



Lead in Priority Areas Report

Naval Air Station Sigonella, Italy

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Environmental

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INTERNAL COMPLIANCE RECORD DRAFT

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EXECUTIVE SUMMARY

This Lead in Priority Areas (LIPA) Report satisfies the requirements from OPNAV N45 Memorandum “Sampling and Testing for Lead in Drinking Water in Priority Areas”, dated 8 Feb 2014, which provided additional guidance on implementation of the OPNAV M-5090.1 requirements on sampling and testing of lead in drinking water in priority areas at Navy installations worldwide.

Initial water sampling for lead was performed at 396 sample locations throughout the priority areas. From the initial sampling results, 16 fixtures exceeded the screening level.

Each of the 16 sample locations that exceeded the initial screening level of 20 parts per billion (ppb) were further sampled following the EPA’s 3Ts protocol for “follow-up flush sampling”, including “Alternative Step 2”. In addition one location was resampled due to high turbidity in the original sample. A resampling SOP conforming to the EPA protocol was developed by NASSIG Environmental Division and was followed for all resampling events. Results showed 7 out of the 17 follow-on sample locations exceeded the screening level, six initial draw samples and one 30 second flush sample. In addition three sample locations testing between 15 and 20 ppb were directed to be mitigated by NAVFAC EURAFSWA Drinking Water Program Manager.

The ten sinks that were to be replaced based on the resampling results were tested with lead check swabs in accordance with the manufacturer’s specifications. The lead swab tests showed that some of the solder and fixtures contained low levels of lead.

All fixtures were replaced, including the valves on two of the fixtures. The fixtures were then passivated (flushed for 30 minutes daily for approximately one week). Upon completion all fixtures tested below the 20 ppb screening level.

INTRODUCTION

OPNAV N45 Memorandum “Sampling and Testing for Lead in Drinking Water in Priority Areas”, dated 8 Feb 2014, updated policy from OPNAV M-5090.1 on sampling and testing of lead in drinking water in priority areas at Navy installations worldwide: “There is no federal law or DoD policy requiring schools or child care facilities to test drinking water for lead unless the school/facility is a public water system. However, the health and safety of all of our Navy family is a top priority of Navy’s uniformed and civilian leadership. Because children are most susceptible to the effects of lead, it is Navy policy to meet U.S. Environmental Protection Agency (EPA) guidelines for testing and sampling of water from drinking water fountains, faucets, and other outlets from which children may drink, including schools and child care facilities.”

The most common sources of elevated lead in drinking water can be from water use patterns, water chemistry, or leaching from lead containing fixtures or solder as water passes through the distribution system and water lines. The NAS Sigonella water distribution system remains in full compliance with EPA’s Safe Drinking Water Act standards and has been verified by our January 2014 EPA Lead and Copper Rule water sample results to meet the water quality standard for lead.

The Navy directed following EPA guidance on Lead in Priority Areas (LIPA) to proactively ensure maximum protection of the NAS Sigonella community and to ensure our water quality through additional testing. The best method to determine if a facility has elevated lead levels in the drinking water is by testing the water at each tap. EPA published guidance for both schools and day care centers titled, “3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance, October 2006” and “3Ts for Reducing Lead in Drinking Water in Child Care Facilities: Revised Technical Guidance, October 2006”. The EPA Guidance on priority areas consists of the “3Ts for Reducing Lead”. The 3Ts are, “Training, Testing, and Telling”. Both of these guidance documents serve as the protocol for testing at NASSIG and include development of a sampling plan, interpreting results to pinpoint specific outlets that require corrective action, short and long term remedies, and communication of sampling results.

At NAS Sigonella, the term “Priority Areas” refers to the primary and secondary schools (DoDDs Elementary/Middle/High School), the Child Development Center (CDC), School Age Care (SAC), Marinai Youth Center, library, NEX Food Court, NAS I Gym, and Midtown complex. In total 396 sample locations were identified and sampled in accordance with the instruction.

