

ENCLOSURE 1

Overview of Testing Results for Lead in Drinking Water and Corrective Actions for Portsmouth Naval Shipyard Building 342 Child Development Center (CDC) and Building H10 Youth Center (YC)

The Navy is committed to maintaining safe drinking water at its installations. Town water supplied to the Navy and the Navy's water distribution system is regularly tested and in compliance with the Safe Drinking Water Act. Because lead exposure is a particular concern for children, and lead may be introduced to drinking water through the pipes, fittings, solder, and fixtures inside a building, the EPA recommends, but does not mandate, that we test the lead content of drinking water in priority areas such as youth centers (YCs), child development group homes (CDGHs) and child development centers (CDCs).

Navy environmental personnel conducted lead testing at the Portsmouth Naval Shipyard in accordance with Navy and EPA guidelines. Samples from various locations in the CDC and YC were sent to a state-certified laboratory for analysis.

At both the CDC and YC outlets used for drinking and cooking, as well as outlets used for hand washing were tested. Out of 32 samples collected, three water outlets located in Building H10 initially tested above the EPA recommended level for lead in drinking water in schools and childcare centers of 20 parts per billion (ppb). One part per billion is equal to one drop of water in an Olympic-size swimming pool.



Two outlets exceeding the EPA-recommended level are in a currently unused area called the “Club House” located on the basement floor of the building. In this area, the kitchen sink faucet tested at 30 ppb and the bathroom faucet tested at 22 ppb. The third exceedance was found in the women’s bathroom sink located on the second floor outside of the theater room. This bathroom is occasionally used by youth for hand washing when movies are shown in the theater.

Follow-up sampling at these three outlets was conducted after inspecting the faucets. Prior to resampling, the aerators were removed and replaced from the two “Club House” faucets; retesting showed that the sink faucet in the bathroom was below the EPA-recommended level while the kitchen faucet remained above 20 ppb. A **faucet aerator** (or tap aerator) is often

found at the tip of modern indoor water faucets. Without an aerator, water usually flows out of a faucet as one big stream. An aerator spreads this stream into many little droplets, which helps save water and reduce splashing. However, the aerator and screen can trap debris which can accumulate lead.



The women's bathroom sink on the second floor had no aerator and was retested without one. Resampling results showed this faucet to remain above 20 ppb. A copy of all test results is enclosed for your information. The test results are presented in two tables:

- Table 1 **Summary of Results** summarizes the data by category of use (e.g., drinking, cooking, washing).
- Table 2 **Summary Statistics** summarizes all the data.

Floor plans of the Portsmouth Naval Shipyard CDC and YC are also included to show the location for the fixtures that exceeded 20 ppb.

Table 1 provides a description of each sampling location using three columns; *Category*, *Sampling ID*, and *Outlet Description*. The *Category* column gives information about whether the outlet is used for drinking water (water fountain), cooking (food preparation), or washing (primarily hand-washing). The *Sample ID* column is the identification used to label each sample bottle. The *Outlet Description* column contains additional information to describe the outlet sampled under each category.

The next set of columns in **Table 1** provides *Initial Sampling Results*, and for those locations that exceeded the recommended level of 20 ppb the *Re-sampling Results*.

EPA sampling protocol requires water to not be used for between 8 and 18 hours prior to first draw sampling. Therefore, *Initial Sampling Results* were from first draw samples collected early in the morning before the CDC or YC opened and before any water was used. The *Initial Sampling Results* also indicate whether resampling was required and the date that fixtures greater than 20 ppb were secured. Outlets that exceeded 20 ppb are highlighted in yellow.

The *Re-sampling Results* includes columns for *First Draw* and flushing samples which help determine the source of lead. For cooking and washing outlets, aerators were removed before retesting:

- If the lead concentration of the 30 second flush sample resulted in lower than 20 ppb lead, the aerator was the source of lead and the outlet can be used for drinking if the aerator is cleaned or replaced. ***The sink in the YC Club House bathroom fits in this category. This aerator has been replaced.***
- If the lead concentration of the resampled first draw (but not the follow up 30 second flush) was greater than 20 ppb, the fixture was the source of lead. These fixtures can be used if water is flushed for 30 seconds before first use of the day or if the fixtures are replaced and retesting confirms that the new fixtures do not leach lead. ***The Club House kitchen sink (basement floor) and the women's bathroom sink (second floor) are in this category. The faucets and shut off valves are being replaced.***
- If the lead concentration of the 30 second flush sample was greater than 20 ppb and greater than the lead concentration of the first draw resample, the source of lead is the

plumbing upstream of the outlet. These outlets should be disconnected unless upstream plumbing is replaced. ***No water outlets tested in this category.***

The *Corrective Actions* column describes actions that were taken to remediate the source of lead. In the event that fixtures or upstream piping are replaced, there are columns for sampling data that confirms that the corrective actions were successful in reducing lead below 20 ppb.

