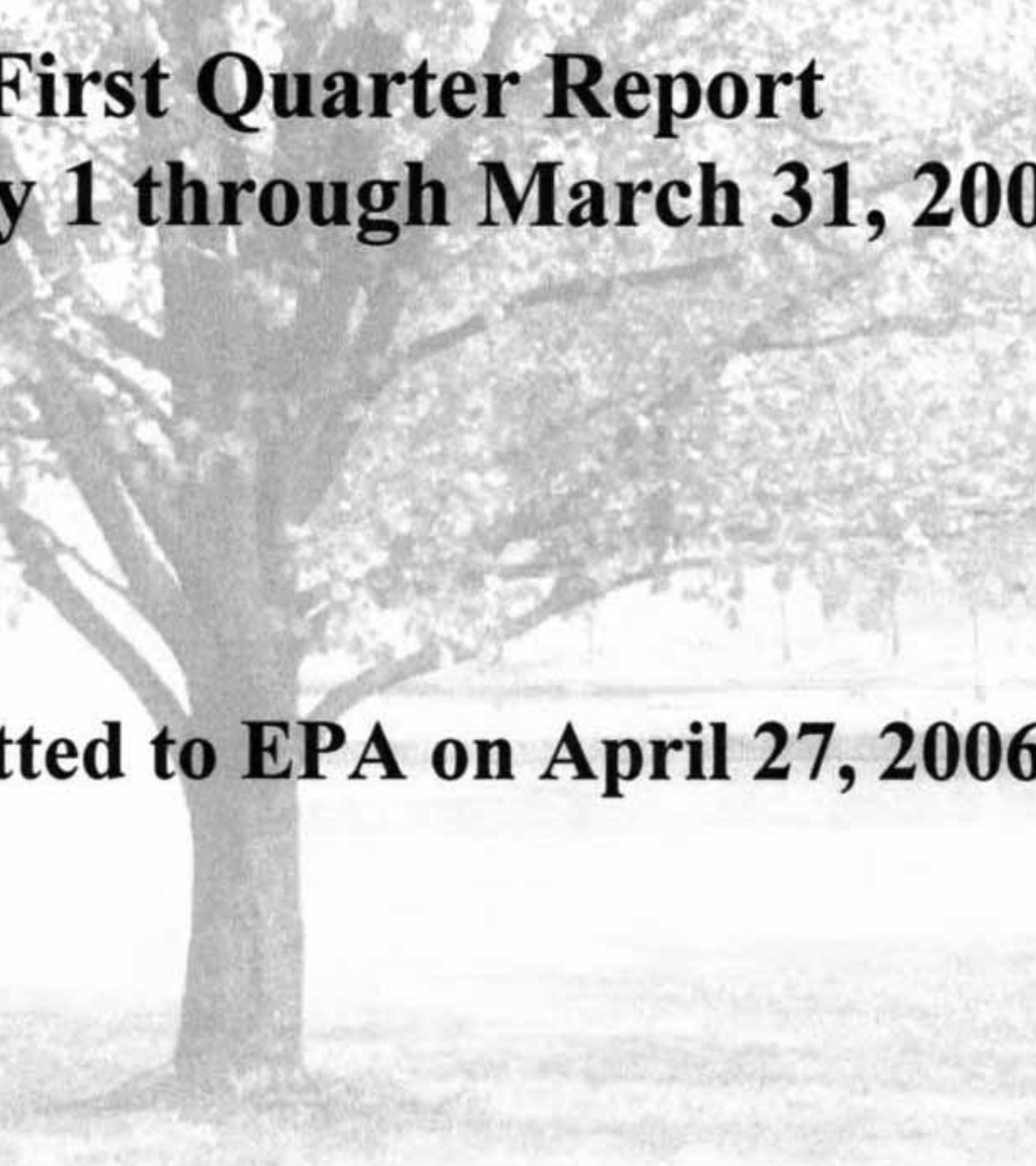

First Quarter Report
y 1 through March 31, 200

tted to EPA on April 27, 2006

ocument and all attachments were prepared under my di
sure that qualified personnel properly gather and evalua
erson or persons who manage the system, or those perso