The OPNAV Instruction directs all Navy installations to implement a three-step program for sampling and testing drinking water in priority areas following the EPA guidance; along with any policy or guidance issued by the Commander Navy Installations Command; the Navy Executive Agent for drinking water. The three steps are as follows:

1. Step 1: Installations shall perform sampling and testing of the following water outlets in priority areas to establish a baseline. These include all types of drinking fountains, kitchen sinks, home economic room sinks, teacher’s lounge sinks, nurse’s office sinks, classroom sinks, and bathroom faucets. Utility sinks, hose attachments, and outdoor outlets are to be tested if used for filling water jugs (e.g. for sports team practice). Also, any sink known to be or visibly used for consumption. Step 1 testing shall be completed in all priority areas by 31 December 2014.
2. Step 2: Consists of sampling and testing of water outlets in newly constructed or modified priority areas.
3. Step 3: Consists of periodic retesting and sampling of all outlets in Step 1. Periodic testing shall be accomplished every five years from the established baseline.

This report documents completion of Step 1.

TRAINING

Awareness of the importance of lead in drinking water has been a subject of focus at NAS Sigonella, as the Installation Water Quality Board (IWQB) strives to ensure the community enjoys water that always meets the same EPA water quality standards that are used in the United States. Through the IWQB and in conjunction with the Public Affairs Officer (PAO), the community was informed when the sampling was planned, and the OPNAV driver and the EPA guidance that was used were explained. The community was informed of the results of the initial screening and that corrective actions were ongoing via Facebook message, *The Signature* article, and all hands e-mail. The community will be made aware of the final results and notified that all corrective actions have been taken; additionally in accordance with EPA guidance and OPNAV, all sampling results are available to the public.

Education will continue to be provided through the IWQB and PAO. The annual consumer confidence reports (CCRs) will also include educational material relating to lead. This will help us to ensure the community remains well protected and enjoys safe and healthy drinking water during their stay in Sicily.

TESTING

Assessment and Strategy

Plumbing Profile and Sampling Plan

In accordance with the EPA 3Ts guidance, an assessment of historical data on lead in drinking water at the priority areas of NAS Sigonella was initiated and revealed zero historical lead water concentration concerns or violations for previous water sampling conducted under the lead and copper rule. The LIPA sampling process is more conservative than the lead and copper rule sampling process, and therefore, the LIPA screening level of 20 ppb is different than the lead and copper rule maximum contaminant limit (MCL) of 15 ppb.

Determining Sample Locations

Every water tap identified within these child occupied facilities that had the potential to be used for water consumption by children was tested as part of the LIPA program. The table of sample locations and results is provided for review in Appendix A of this report.

Lab Analysis of Samples

All water samples collected in the priority areas assessment were sent to the United States Army – Public Health Command (USA-PHC) Region Europe certified laboratories for analysis. Lead analysis was performed for each sample submitted using EPA Method 200.8.

Initial Sampling and Results

Initial water sampling for lead occurred at 396 sample locations identified as priority areas in accordance with the CNIC and EPA guidance. Sampling occurred during the months of November and December 2014 with all samples going to the USA-PHC Region Europe certified lab for analysis. Sampling protocol was followed from the EPA 3Ts for Reducing Lead in Drinking Water in Schools Revised Technical Guidance. Specifically the protocol included flushing the tap for 10 minutes, then holding water undisturbed in the line for 8-18 hours, and then drawing the first draw water into the 250 mL sample bottle. For quality control, a field record was taken for each sample to document protocol was followed and recorded for future reference.

From the initial sampling event, 16 results exceeded the screening level, and one sample was not able to be analyzed by the laboratory due to high turbidity. These fixtures were placed out of service and were not returned to use until mitigation and follow up sampling was complete.