To learn more about lead in drinking water schools and day care centers visit this EPA website at: http://water.epa.gov/drink/info/lead/schools_index.cfm.

To learn more about your home's public water supplier, see their annual water quality report:

- Kittery, ME: <http://kitterywater.org>
- Berwick, ME: http://www.berwickmaine.org/index.asp?SEC=8783B20E-38B7-4179-A0F8-A51B44D32726&Type=B_BASIC
- Portsmouth, NH: <http://cityofportsmouth.com/publicworks/waterqualityreports.htm>

Navy Water Quality Reports:

http://www.cnrc.navy.mil/regions/cnrma/om/environmental_support/drinking_water.html

To answer any questions you may have on the sampling program contact the Portsmouth Naval Shipyard Public Affairs Officer Danna Eddy at 207-438-1525 or danna.eddy@navy.mil. If you have any health questions or concerns, we encourage you to contact your health care provider or, if you are a TRICARE beneficiary, contact the Mid-Atlantic Nurse Advice Line (1-800-TRICARE, press option 1) or use the PNS Naval Branch Health Clinic Appointment Center to schedule an appointment with your primary care provider at 888-628-9633.

ENCLOSURE 2

Priority Areas Lead Testing and Corrective Actions Portsmouth Naval Shipyard Child Development Center and Youth Center Buildings 342 and H10

Table 1. Summary of Results

SAMPLING LOCATION DESCRIPTION			INITIAL SAMPLING RESULTS			RE-SAMPLING RESULTS			CORRECTIVE ACTIONS		POST REMEDIATION SAMPLING RESULTS	
CATEGORY Water Intended For:	SAMPLE ID No.	Outlet Description	First Draw (ppb)	Retest required?	Date Fixture Secured? (See Note 1)	Recommended Level = 20ppb			Description	Recommended Level = 20ppb		
						Water Fountain 15 min. Follow up Flush Sample - Collected day before First Draw Sampling (ppb)	First Draw (ppb)	Follow up Flush - Collected 30 seconds after First Draw Sampling (ppb)		First Draw (ppb)	Follow up Flush - Collected 30 seconds after First Draw Sampling (ppb)	
SAMPLING DATE			9/5/2014			N/A	9/16/2014	9/16/2014				
RESULTS DATE			9/15/2014			N/A	9/19/2014	9/19/2014				
DRINKING	1	Staff bathroom opposite front desk	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRINKING	2	Water fountain (cooler)	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRINKING	4	Room 175 kitchen sink for food prep	2	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRINKING	9	Room 179 water fountain from combination sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRINKING	13	Room 181 kitchen sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRINKING	19	Room 185 water fountain from combination sink	1	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRINKING	23	Room 187 water fountain from combination sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRINKING	32	Room 176 water fountain from combination sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
COOKING	25	Room 186 kitchen sink for dishwashing, food prep	1	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
COOKING	26	Room 186 kitchen sink for dishwashing, food prep	3	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
COOKING	27	Room 186 kitchen sink for dishwashing, food prep	22	YES	9/12/2014	N/A	10	2	Results were below recommended level after removal of aerator. Additional corrective actions are not required.	N/A	N/A	
COOKING	28	Room 186 kitchen sink for dishwashing, food prep	19	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	3	Restroom A hand washing sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	5	Room 175 hand washing sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	8	Room 179 hand washing outlet from combination sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	10	Room 179 hand washing sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	11	Room 179 hand washing sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	12	Restroom B hand washing sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	16	Room 185 hand washing sink	3	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	17	Room 185 hand washing sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	18	Room 185 hand washing outlet from combination sink	3	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	20 (sampled 9/10/14)	Room 187 hand washing sink	3	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	21	Room 187 hand washing sink	6	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	22	Room 187 hand washing outlet from combination sink	3	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	29	Room 186 hand washing sink	5	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	30	Room 176 hand washing sink	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING/TEETHBRUSHING	31	Room 176 hand washing and teeth brushing outlet	non-detect	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASHING	33	Room 176 hand washing sink	1	NO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

Notes:

¹ Affected outlets were immediately secured after receiving verbal communication from the lab on results exceeding the recommended level of 20ppb.