e Program

rship

n-Compliance With the Consent Decree

ables
tipulated Penalties

rflows (SSOs), Bypasses, Diversions, and Ef

ns

compliance with and activities related to impl
l Phase 2 CAP/ER, including: the status of co
the schedules that have been established purs
se projects; and schedule deadlines and miles
rter and expected during the next Calendar Q
compliance with and activities related to impl

implementation of and compliance with the P
the implementation of the Capacity Assurance
rter, including the number of, and anticipated
at have been authorized, by Sewerbasin, a des
authorized and the number of credits earned
ed for those projects, by Sewerbasin, and any
r essential services;
of any transfer of an ownership interest, opera
of the Treatment Works, or any portion thereof
of the status of compliance or non-compliance
d, if applicable, the reasons for non-compliand
are subject to stipulated penalties under Secti

e Performance Evaluation and Composite Co
the development of those deliverables.

ols Program – Summary of implementation o

rance Program - Summarizes the status of the

Ownership – Identifies any transfers of ownersh
ntrol of the treatment works, or any portion the

nd Non-Compliance with the Consent Decree -
iance with requirements of the Consent Decre

s, Diversions, and Effluent Limit Violations –
, Bypasses, Diversions, and effluent limit viola

Monitoring Data – Summarizes all sampling
nd the projected data collection for the first qua

DEC regarding EPA's comments on the Phase

0-day response to EPA's comments on the Pha

d, subsequently, the Consent Decree. The obje
ility improvements needed to address the cond
n system during the period of 2001-2004 with
Long-Term List and to support future growth
PA on October 28, 2005. Comments were rece
PA's letter, KUB submitted a 30-day response
ised Phase 1 CAP/ER will be submitted to EP
submitted to EPA within 12 months after EPA
on April 30, 2008.

vement Plan for FY 04/05 and FY 05/06

facility improvement projects included in the C
4, to June 30, 2005) and FY 05/06 (July 1, 200
rious stages during the reporting period includ
truction, and completion. Many of these projec
nd work is defined as the inspection (i.e. flow
oke testing, etc.) and design phase of the projec
ay include manhole rehabilitation/replacement
t, and lower lateral rehabilitation/replacement.
vements or wet-weather storage. Each of these
1 CAP/ER.

e is to be inspected. Project includes inspectio
ns), design, and rehabilitation of lines requirin

llector Rehab (Mini-basin 10B1) – Assess an
ately 16,400 lf of collector pipe. Condition As
y
son Collector Rehab (Mini-basin 10C1) – A
proximately 19,000 lf of collector pipe. Condit
n is underway

rage - Design 4.5 MG wet-weather storage tan
estern Avenue and Third Creek Road during ra

1* - Find and design rehabilitation needs for c
ely 7,900 lf of pipe). Project includes inspecti
ns), design, and rehabilitation of lines requirin
ent and preliminary design analysis is complet
ture rehabilitation project. No construction is
in 11 - Find and design rehabilitation needs fo
129,657 lf). Project includes inspection (CC

ntrol sewer overflows near Walker Springs Pu
on is underway. Substantial completion expec

habilitation Phase III - Rehabilitate approxim
1. Project includes inspection (CCTV, smoke t
gn, and rehabilitation of lines requiring repair.
ntial completion is expected in May 2006.
p Station – Project will include evaluation of p
equate capacity. Project will also include impr
valve vault. Design is underway.
Trunkline C – Project will examine major trun
Knoxville. Project will include field survey, lin
n report will be prepared to present recommend
ne preliminary design study is complete. Const

Trunk Line Replacement - Design and constr
00 lf of 24-inch sewer to correct structural pro
plete.