Follow-Up “Flush” Sampling and Results

Each of the 16 sample locations that exceeded the initial screening level of 20 ppb and the one sample location that was not able to be tested due to high turbidity were further sampled following the EPA’s 3Ts protocol for “follow-up flush sampling” including alternative option 2. The resampling event used a method to determine if the lead contamination results are from the fixture, the aerator, or the piping. On

the evening of 30 January, each aerator, if present, was removed, rinsed, and cleaned with a soft brush prior to flushing the fixture in accordance with the 3Ts guidance. After flushing each fixture was secured from use for approximately 15 hours, which was within the recommended 8-18 hour range. On the morning of 31 January, a second first draw sample was collected from each fixture following the same protocol as the initial sampling. Without turning the fixture off and 30 seconds after the fixture was turned on, a second sample was taken from each location. The samples were sent to the USA-PHC Europe Region for analysis at their certified laboratory.

Results showed six of the second first draw samples and one of the 30 second flush samples exceeded the screening level. The sampling results indicated that for the majority of the locations, 9 of 16, the elevated lead concentrations were a result of the aerators. At 6 of 16 locations, the fixture and local piping was the source of elevated lead levels, and at one location the building piping was a potential source of elevated lead. Sampling did not indicate that the water itself was a probable source of lead.

Mitigation Strategies

Lead swab samples were taken from locations that were as close as possible to the tap locations which exceeded the screening level. In almost all cases, there was no solder to test on the water lines below the sinks, as threaded connections were used instead of solder from the wall and to the fixtures. There were four fixtures that showed elevated levels of lead from the testing.

Based on the lead swab results and the results of the first two rounds of samples, the fixtures were replaced at the seven locations that tested above the 20 ppb limit after the aerator maintenance. Additionally NAVFAC EURAFSWA Drinking Water Manager directed that all fixtures testing above 15 ppb be replaced. In all nine fixtures at the Child Development Center (CDC) and three at DoDDs were replaced. The CDC fixtures were resampled on 24 March 2015, in accordance with the follow-up flush sampling procedures because one flush sample had elevated levels. DoDDs fixtures were sampled on 19 June 2015 following the initial sampling method because no flush samples had elevated levels. Fixture replacement was successful for all but one fixture at both the CDC and DoDDs. Investigations were conducted and identified the sink connection valve as the source of lead. Valves were replaced at both locations and following tests showed results below 20 ppb.

The best management practice of flushing new fixtures was also completed at the one remaining DoDDs and CDC sink to accelerate natural passivation. Passivation refers to the natural process of coating the plumbing with scale, which occurs through chemical interactions with the water. This practice consisted of flushing each fixture for 30 minutes a day for approximately one week.

After the test results for a fixture indicated that the mitigation was successful, the fixture was returned to service.

TELLING

Informing the NASSIG Community about Lead

NASSIG was engaged with the stakeholders from the beginning of this effort to ensure that instructional and transparent communication about lead testing was provided. An article was released to the NASSIG

Community in the NASSIG Paper, *The Signature*, in the 19 September 2014 issue (A copy of the article is located in Appendix B and is available at the link below.).

http://issuu.com/nas_sigonella/docs/sigo_web_sept19

Communication of Results

Upon receiving the initial results, a letter and fact sheet was drafted with concurrence from the Installation Water Quality Board, Public Affairs Office, and PWD Environmental Office. The letter was released via All-Hands Message, an article in the NASSIG Paper, *The Signature* 23 January 2015 issue (a copy of which is located in Appendix C and is available at the link below), and via Facebook.

http://issuu.com/nas_sigonella/docs/new_23january2015

A summary of the final sampling results is available in the appendices of this report and on the NASSIG CNIC website, and an article will be published in an upcoming issue of *The Signature* notifying consumers that this report is available for review. The complete sampling records are available by contacting Rachel Methvin, P.E., NAS Sigonella Drinking Water Program Manager: DSN: 624-7220; rachel.methvin@eu.navy.mil.

Follow Up

Upon completion of the Baseline LIPA Sampling and rectifying all non-conforming fixtures, an aerator maintenance program will be initiated for all priority areas and the next round of sampling will be held in FY17 as directed by the CNREURAFSWA Regional Water Quality Board. Sampling will occur ahead of the EPA recommended five year sampling cycle.