Table 2. Summary Statistics

CATEGORY	INITIAL SAMPLING RESULTS		RE-SAMPLING RESULTS		POST REMEDIATION RESULTS
	First Draw	Water Fountain Follow up Flush Sample - Collected day before First Draw Sampling	Recommended Level = 20ppb		First Draw
			First Draw (ppb)	Follow up Flush - Collected 30 seconds after First Draw Sampling	
Total Drinking	8	0	0	0	-
Total Drinking > 20 ppb	0	0	0	0	-
Total Cooking	4	0	1	0	-
Total Cooking > 20 ppb	1	0	0	0	-
Total Washing/Brushing	16	0	0	0	-
Total Washing/Brushing > 20 ppb	0	0	0	0	-
Total Samples	28	0	1	3	-
Total Samples > 20 ppb	1	0	0	0	-

ENCLOSURE 3

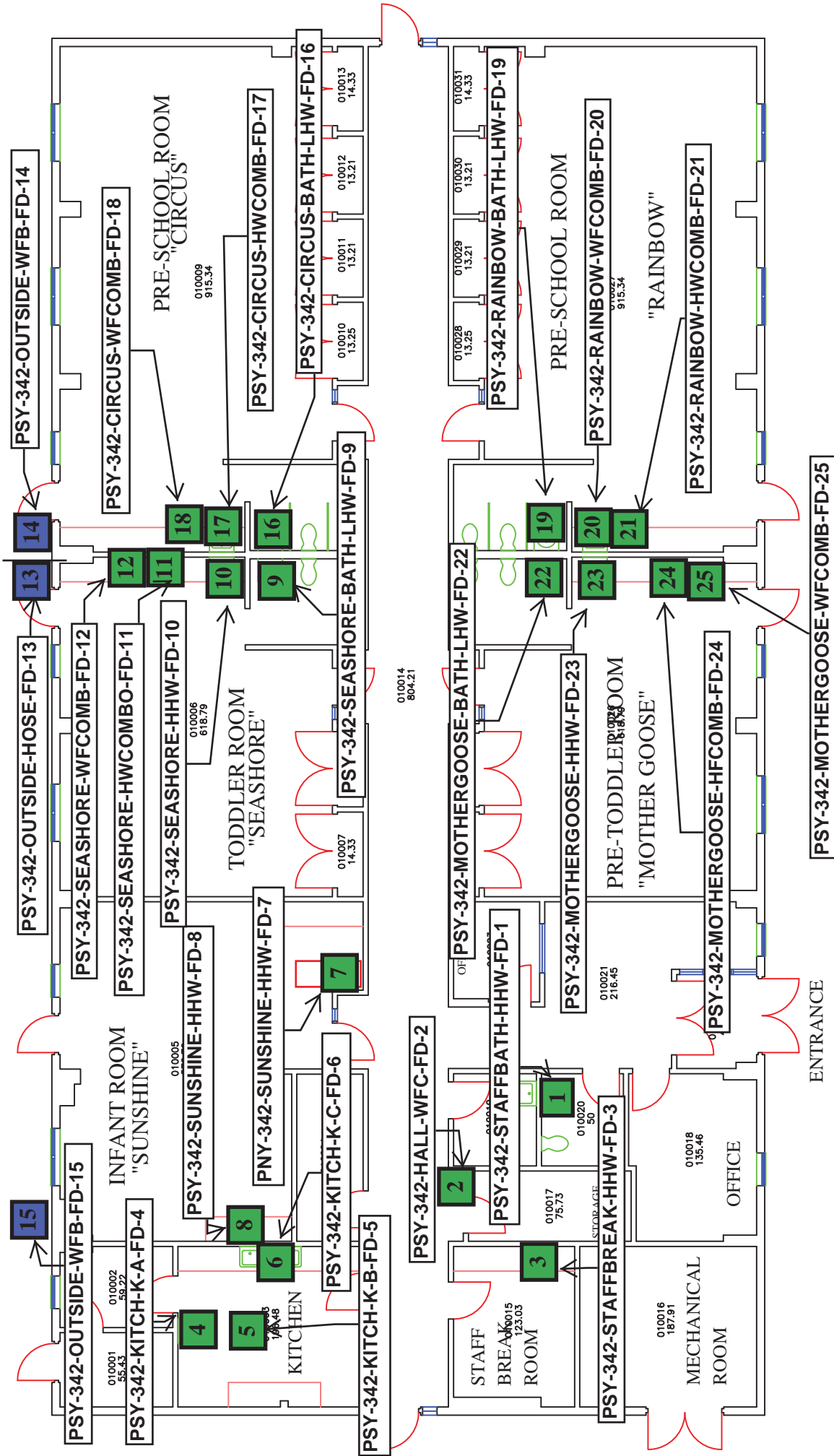
BUILDING 342

PORTSMOUTH NAVAL SHIPYARD

CHILD DEVELOPMENT CENTER

FLOOR PLAN ILLUSTRATING RESULTS

- **3 OUTSIDE OUTLETS NOT SAMPLED**
- **22 INTERIOR OUTLETS SAMPLED – ALL TESTED < 20 PPB**



RED = ABOVE 20 ppb

GREEN = BELOW 20 ppb

BLUE = NOT SAMPLED

TOTAL SAMPLES ANALYZED = 23



Scale: GRAPHIC



1 BUILDING 342 - FIRST FLOOR PLAN

PORTSMOUTH NAVAL SHIPYARD
CHILD DEVELOPMENT CENTER (CDC)