4. Project includes inspection (CCTV, smoke
gn, and rehabilitation of lines requiring repair.

ern, and Canna - Replace approximately 1,70
imately 3,400 lf of 8-inch up to 10-inch and 12
city restrictions resulting in overflows near Ple

Sewer Replacement - Design and construct r
ver that has been partially exposed by erosion
channel. [Complete]

Design and construct replacement of 800–1,20
spoon Superfund site. Design will reroute sewe
ase I and Phase II - Relocate, rehabilitate, and
g collector sewers to increase conveyance capa

nd TSS meters)
supporting standard operating procedures (SO
training for operations staff

mp Dresser and McKee Inc. (CDM) and KUB
appropriate personnel were trained and the pro
ations. Once training of the program was comp
e PCP guided the decisions made during peak
WWTP (3/14/06). All parameters were follow
with the program. KUB is currently within the
PE.

ed Order until the Consent Decree CAP is appr

st of all new wastewater service connections th
since the TDEC CAP was implemented in Ma
nnections that have been approved but have no

past quarter. Also noted are the dates each sub
the Public Document Repository (PDR), when
when EPA responded with comments, when K
en EPA approval was received.

ntrols Program

cree language, page 57: *"No later than one-hu*
he Date of Entry, KUB shall submit a Process
ourth Creek and Loves Creek WWTPs for use
onditions."

the Process Controls Program in the PDR on
el 1 Deliverable was available for public comm
5, 2005. No comments were received during th
is deliverable on July 8, 2005. EPA disapprov
e to the extent of the comments and delays in s
EPA to discuss the comments in greater detail,
n September 16, 2005. EPA approved the exten
deliverable was submitted to EPA on Novemb
approved on January 9, 2006.

cree language, page 30: *"No later than three-h*
after the Date of Entry, KUB shall submit an C

the Capacity Assurance Program in the PDR
Level 1 Deliverable was available for public
til January 16, 2006. No comments were recei
tted this deliverable on February 8, 2006.

rrective Action Plan/Engineering Report

cree language, page 23: *"On or before Novemb*
ase 1 Corrective Action Plan/Engineering Rep
he conditions causing SSOs with the goal of el
the Long-Term List."

the Phase 1 Corrective Action Plan/Engineeri
2, 2005. This Review Level 1 Deliverable was
om September 12, 2005, until October 12, 200
ing that period. KUB submitted this deliverab
able was disapproved by EPA on February 23,

g period, KUB incurred five Unpermitted Disc
blockages caused by grease, two were due to h
tion failure. Table 1 below lists all violations s
d in the Consent Decree.

ject to Stipulated Penalties

	Date	Address	C
	1/17/06	2505 Delrose Drive	H
	1/17/06	436 Maryville Pike	H
	1/17/06	4132 W Martin Mill Pike	B
	1/26/06	4713 Old Broadway	C
	3/20/06	1817 Rocky View Way	B

nd Diversion; and the total Bypass or Diversio
nit violations, all information required to be re
oring Reports."

SSOs that occurred during this reporting perio
events. Of that number, 18 were due to blocka
ombination thereof, four were due to heavy rai
, two were due to broken pipe, two were due to
hanical failure. Of the 30 SSO events, 21 were
were in the 1001 – 10,000 range, and three even
rations for events during this period are as follo
d from 2.1 – 5 hours, and five lasted more than

considered significant because of the lengthy
after a contractor failed to reconnect a service
rd the homeowner had ongoing issues with slo
traced back to the date the contractor complet
volume of the event was estimated based on th

1/17/06	18:30	1/18/06	00:30	1/17/06
-	-	-	-	-
-	-	-	-	-

an nt ur?	Date	Parameter	Type	Limit	
s	3/20/06	TSS	Daily Max	45 mg/l	
s	2/18/06	TSS	Daily Max	45 mg/l	
)	-	-	-	-	
)	-	-	-	-	

r investigation is necessary. A complete investi
rterly Progress Report for the 2nd quarter 2006
d during this investigation are included in a pr

llection

quarter of 2006, KUB will continue to monitor
er basins of eight area creeks. KUB will collec
during the second quarter 2006:

by Creek Mile or Site Number

	Creek Mile #	***Creek Mile #***
	0.45	2.57
	0.36	1.54
	0.87	2.08E
	0.55	1.33
	0.15	0.32
	0.35	0.90E
	0.85	1.89
	0.53	1.12

