

Seattle Public Schools
Drinking Water Quality Program

Results of Water Quality Testing
for
Columbia Annex

Updated June 15, 2007

General Information:

Plumbing piping materials: mainly galvanized steel

Remediation plan:

This remediation plan is based on a Water Quality policy approved by the School Board. The policy includes standards for the presence of lead, cadmium, copper, iron and other substances in drinking water.

Status:

Policy Criteria: This school has zero sources that do not meet the policy criteria.

Follow-up monitoring: Will be performed in 2008.

Service: The school will be flushed after any breaks longer than five days.

Water Quality Testing Results:

Legend	
Symbol	Definition
SE	service entry (main)
B	bubbler
S	sink (faucet)
B/S	sink/bubbler combination
S/B	sink/bubbler combination
ppb	parts per billion
ppm	parts per million
NA	not applicable
None	no action required
Unk	unknown status or action
Sample	sample needs to be taken
Re-test	fixture needs to be resampled
Conf	resample to confirm measurement
No flush	not flushed before sampling
Sink	sampled faucet of S/B combo
Used	recently used; no 1st draw sample possible
PS	post sign
Disable(d)	fixture disabled in response to water quality testing
IF	install filter
RB	replace bubbler
RB/IF	replace bubbler and/or install filter
RF	replace faucet
RF/IF	replace faucet and/or install filter
BW	disable fixture and provide bottled water until remediated
Leaks	leaking fixture
NW	not working properly (sample S when B of S/B NW)
OS	out of service - disabled until fixed
RS	return to service - now passes testing
Rem	Removed from system - no longer exists

Table 1. Summary of Results

CURRENT STATUS													
FIXTURE INFORMATION			LEAD		CADMIUM		COPPER		IRON		ARSENIC		OK?
Fixture ID	Type	Location	Pass/Fail	Status	Pass/Fail	Status	Pass/Fail	Status	Pass/Fail	Status	Pass/Fail	Status	Yes/No/Status
01	B	hallway bubbler, bldg. west	P	None	P	None	P	None	P	None	P	None	Yes
02	B	hallway bubbler, bldg. west	P	Rem	P	Rem	P	Rem		Rem	P	Rem	Rem
03	B	hallway bubbler, bldg. west	P	None	P	None	P	None	P	None	P	None	Yes
04	B	hallway bubbler, bldg. east	P	None	P	None	P	None	P	None	P	None	Yes
05	S	kitchen sink, bldg. east	P	None	P	None	P	None	P	None	P	None	Yes
05b	S	Kitchen (L most of 3 sinks on opp side - south)	P	None	P	None	P	None		Sample	P	None	Yes

Table 2. Lead Test Results

Test Results (Lead/Pb, ppb)																						
FIXTURE INFORMATION			Initial Sampling						Follow-up Sampling 1						Follow-up Sampling 2						Summary Status	
Fixture ID	Type	Location	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Pass/Fail	Status
01	B	hallway bubbler, bldg. west	5/20/04	11	<1			RB	1/19/05	4	<1		P								P	None
02	B	hallway bubbler, bldg. west	5/20/04	120	1			Disabled	1/19/05					Rem							P	Rem
03	B	hallway bubbler, bldg. west	5/20/04	12	<1			RB	1/19/05	1	<1		P		5/19/06	<1	<1		P		P	None
04	B	hallway bubbler, bldg. east	5/20/04					RB	1/19/05	2	<1		P								P	None
05	S	kitchen sink, bldg. east	5/20/04	<1	<1		P		1/19/05	1	<1		P								P	None
05b	S	Kitchen (L most of 3 sinks on opp side - south)													5/19/06	2	<1		P		P	None

Table 3. Cadmium Test Results

Test Results (Cadmium/Cd, ppb)																						
FIXTURE INFORMATION			Initial Sampling						Follow-up Sampling 1						Follow-up Sampling 2						Summary Status	
Fixture ID	Type	Location	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Pass/Fail	Status
01	B	hallway bubbler, bldg. west	5/20/04	<1	<1		P		1/19/05	<1	<1		P								P	None
02	B	hallway bubbler, bldg. west							1/19/05					Rem							P	Rem
03	B	hallway bubbler, bldg. west							1/19/05	<1	<1		P		5/19/06	<2	<2		P		P	None
04	B	hallway bubbler, bldg. east							1/19/05	<1	<1		P								P	None
05	S	kitchen sink, bldg. east	5/20/04	<1	<1		P		1/19/05	<1	<1		P								P	None
05b	S	Kitchen (L most of 3 sinks on opp side - south)													5/19/06	<2	<2		P		P	None

