APPENDIX E
Chlorination Verification

1995 Nolan Street
San Bernardino, CA 92
(909) 887-2610

ELCO CONTRACTORS, INC.

WATER QUALITY - NEW MAIN CHLORINATION CHECK

DATE: 5/18/04 C.O./ACCOUNT #: _____

DESCRIPTION OF PROJECT: 19th St. Treatment Plant
L6 Influent Line

PROJECT MANAGER: John Wolles DATE COMPLETED: 5/22/04

CHLORINE TYPE

Cl_2 GAS ☐
Cl_2 LIQUID ☐
Cl_2 CALCIUM HYPOCHLORITE ☐

INITIAL FLUSHING VERIFICATION

PIPE DIAMETER FT	PIPE LENGTH FT	PIPE VOLUME GALLONS	TOTAL GALLONS FLUSHED
2' & 2.5'	306' & 612'	30,000 Gal.	34,000 Gal.

TOTAL CHLORINE DOSAGE VERIFICATION

SAMPLE LOCATION/ID	TESTED BY	CHLORINATED BY	DOSAGE PPM	TIME	DATE
#1, 6+43	Corey Evans	Corey Evans	70 PPM	3:00	5/18/04
#2, 2+10	"	"	70 PPM	3:05	"
#3, 0+57 #4, 0+00	"	"	70 PPM 70 PPM	3:10 3:15	"

TOTAL CHLORINE RESIDUAL VERIFICATION

SAMPLE LOCATION/ID	RETENTION HOURS	RESIDUAL PPM	PASS > 25 PPM	FAIL ≤ 25 PPM	DATE
#1, 6+43	24	40 PPM	✓		5/19/04
#2 2+10	24	40 "	✓		"
#3, 0+57 #4, 0+00	24	40 " 40 "	✓		"

FREE CHLORINE RESIDUAL VERIFICATION

PRESSURE ZONE SYSTEM	SYSTEM FREE CL_2 RESIDUAL mg/L	NEW PIPE FREE CL_2 RESIDUAL mg/L
19th St Plant	104 PPM	104 PPM

MICROBIOLOGICAL SAMPLE VERIFICATION

SAMPLE LOCATION/ID	RESULTS PRESENT/ABSENT	TESTED BY	PASS	FAIL	DATE
4 Locations	All Absent	SB Water	✓		5/22/04

ELCO CONTRACTORS, INC.
1995 Nolan Street
San Bernardino, CA 9
(909) 887-2610

WATER QUALITY - NEW MAIN CHLORINATION CHECK

DATE: 5/20/04 C.O./ACCOUNT #: _____

DESCRIPTION OF PROJECT: 19th St. Treatment Plant C4 Backwash Supply Line

PROJECT MANAGER: John Wiles DATE COMPLETED: 5/25/04

CHLORINE TYPE

Cl_2 GAS ☐
Cl_2 LIQUID ☐
Cl_2 CALCIUM HYPOCHLORITE ☐

INITIAL FLUSHING VERIFICATION

PIPE DIAMETER FT	PIPE LENGTH FT	PIPE VOLUME GALLONS	TOTAL GALLONS FLUSHED
2' & 1'	162' & 216'	5,100 Gal	5,500 Gal

TOTAL CHLORINE DOSAGE VERIFICATION

SAMPLE LOCATION/ID	TESTED BY	CHLORINATED BY	DOSAGE PPM	TIME	DATE
#1 3+48	Corey E.	Corey E.	65 PPM	2:00	5/20/04
#2 0+38	"	" "	65 PPM	2:05	5/20/04
#3 0+00	"	"	65 PPM	2:10	5/20/04

TOTAL CHLORINE RESIDUAL VERIFICATION

SAMPLE LOCATION/ID	RETENTION HOURS	RESIDUAL PPM	PASS > 25 PPM	FAIL ≤ 25 PPM	DATE
#1 3+48	24	45 PPM	✓		5/21/04
#2 0+38	24	45 PPM	✓		5/21/04
#3 0+00	24	45 PPM	✓		5/21/04

FREE CHLORINE RESIDUAL VERIFICATION

PRESSURE ZONE SYSTEM	SYSTEM FREE CL_2 RESIDUAL mg/L	NEW PIPE FREE CL_2 RESIDUAL mg/L
19th St Plant	.05 PPM	.05 PPM

MICROBIOLOGICAL SAMPLE VERIFICATION

SAMPLE LOCATION/ID	RESULTS PRESENT/ABSENT	TESTED BY	PASS	FAIL	DATE
3 Locations	All Absent	SB Water	✓		5/25/04

1995 Nolan Street
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ELCO CONTRACTORS, INC.

WATER QUALITY - NEW MAIN CHLORINATION CHECK

DATE: 6/8/04

C.O./ACCOUNT #: _____

DESCRIPTION OF PROJECT: 12" pipeline (By pass)

PROJECT MANAGER: John Wiles

DATE COMPLETED: 6/8/04

CHLORINE TYPE

Cl_2 GAS ☐
Cl_2 LIQUID ☐
Cl_2 CALCIUM HYPOCHLORITE ☐

INITIAL FLUSHING VERIFICATION

PIPE DIAMETER FT	PIPE LENGTH FT	PIPE VOLUME GALLONS	TOTAL GALLONS FLUSHED
12"	200'	1700 GAL	~~3?~~ 3400 GAL

TOTAL CHLORINE DOSAGE VERIFICATION

SAMPLE LOCATION/ID	TESTED BY	CHLORINATED BY	DOSAGE PPM	TIME	DATE
0+00	Don Wagner	Don Wag	70 ppm	8:00	6/4/04
2+00	Don Wag	Don Wag	70 ppm	8:05	6/4/04

