



DEPARTMENT OF THE ARMY
CAMP STANLEY STORAGE ACTIVITY, RRAD
25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

February 16, 1999

Office of the Commander

Mr. Robert Robinson
Wastewater Permits Section
Texas Natural Resource Conservation
Commission
Building F/2, MC 148
P.O. Box 13087
Austin, Texas 78711-3087

Subject: Camp Stanley Storage Activity, Wastewater Permit
Number 03849

Dear Mr. Robinson:

The U.S. Army's, Camp Stanley Storage Activity, located north of San Antonio, is authorized by TNRCC Permit Number 03849 to discharge treated domestic wastewater from Outfall 001 at a rate of 30,000 gallons per day (monthly average). The permit also authorizes the discharge of treated groundwater from Outfall 002 which may be generated in the future as part of a site cleanup program. At this time, CSSA has not started treating groundwater at the site and Outfall 002 has remained inactive since the permit was issued in June of 1996.

Although the pump and treat groundwater remediation program has not started, CSSA conducts a routine quarterly groundwater monitoring program using 13 wells on the base. For five of these wells, the monitoring procedure specifies that the well be purged prior to sampling. The purging procedure produces about 20 gallons of groundwater per well. Within the next year, an additional 13 groundwater monitoring wells will be installed at the site resulting in a total of about 360 gallons per quarter of groundwater that will be generated. The purge water is currently disposed of off site.

The five existing wells that are currently purged every quarter are designated wells 2, 16, C, MW-1, and MW-2. As shown on the attached Table 1, they contain detectable concentrations of the following compounds:

- cis-1,2-Dichloroethene;

- trans-1,2-Dichloroethene;
- Tetrachloroethene; and
- Trichloroethene.

Based on the location of the 13 new wells and knowledge of the source of the contaminants, it is expected that the new wells will have contaminant concentrations below those shown in Table 1. CSSA requests that TNRCC authorize the addition of the 360 gallons of groundwater monitoring well purge water to the influent of the domestic wastewater treatment plant (WWTP) for treatment and discharge through Outfall 001. The need to dispose of this volume is expected to occur only once per quarter. Because of the extremely low volume and concentrations of the contaminants, the resulting addition of the monitoring well purge water will not significantly effect the character of the domestic wastewater being treated in the wastewater treatment plant.

As shown on the bottom of Table 1, assuming that each well contributes purge water with contaminant concentrations at the maximum level that has been measured in the past, the WWTP effluent levels for each contaminant would be less than 0.0005 lb/day for one day per quarter even without considering treatment in the WWTP by volatilization or biodegradation.

In order to achieve the lowest effluent concentrations practicable, CSSA intends to pretreat the monitoring well purge water using a granular activated carbon (GAC) bed to adsorb the trace levels of contaminants prior to adding the treated water to the influent of the WWTP. The GAC system will be designed to attain effluent levels of 5 ug/L. The addition of 360 gallons per quarter of treated well purge water with concentrations of 5 ug/L will result in WWTP effluent concentrations of less than 0.3 ug/L at Outfall 001.

CSSA proposes to monitor the effluent of the GAC system following startup of the well purge water treatment procedure to verify its effectiveness. Vendor data sheets suggest that the GAC has the capacity to adsorb about 0.7 pounds each of trichloroethene and tetrachloroethene. Using the concentrations from Table 1, over 300,000 gallons of well purge water could be treated in the 165 pound GAC bed. At the projected rate of 1,380 gallons per year, the GAC bed should be adequate for the foreseeable future.

Logsheets will be maintained to document the volume of water treated in the GAC system.

CSSA believes that the combination of 360 gallons per quarter of treated monitoring well purge water with domestic sewage flowing to the WWTP for further treatment and discharge through Outfall 001 can be authorized by the current permit. This is based on the fact that the low volume and concentrations in the well purge water will not significantly effect the character of the wastewater flowing to the WWTP. We request that TNRCC review this information and provide concurrence that the discharge is authorized. Your review of the attached information is greatly appreciated. Please call Brian Murphy of CSSA at (210) 698-5208 with any questions.

