boron (Total) ug/L	Chloride (mg/L)	Iron (total) ug/L	Iron (dissolved)(ug/L)	Alkalinity (total - mg/L)	TDS (mg/L)	Hardness (CaCO3 - mg/L)	Magnesium - Total (mg/L)	Calcium - Total (mg/L)
Permit Limits			250 mg/L		10ug/L			no specific limit - must just report results	2,000 ug/L	2,000 ug/L								
11/02/2021	12:05	SP001	244	238	74.3		964	950	4,470	4,650	28	1,370	80	256	626	446		
	12:10	SP501		259			1,010			4,780	230	41,000						
	12:15	SP601A		255			590			4,850	280	35,300						
	12:20	SP601B		257			374			4,930	280	30,400						
	12:25	CV703		256			4.6 J			5,030	256	7,720						
	12:30	SP801	232	232	<1.0		<10.0	<10.0	3,950		257	2,990	2,700	22	776	529		
	13:30	T1001								286								
11/04/2021	14:30	SP001		525		39.6	4,570			19,900								
	14:40	SP801		43		0.7	<10											
11/09/2021	10:05	SP001	264	275	84.7	107	925	890	4,340	4,580	29	1,410	<40	254	672	472		
	10:10	SP501		250		111	923			4,630	315	50,300		0				
	10:15	SP601A		255		95	896			4,620	319	49,700		0				
	10:20	SP601B		264		94.2	878			4,650	321	49,600		0				
	10:25	CV703		250		4	17.3			4,650	325	32,100		0				
	10:30	SP801	215	212		0.9 J	<10	<10	7,340		333	26,000	23,800	0	906	487		
11/10/2021	13:00	SP801		10 J			<10		<10									
11/11/2021	10:30	SP801		<10		<1.0	<10			20.3								
11/12/2021	13:30	SP001	265	270	72.4	91.7	968	835	4,060	4,750	28	1,480	<40	259				
	13:35	SP801	24	24	0.5 J	<10	<10	<10	11 J	20.4	278	322	<40	227	792	534		
11/15/2021	13:00	SP801		222		<10	<10			12,600								
11/16/2021	10:35	SP001	324	304	81.6	98.7	950	883	4,360	4,680	27	1,520	50.3	255	688	464		
	10:40	SP501		298		70.2	631			4,670				0				
	10:45	SP601A		295		67.4	441			4,770				0				
	10:50	SP601B		259		52.6	379			5,000				0				
	10:55	CV703		259		1.7	13.5			4,980				0				
		SP801	229	247	0.6 J	0.7 J	<10	11.4	8,390	9,260	284	6350	5,590	0	772	469		
11/17/2021	11:30	SP801		13	<10	<10	<10	<10	<20	<20	157							
11/19/2021	12:00	SP801		193	0.6 J	0.6 J	<10	<10	<20	<20					626			
	12:15			228	0.7 J	0.9 J	<10	<10	<20	<20					702			
11/22/2021	10:00	SP801		427	1	1.3	<10	<10	<20	<20					780			