TOTAL CHLORINE RESIDUAL VERIFICATION

SAMPLE LOCATION/ID	RETENTION HOURS	RESIDUAL PPM	PASS > 25 PPM	FAIL ≤ 25 PPM	DATE
0+00	48	30 ppm	✓		6/7/04
2+00	48	30 ~	✓		6/7/04

FREE CHLORINE RESIDUAL VERIFICATION

PRESSURE ZONE SYSTEM	SYSTEM FREE CL_2 RESIDUAL mg/L	NEW PIPE FREE CL_2 RESIDUAL mg/L
19TH ST plant	.03	.05

MICROBIOLOGICAL SAMPLE VERIFICATION

SAMPLE LOCATION/ID	RESULTS PRESENT/ABSENT	TESTED BY	PASS	FAIL	DATE
2					

1995 Nolan Street
San Bernardino, CA 9
(909) 887-2610

WATER QUALITY - NEW MAIN CHLORINATION CHECK

DATE: 6/10/04 C.O./ACCOUNT #: _____

DESCRIPTION OF PROJECT: Effluent Piping LS

PROJECT MANAGER: John Wiles DATE COMPLETED: 6/11/04

CHLORINE TYPE

Cl_2 GAS ☐
Cl_2 LIQUID ☑
Cl_2 CALCIUM HYPOCHLORITE ☐

INITIAL FLUSHING VERIFICATION

PIPE DIAMETER FT	PIPE LENGTH FT	PIPE VOLUME GALLONS	TOTAL GALLONS FLUSHED
2.5', 1.33'	250', 184'	11,093 Ga.	13,800 Ga.

TOTAL CHLORINE DOSAGE VERIFICATION

SAMPLE LOCATION/ID	TESTED BY	CHLORINATED BY	DOSAGE PPM	TIME	DATE
1. Sta. 5+00	John	John	60 PPM	3:15	6/11/04
2. Sta. 0+84	"	"	60 PPM	3:20	"
3. Sta. 0+92	"	"	60 PPM	3:25	"
4. Sta. 2+57	"	"	60 PPM	3:30	"

TOTAL CHLORINE RESIDUAL VERIFICATION

SAMPLE LOCATION/ID	RETENTION HOURS	RESIDUAL PPM	PASS > 25 PPM	FAIL ≤ 25 PPM	DATE
1. Sta. 5+00	24	40	✓		6/12/04
2 " 0+84	24	50			
3 " 0+92	24	50	✓		" "
4 " 2+57	24	50	✓		" "

FREE CHLORINE RESIDUAL VERIFICATION

PRESSURE ZONE SYSTEM	SYSTEM FREE CL_2 RESIDUAL mg/L	NEW PIPE FREE CL_2 RESIDUAL mg/L
19th St. Plant	.04	.04

MICROBIOLOGICAL SAMPLE VERIFICATION

SAMPLE LOCATION/ID	RESULTS PRESENT/ABSENT	TESTED BY	PASS	FAIL	DATE
4 Locations	Absent	S.B. Water	✓		6/14/04

1995 Nolan Street
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WATER QUALITY - NEW MAIN CHLORINATION CHECK

DATE: 7-14-04 C.O./ACCOUNT #: _____

DESCRIPTION OF PROJECT: Effluent Piping Fo. 19th St Treatment Plant

PROJECT MANAGER: John Wiles DATE COMPLETED: 7-15-04

CHLORINE TYPE

Cl_2 GAS ☐
Cl_2 LIQUID ☒
Cl_2 CALCIUM HYPOCHLORITE ☐

INITIAL FLUSHING VERIFICATION

PIPE DIAMETER FT	PIPE LENGTH FT	PIPE VOLUME GALLONS	TOTAL GALLONS FLUSHED
3.5 / 2.0	306 / 185	10,170 / 4347	31,034

TOTAL CHLORINE DOSAGE VERIFICATION

SAMPLE LOCATION/ID	TESTED BY	CHLORINATED BY	DOSAGE PPM	TIME	DATE
Sta# 0+90	[illegible]	" " "	50	3:00 PM	7/13/04
Sta# 0+00 - West Vessel Train	" "	" "	60	" "	" "
Sta# 0+00 East Vessel Train	" "	" "	60	" "	" "

TOTAL CHLORINE RESIDUAL VERIFICATION

SAMPLE LOCATION/ID	RETENTION HOURS	RESIDUAL PPM	PASS > 25 PPM	FAIL ≤ 25 PPM	DATE
Sta# 0+90	24	50			7/14/04
Sta# 0+00 West Vessel Train	24	60			" "
Sta# 0+00 East Vessel Train	24	60			" "

FREE CHLORINE RESIDUAL VERIFICATION

PRESSURE ZONE SYSTEM	SYSTEM FREE CL_2 RESIDUAL mg/L	NEW PIPE FREE CL_2 RESIDUAL mg/L
Effluent Line	1 PPM	1 PPM

MICROBIOLOGICAL SAMPLE VERIFICATION

SAMPLE LOCATION/ID	RESULTS PRESENT/ABSENT	TESTED BY	PASS	FAIL	DATE