BUILDING H10

PORTSMOUTH NAVAL SHIPYARD

YOUTH CENTER

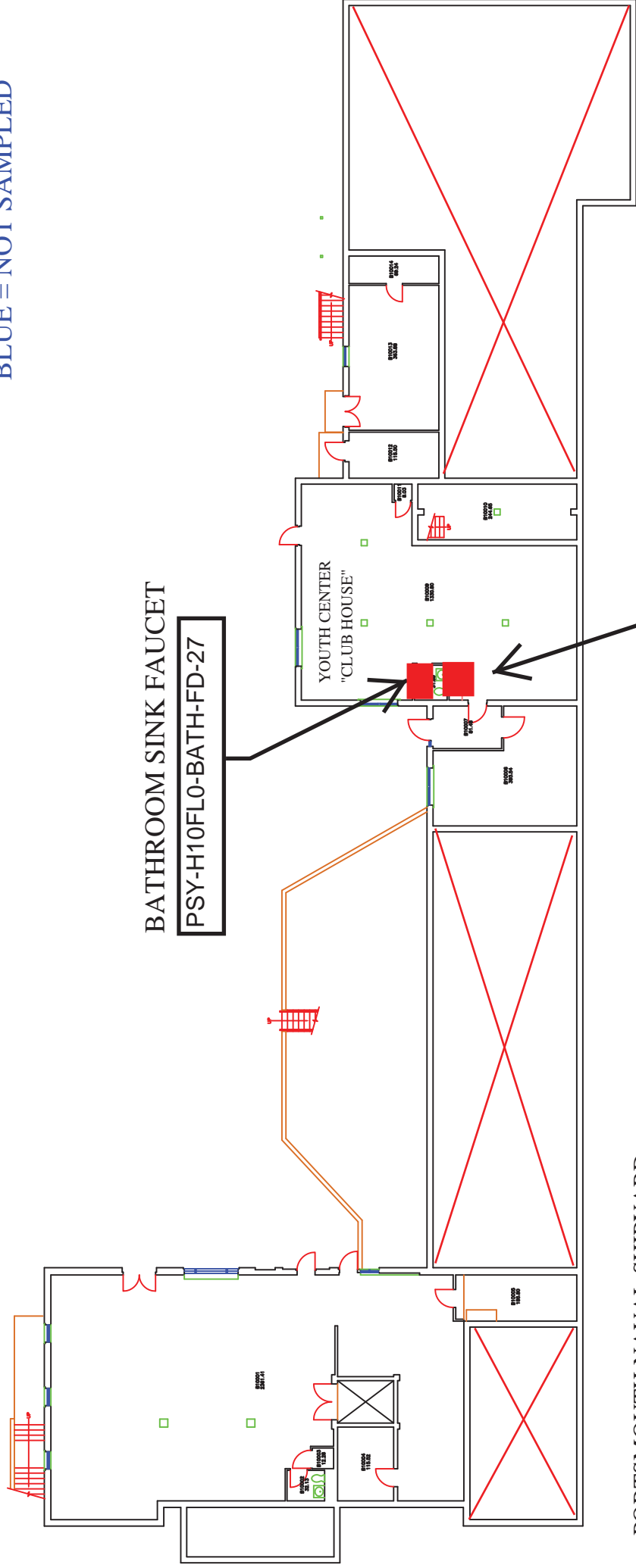
FLOOR PLANS ILLUSTRATING RESULTS

- **FLOOR 0 (BASEMENT LEVEL): 2 OUTLETS SAMPLED; BOTH > 20 PPB**
- **FLOOR 1 (YOUTH CENTER): 5 OUTLETS SAMPLED; ALL < 20 PPB**
- **FLOOR 2 (THEATER AREA): 3 OUTLETS SAMPLED; 1 > 20 PPB AND 2 < 20 PPB**