APPENDIX A: Sampling Results

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000199	314	Sig-B314-skyrm-1	0.0053
2015000200	314	Sig-B314-bathroom-1	0.0015
2015000201	314	Sig-B314-bathroom-2	0.0016
2015000202	314	Sig-B314-bathroom-3	0.0019
2015000203	314	Sig-B314-staff-1	0.0008
2015000204	314	Sig-B314-staff-2	0.0017
2015000205	314	Sig-B314-1step-1	0.028
2015000206	314	Sig-B314-1step-2	0.022
2015000207	314	Sig-B314-1step-3	0.016
2015000208	314	Sig-B314-1step-4	0.049
2015000209	314	Sig-B314-bloss-1	0.0086
2015000210	314	Sig-B314-bloss-2	0.0067
2015000211	314	Sig-B314-bloss-3	0.008
2015000212	314	Sig-B314-RM6-1	0.025
2015000213	314	Sig-B314-RM6-2	0.044
2015000214	314	Sig-B314-RM7-2	0.012
2015000215	314	Sig-B314-RM7-1	0.0085
2015000216	314	Sig-B314-forest-1	0.003
2015000217	314	Sig-B314-forest-2	0.0052
2015000218	314	Sig-B314-forest-3	0.0044
2015000219	314	Sig-B314-forest-4	0.0057
2015000220	314	Sig-B314-summer-1	0.012
2015000221	314	Sig-B314-summer-2	0.0076
2015000222	314	Sig-B314-summerR-3	0.007
2015000223	314	Sig-B314-summerR-4	0.027
2015000224	314	Sig-B314-summerL-1	0.0059
2015000225	314	Sig-B314-summerL-2	0.017
2015000226	314	Sig-B314-summerL-3	0.0083
2015000227	314	Sig-B314-summerL-4	0.016
2015000228	314	Sig-B314-trop2-1	0.0034
2015000229	314	Sig-B314-trop2-2	0.0041
2015000230	314	Sig-B314-trop2-3	0.0038
2015000231	314	Sig-B314-janitor-1	0.0012
2015000232	314	Sig-B314-trop-1	0.0005
2015000233	314	Sig-B314-trop-2	0.0007
2015000234	314	Sig-B314-trop-3	0.0008
2015000235	314	Sig-B314-tadpole-1	0.0023
2015000236	314	Sig-B314-tadpole-2	0.0012
2015000237	314	Sig-B314-tadpole-3	0.0018
2015000238	314	Sig-B314-tadpole-4	0.0024
2015000239	314	Sig-B314-spring-2	0.0025
2015000240	314	Sig-B314-spring-1	0.0028
2015000241	314	Sig-B314-spring-3	0.0012
2015000242	314	Sig-B314-laundry-1	0.023
2015000243	314	Sig-B314-kitchen-1	0.0006
2015000244	314	Sig-B314-kitchen-2	0.0016