Appendix A

Authorized Sewer Connections

835	1250	4th Creek	4th
1002	1500	4th Creek	4th
0	0	4th Creek	4th
0	0	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th
334	500	4th Creek	4th
3841	5750	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th
334	500	4th Creek	4th
668	1000	4th Creek	4th
668	1000	4th Creek	4th
0	0	4th Creek	4th
1336	2000	4th Creek	4th
1503	2250	4th Creek	4th
167	250	4th Creek	4th
167	250	4th Creek	4th

167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea

501	750	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	Eastbridge	Ea
167	250	1st Creek	Ku

167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
4200	6300	1st Creek	Ku
167	250	South Knox / Knob Cr	Ku
167	250	1st Creek	Ku
167	250	3rd Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
700	1050	3rd Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku

167	250	1st Creek	Ku
1503	2250	South Knox / Knob Cr	Ku
1503	2250	South Knox / Knob Cr	Ku
3006	4500	South Knox / Knob Cr	Ku
3173	4750	3rd Creek	Ku
3006	4500	South Knox / Knob Cr	Ku
1503	2250	South Knox / Knob Cr	Ku
1503	2250	South Knox / Knob Cr	Ku
3340	5000	South Knox / Knob Cr	Ku
835	1250	South Knox / Knob Cr	Ku
2672	4000	South Knox / Knob Cr	Ku
2171	3250	South Knox / Knob Cr	Ku
2505	3750	South Knox / Knob Cr	Ku
2505	3750	South Knox / Knob Cr	Ku
167	250	South Knox / Knob Cr	Ku
0	0	1st Creek	Ku
0	0	1st Creek	Ku
167	250	3rd Creek	Ku
167	250	WKUD	Ku
167	250	WKUD	Ku
1503	2250	2nd Creek	Ku
334	500	Williams Creek	Ku
167	250	WKUD	Ku

167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
334	500	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku
167	250	1st Creek	Ku

167	250	2nd Creek	Ku
167	250	3rd Creek	Ku
167	250	3rd Creek	Ku
2839	4250	3rd Creek	Ku
2839	4250	3rd Creek	Ku
835	1250	3rd Creek	Ku
3340	5000	3rd Creek	Ku
334	500	3rd Creek	Ku
334	500	3rd Creek	Ku
2839	4250	3rd Creek	Ku
2839	4250	3rd Creek	Ku
334	500	3rd Creek	Ku
3507	5250	3rd Creek	Ku
2839	4250	3rd Creek	Ku
3507	5250	3rd Creek	Ku
3507	5250	3rd Creek	Ku
2672	4000	3rd Creek	Ku
2839	4250	3rd Creek	Ku
2839	4250	3rd Creek	Ku
2839	4250	3rd Creek	Ku
167	250	3rd Creek	Ku
167	250	3rd Creek	Ku
167	250	3rd Creek	Ku

167	250	South Knox / Knob Creek	Ku
0	0	South Knox / Knob Creek	Ku
167	250	South Knox / Knob Creek	Ku
20374	30500	South Knox / Knob Creek	Ku
167	250	South Knox / Knob Creek	Ku
0	0	South Knox / Knob Creek	Ku
167	250	South Knox / Knob Creek	Ku
167	250	South Knox / Knob Creek	Ku
167	250	South Knox / Knob Creek	Ku
167	250	Williams Creek	Ku
167	250	Williams Creek	Ku
167	250	WKUD	Ku
167	250	Williams Creek	Ku
9018	13500	Williams Creek	Ku
167	250	South Knox / Knob Creek	Ku
167	250	South Knox / Knob Creek	Ku
167	250	South Knox / Knob Creek	Ku
167	250	WKUD	Ku
167	250	WKUD	Ku
167	250	WKUD	Ku
167	250	WKUD	Ku
167	250	WKUD	Ku
167	250	WKUD	Ku