Table 4. Copper Test Results

Test Results (Copper/Cu, ppm)																						
FIXTURE INFORMATION			Initial Sampling						Follow-up Sampling 1						Follow-up Sampling 2						Summary Status	
Fixture ID	Type	Location	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Pass/Fail	Status
01	B	hallway bubbler, bldg. west	5/20/04	0.08		0.006	P		1/19/05	0.007	0.003		P								P	None
02	B	hallway bubbler, bldg. west							1/19/05					Rem							P	Rem
03	B	hallway bubbler, bldg. west							1/19/05	0.01	0.002		P		5/19/06	<0.02	<0.02		P		P	None
04	B	hallway bubbler, bldg. east							1/19/05	0.006	0.005		P								P	None
05	S	kitchen sink, bldg. east	5/20/04	0.008			P		1/19/05	0.218	0.01		P								P	None
05b	S	Kitchen (L most of 3 sinks on opp side - south)													5/19/06	0.523	<0.02		P		P	None

Table 5. Iron Test Results

Test Results (Iron/Fe, ppm)																
FIXTURE INFORMATION			Initial Sampling						Follow-up Sampling 1						Summary Status	
Fixture ID	Type	Location	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Pass/Fail	Status
01	B	hallway bubbler, bldg. west	5/20/04	0.35		<0.05	P		1/19/05			<0.05	P		P	None
02	B	hallway bubbler, bldg. west							1/19/05					Rem		Rem
03	B	hallway bubbler, bldg. west							1/19/05			<0.05	P		P	None
04	B	hallway bubbler, bldg. east							1/19/05			0.43	P		P	None
05	S	kitchen sink, bldg. east	5/20/04	1					1/19/05			0.424	P		P	None
05b	S	Kitchen (L most of 3 sinks on opp side - south)												Sample		Sample

Table 6. Service Entry Test Results

Test Results (Service Entry/SE, Units as Shown)						
SOURCE INFORMATION			Most Recent Sampling			
Fixture ID	Type	Location	Item	Sampled	Max Value	Pass/Fail
0.5	SE	bldg. east, basement	Cadmium	20-May-04	1 ppb	P
0.5	SE	bldg. east, basement	Copper	20-May-04	0.007 ppm	P
0.5	SE	bldg. east, basement	E coli	20-May-04	Absent	P
0.5	SE	bldg. east, basement	Iron	20-May-04	0.08 ppm	P
0.5	SE	bldg. east, basement	Lead	20-May-04	1 ppb	P
0.5	SE	bldg. east, basement	Total Coliforms	20-May-04	Absent	P

"<" means: less than the value shown (below analytical detection limits).

"n/a" means: not applicable.

Table 7. Bacteriological Test Results

Bacteriological Characteristics

Bacteriological testing of selected samples indicated no (zero) coliform bacteria.

Table 8. Arsenic Test Results

Test Results (Arsenic/As, ppb)																
SOURCE INFORMATION			Prior to March 2006**						May 2006 and Beyond**						Summary Status	
Fixture ID	Type	Location	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Sampled	1st Draw	Flush 30s	Flush 2m	Pass/Fail	Status	Pass/Fail	Status
01	B	hallway bubbler, bldg. west	1/19/06	<2	<2		P		5/19/06	<2	<2		P		P	None
02	B	hallway bubbler, bldg. west							5/19/06					Rem	P	Rem
03	B	hallway bubbler, bldg. west	1/19/06	<2	<2		P		5/19/06	<2	<2		P		P	None
04	B	hallway bubbler, bldg. east	1/19/06	<2	<2		P		5/19/06	<2	<2		P		P	None
05	S	kitchen sink, bldg. east	1/19/06	<2	<2		P		5/19/06	<2	<2		P		P	None
05b	S	Kitchen (L most of 3 sinks on opp side - south)							5/19/06	<2	<2		P		P	None

Notes: * These results are for the arsenic concentrations measured in the first 250 mL of water from the fountain that has stood in the piping and fixture for several days (a “1st-draw water” sample) and in the 250 mL sample collected after running the fountain for 30 seconds or 2 minutes (“flushed” samples), as applicable. These were “non-standard” sampling protocol.

**These results are from the standard sampling protocol, whereby the 1st-draw sample was collected after 16-18 hours standing time and the flushed sample was collected after 30 seconds of flushing.

ND Less than the analytical detection limit of 2 ppb.