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000245	314	Sig-B314-kitchen-3	0.0007
2015000246	314	Sig-B314-sky-4	0.0056
2015000247	314	Sig-B314-sky-3	0.0042
2015000248	314	Sig-B314-sky-2	0.005
2015000249	225	Sig-B225-Subway-1	0.0064
2015000250	225	Sig-B225-Subway-2	0.0002
2015000251	225	Sig-B225-Femhead-2	0.0016
2015000252	225	Sig-B225-Femhead-1	0.0007
2015000253	225	Sig-B225-malhead-1	0.0008
2015000254	225	Sig-B225-malhead-2	0.0004
2015000255	220	3FH-02	0.0004
2015000256	220	BOYSLROOM-1	0.0027
2015000257	220	BOYSLROOM-2	0.0015
2015000258	220	BOYSLROOM-3	0.0018
2015000259	220	BOYSLROOM-4	0.0013
2015000260	220	BOYSLROOM-5	0.0003
2015000261	220	BOYSLROOM-6	0.0009
2015000262	220	BOYSLROOM-7	0.0012
2015000263	220	BOYSLROOM-8	0.0007
2015000264	220	BOYSLROOM-9	0.0017
2015000265	220	BOYSLROOM-10	0.0083
2015000266	220	BOYSLROOM-11	0.0057
2015000267	220	BOYSLROOM-12	0.0028
2015000268	220	BOYSLROOM-12	0.0033
2015000269	220	BOYSRESTRM-01	0.0081
2015000270	220	BOYSRESTRM-02	0.0037
2015000271	220	BOYSRESTRM-03	0.0047
2015000272	220	GFHALL-01	0.001
2015000273	220	GFHALL-02	0.0011
2015000274	220	GIRLSBATHRM-1	0.0074
2015000275	220	GIRLSBATHRM-2	0.0024
2015000276	220	GIRLSBATHRM-3	0.0091
2015000277	220	GIRLSROOM-3	0.0043
2015000278	220	GIRLSROOM-4	0.0023
2015000279	220	GIRLSROOM-5	0.0025
2015000280	220	GJR-01	0.0002
2015000281	220	GJR-02	0.0017
2015000282	220	GJR-S3	0.0006
2015000283	220	GJR-S5	0.0007
2015000284	220	GJR-S6	0.0017
2015000285	220	GJR-S7	0.001
2015000286	220	GJR-S8	0.0006
2015000287	220	GRNDGIRLSLSHR-1	0.0006
2015000288	220	GRNDGIRLSLSHR-2	0.0006
2015000289	220	GRNDGIRLSLSHR-4	0.0009
2015000290	220	GYMFOUNTAIN-1	0.0002

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000291	220	GYMFOUNTAIN-2	0.0007
2015000292	220	HALL-01	0.0007
2015000293	220	HALL-02	0.0023
2015000294	220	JANCLOSET-1	0.0009
2015000295	220	MALERESTROOM	0.0015
2015000296	220	PREPROOM-01	0.05
2015000297	220	RM136-1	0.0014
2015000298	220	RM141-2	0.002
2015000299	220	R23754-01	0.0003
2015000300	220	R239-1	0.002
2015000301	220	RESTROOM-01	0.001
2015000302	220	RM135-1	0.0019
2015000303	220	RM141-1	0.0007
2015000304	220	RM237-1	0.0057
2015000305	220	RM237-2	0.0019
2015000306	220	ROOM032-1	0.0004
2015000307	220	ROOM032-2	0.0008
2015000308	220	ROOM133-1	0.001
2015000309	220	ROOM137-1	0.0005
2015000310	220	ROOM240-1	0.032
2015000311	220	ROOM240-2	<0.005
2015000312	220	WRESTRMNHALL	<0.005
2015000313	216	KITCHEN-10	<0.005
2015000314	211	3RDFLOORHALLWA	<0.005
2015000315	211	3RDFLRGIRLSREST	<0.005
2015000316	211	BOYSBATHROOM-1-	<0.005
2015000317	211	CUSTODIAL-1	<0.005
2015000318	211	DF-01	<0.005
2015000319	211	LDF-01	<0.005
2015000320	211	R050D-01	<0.005
2015000321	211	STAFFBATHROOM-1	<0.005
2015000322	213	KITCH31-1	<0.005
2015000323	213	R06-1	<0.005
2015000324	213	R11-01	<0.005
2015000325	213	R11-02	<0.005
2015000326	213	R21-1	<0.005
2015000327	213	R26-01	<0.005
2015000328	213	R26-02	<0.005
2015000329	213	R36-03	<0.005
2015000330	213	R5-01	<0.005
2015000331	213	RM26-03	<0.005
2015000332	213	RM31-1	<0.005
2015000333	213	RM31-2	<0.005
2015000334	213	RM36-4	0.0099
2015000335	213	RM9-1	0.0002
2015000336	213	ROOM18-1	0.0004