167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov
167	250	Loves Creek	Lov

167	250	Loves Creek	Lo
334	500	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo
167	250	Loves Creek	Lo

Appendix B

SSOs

Appendix C

Building Backups

nd Creek	15	BBU	The sewer main was flushed to remove the blockage caused by grease and
l Creek	29	BBU	The sewer main was flushed to remove the blockage caused by debri

Appendix D

Water Quality Monitoring Program
Sampling Results

45	8.3	10	11.9	82
38	8.4	10	12.0	91
22	8.1	14	9.8	82
45	7.7	12	14.3	40
30	8.5	12	11.2	11
15	7.9	15	12.1	70

45	8.1	12	8.1	17
10	7.8	12	8.2	13
29	7.3	10	6.7	<1
45	7.8	13	13.9	370
58	7.6	10	13.7	91

02	8.8	11	10.0	19
58	7.4	10	12.1	10
44	7.2	15	10.0	10
10	8.6	13	9.8	20
48	10.4	12	9.5	14
39	9.2	15	7.5	54
25	7.6	11	7.8	14
51	7.7	10	9.8	100
38	7.8	12	10.0	54
17	7.7	17	8.1	10
27	7.6	14	8.7	60

04	7.7	16	10.7	91
11	8.2	12	10.2	12
20	7.8	14	9.8	30
00	8.8	15	8.5	32
50	8.6	16	11.1	38
40	8.6	17	8.5	90

14	7.8	9	9.4	11
44	7.7	6	10.8	45
37	7.8	6	11	99
47	7.8	15	9.9	25
39	7.7	16	10.4	22

17	7.5	14	13.1	70
03	8.0	14	11.5	70
53	8.8	14	13.2	18
10	8.3	18	11.4	24
55	7.2	17	11.0	64
35	8.4	15	12.3	80
15	8.7	10	11.1	11
56	8.1	8	11.5	11
37	8.8	12	8.2	30
58	9.9	17	11.9	27
40	8.4	18	11.3	18

4,025 gallons

There was no industry upstream of the SSO, therefore no P
collected.

-25-06: 0.00 inches rain

-26-06: 0.00 inches rain

-27-06: 0.00 inches rain

Sample Time	Dissolved Oxygen (mg/l)	Temperature (Celsius)	pl
13:35	7.5	13.3	8.
13:40	9.1	8.8	8.
13:39	8.5	8.0	8.

0,800 gallons
There was no industry upstream of the SSO, therefore no P
collected.
-19-06: 0.00 inches rain
-20-06: 0.64 inches rain
-21-06: 0.23 inches rain

Sample Time	Dissolved Oxygen (mg/l)	Temperature (Celsius)	pl
10:20	11.0	10.3	7.
10:05	12.7	9.5	7.
10:40	10.8	9.4	8.
10:30	11.3	9.3	9.

.3	13.7	7.3	0	11
52	10.6	7.6	0	11
57	*	*	0	*
79 T	10.1	7.3	0	13
79	12.7	7.6	*	13
791	12.3	4.6	0	13
84	*	7.8	*	14.
88 T	9.3	6.7	0	16
89	12.6	7.6	0	15
92 T	7.5	6.7	0	16
94	13.7	7.8	0	16
941T	7.6	6.8	0	16
95	11.7	7.9	0	16
.0	12.9	7.9	0	17
09	13.7	8	0	17
.3	12.7	7.5	0	12
33	11.5	7.6	0	12
47T	*	*	0	*
58	9.8	7.6	0	12
66	9.2	7.4	0	13
67T	12	7.5	0	12
68	9	7.4	0	14
72	9.8	7.3	0	15