BUILDING H10 YOUTH CENTER (CURRENTLY NOT IN USE)
 FLOOR 0 - BASEMENT LEVEL

CLUB HOUSE ROOM

RED = ABOVE 20 ppb
 GREEN = BELOW 20 ppb
 BLUE = NOT SAMPLED



BATHROOM SINK FAUCET

PSY-H10FLO-BATH-FD-27

PSY-H10FLO-K-FD-26

KITCHEN SINK FAUCET

PORTSMOUTH NAVAL SHIPYARD
 YOUTH CENTER



Scale: GRAPHIC

BUILDING H10 YOUTH CENTER FLOOR ONE

RED = ABOVE 20 PPB

GREEN = BELOW 20 PPB

BLUE = NOT SAMPLED

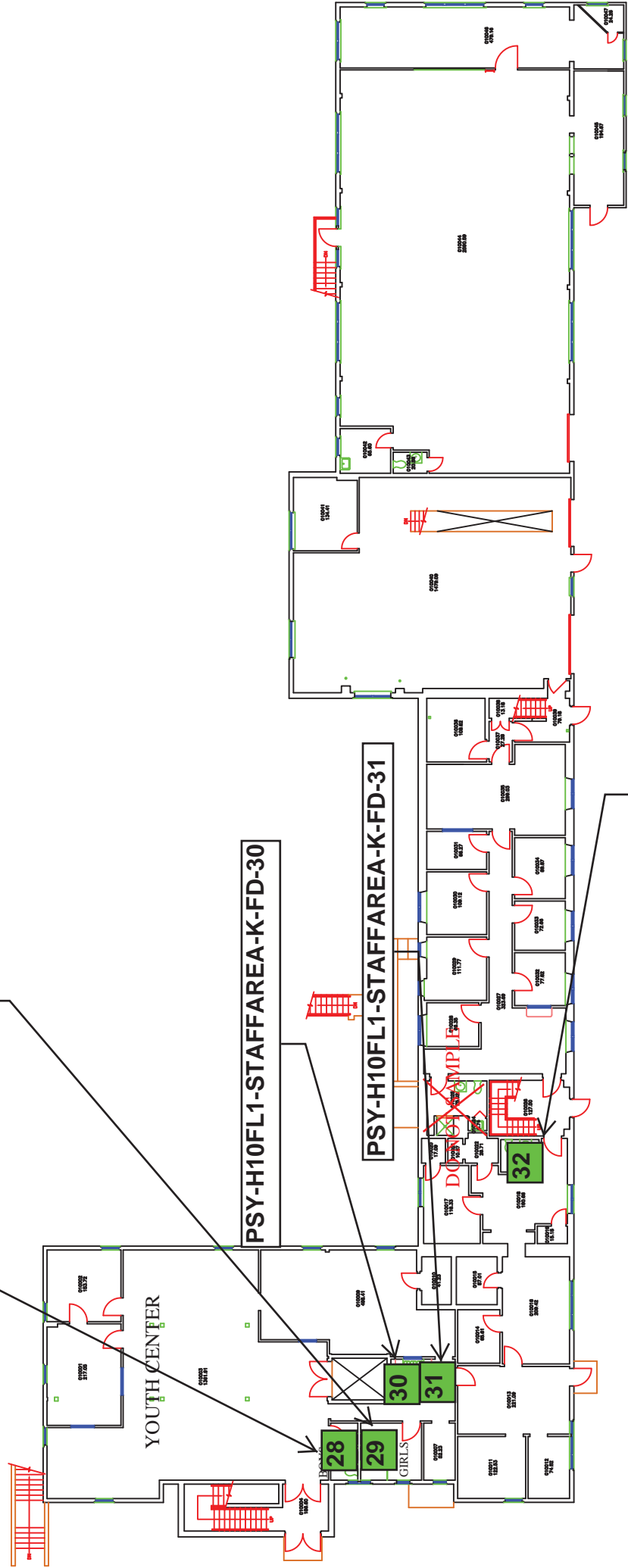
PSY-H10FL1-BOYSBATH-HHW-FD-28

PSY-H10FL1-GIRLSBATH-HHW-FD-29

PSY-H10FL1-STAFFAREA-K-FD-30

PSY-H10FL1-STAFFAREA-K-FD-31

PSY-H10FL1-STAFFBATH-HHW-FD-32

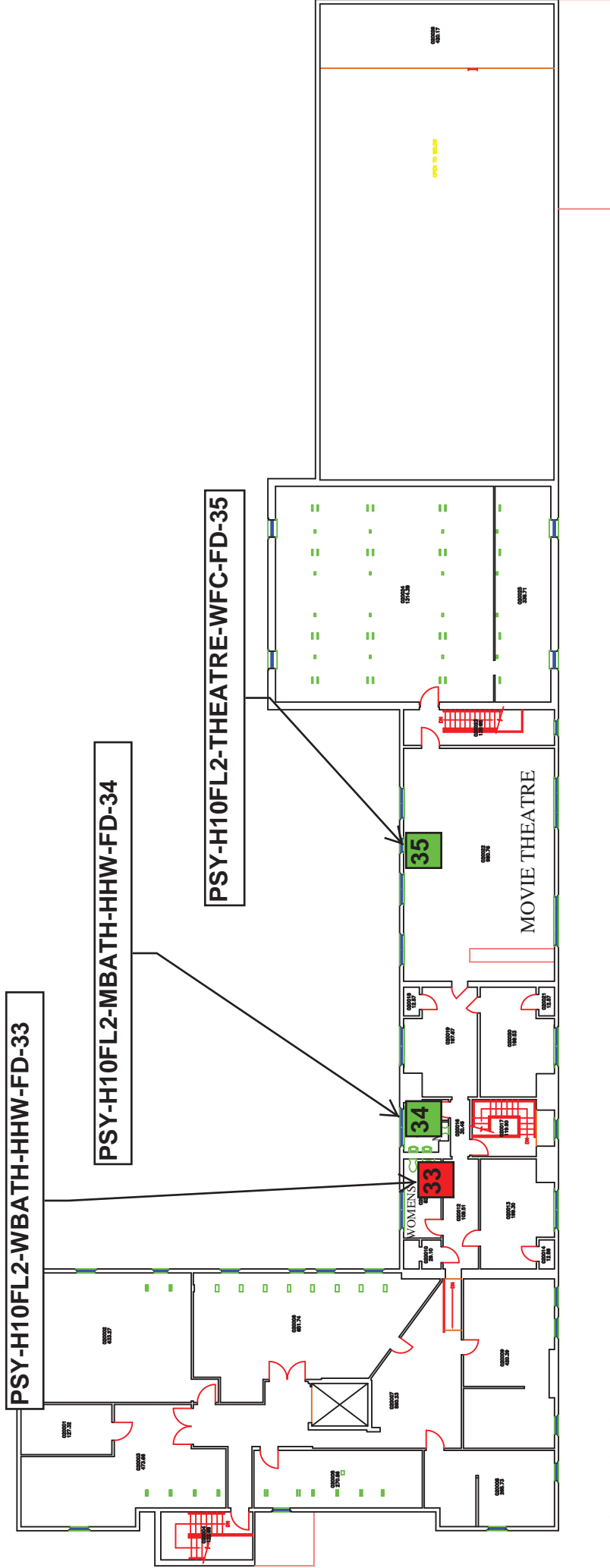


PORTSMOUTH NAVAL SHIPYARD
YOUTH CENTER



BUILDING H10 YOUTH CENTER
FLOOR TWO

RED = ABOVE 20 ppb
GREEN = BELOW 20 ppb
BLUE = NOT SAMPLED



PORTSMOUTH NAVAL SHIPYARD
YOUTH CENTER



Scale: GRAPHIC