Sincerely,



Ernest N. Roberson, Jr.
LTC, Commanding

enclosure

cc w/ enclosure: TNRCC Region 13 - San Antonio

Table 1. Groundwater VOC Analytical Results for 1995 - 1998

		<i>cis</i> -1,2-Dichloroethene	^{trans-1,2} Dichloroethene	Tetrachloroethene	Trichloroethene
		(ug/L)	(ug/L)	(ug/L)	(ug/L)
Well Number	MCL:	70	100	5	5
	Sample Date				
2	4/6/95	< 0.8	< 0.8	1	< 0.4
	6/13/95	< 4	< 4	< 5	< 2
	8/30/95	< 4	< 4	< 5	< 2
	12/12/95	< 4	< 4	< 5	< 2
	12/12/95	< 4 (DUP)	< 4 (DUP)	< 5 (DUP)	< 2 (DUP)
	2/29/96	< 4	< 4	< 5	< 2
	1/15/97	< 0.2	< 0.33	< 0.47	< 0.34
	10/23/97	< 0.2	< 0.33	< 0.47	< 0.34
	11/6/98	< 0.3	< 0.2	0.43	< 0.2
	Average	< 1.9	< 2.0	0.7	< 1.0
Maximum	< 4	< 4	1	< 2	
16	4/6/95	270	< 0.8	170	170
	4/7/95	280	< 0.8	170	170
	4/7/95	290 (DUP)	< 0.8 (DUP)	160 (DUP)	170 (DUP)
	6/14/95	38	< 4	39	45
	8/30/95	72	< 4	78	83
	12/13/95	63	< 4	64	77
	2/29/96	152	< 4	158	175
	3/20/97	121 (M)	20.7 (M)	228 (M)	125 (M)
	10/24/97	121	2.03	123	123
	11/6/98	212	1.61	204	233
Average	162	8.1	139	137	
Maximum	290	20.7	228	233	
Reservoir D	3/1/96	< 4	< 4	< 5	< 2
	4/6/95	240	< 0.8	110	130
	6/14/95	120	< 4	64	99
	8/30/95	86	< 4	80	88
	12/12/95	130	< 4	110	150
	2/29/96	81	< 4	72	98
	3/19/97	30.8 (M)	2.99 (F)	58.7 (M)	33.5 (M)
	10/24/97	138	14.6	126	146
Average	118	8.8	89	106	
Maximum	240	14.6	126	150	
MW-1	1/9/97	3.92	< 0.33	13.70	12.30
	10/23/97	25.3	2.91	23.2	29.3
	11/6/98	27.3	0.34	23	28.5
	Average	18.8	1.6	20.0	23.4
Maximum	27.3	2.91	23.2	29.3	
MW-2	1/10/97	1.14 (F)	< 0.33	6.74	7.00
	10/24/97	4.72	< 0.33	6.13	8.25
	11/6/98	4.4	< 0.2	9.33	9.62
	Average	3.4	< 0.3	7.4	8.3
Maximum	4.72	< 0.33	9.33	9.62	
Avg of Max Conc. (ug/L)		113	8.5	78	85
Total Well Purge Flow (gal)		360	360	360	360
Pollutant Mass (lb)		0.00034	0.000026	0.00023	0.00025
GAC Effluent Conc. (ug/L)		5	5	5	5
GAC Effluent Mass (lb)		0.000015	0.000015	0.000015	0.000015
WWTP Flow (MGD)		0.007	0.007	0.007	0.007
WWTP Effl. Conc. (ug/L)		0.26	0.26	0.26	0.26

Notes: Analytes detected above the MCL are shown in bold font. All well water samples were collected through well pump or via bailer.

Samples were diluted as of January 1, 1997, per AFCEE QAPP.

Samples with results shown in italics were diluted and reanalyzed for that particular analyte (October 23-24, 1997).

< = minimum detection limit

ug/L = micrograms per liter

• Chlorination byproducts in water supply well (referenced in SDWA drinking water regulations as THMs, or trihalomethanes). MCL for total concentration of THMs is 100 ug/L.

(DUP) = Duplicate

(F) = Laboratory data qualifier indicates the analyte was detected above the MDL, but below the Practical Quantitation Limit (PQL).

(J) = Laboratory data qualifier indicates the analyte was detected, but the value is an estimate.

(M) = Laboratory data qualifier indicates matrix effect present.