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000337	213	TOILET07-1	0.0008
2015000338	213	TOILET08-1	0.0004
2015000339	213	TOILET22-1	0.0014
2015000340	216	CAFEBOYSROOM-1	0.01
2015000341	216	CAFEBOYSROOM-2	0.0038
2015000342	216	CAFETERIA-1	0.006
2015000343	216	CAFETERIA-2	0.007
2015000344	216	CAFJANCLOSET-1	0.0023
2015000345	216	GALLEY-3	ANP
2015000346	216	GALLEY-4	0.0019
2015000347	216	GALLEY-6	0.0018
2015000348	216	GALLEY-6-1	0.0024
2015000349	216	GALLEY-7	0.023
2015000350	216	JC2F-01	0.0018
2015000351	216	KITCHEN-9	0.0047
2015000352	216	KITBATHROOM-1	0.0029
2015000353	216	KTCH-02	0.1
2015000354	216	KTCN-01	0.0038
2015000355	216	KTCN-08	0.0028
2015000356	216	ROOM304-1	0.0039
2015000357	218	R113-01	0.0006
2015000358	218	R213-01	0.0034
2015000359	218	TFLRGIRLSRRM-02	0.001
2015000360	218	1STFLGIRLSBARM-1	0.0009
2015000361	218	1STFLGIRLSBARM-2	0.0008
2015000362	218	1STFLHALLWAY-1	0.0004
2015000363	218	1STFLHALLWAY-2	0.0011
2015000364	218	2FDF-01	0.0003
2015000365	218	2FDF-02	0.0002
2015000366	218	2NDFLGIRLSBRM-11	0.0011
2015000367	218	2NDFLGIRLSBRM-2	0.0017
2015000368	218	2NDFLGIRLSBRM-3	0.0007
2015000369	218	2NDFLGIRLSRM-1	0.0027
2015000370	218	2NDFLSTAFFBARM-1	0.0011
2015000371	218	BB-01	0.0005
2015000372	218	BB-01(2FLR)	0.0015
2015000373	218	BB-02	0.0027
2015000374	218	BB-02(FL)	0.0009
2015000375	218	BB-03	0.0006
2015000376	218	BB-03(2FLR)	0.0004
2015000377	218	BBROOM-1-2NDFL	0.0003
2015000378	218	BBROOM-2-2NDFL	0.0009
2015000379	218	BOYSRESTROOM-01	0.0028
2015000380	218	BOYSRESTROOM-02	0.0007
2015000381	218	GB-01	0.0073
2015000382	218	GB-02	0.0016

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000383	218	GB-03	0.0028
2015000384	218	GB-04	0.0011
2015000385	218	R106-1	0.0051
2015000386	218	R106-2	0.022
2015000387	218	R106A-1	0.016
2015000388	218	R118B-1	0.003
2015000389	218	R126-01	0.0006
2015000390	218	R129-01	0.0007
2015000391	218	R207-01	0.0006
2015000392	218	R214-1	0.0016
2015000393	218	R215-01	0.0017
2015000394	218	R216-01	0.0069
2015000395	218	R217-1	0.0019
2015000396	218	R218-01	0.0049
2015000397	218	R225-1	0.0007
2015000398	218	R228-01	0.0014
2015000399	218	R229-1	0.0013
2015000400	218	RM107-1	0.0006
2015000401	218	RM112-01	0.0007
2015000402	218	RM114-1	0.0019
2015000403	218	RM118C-1	0.0008
2015000404	218	RM212-1	0.0058
2015000405	218	RM219-1	0.0013
2015000406	218	ROOM127-1	0.0012
2015000407	218	ROOM226-1	0.0051
2015000408	218	ROOM227-1	0.0023
2015000409	218	SHL-02	0.0008
2015000410	218	SHR-01	0.0006
2015000411	218	SHS-01	<0.0002
2015000412	218	STAFFHEAD-1	0.0003
2015000413	218	TFLRGRESTRM-01	0.0014
2015000414	218	WWF-02	0.0004
2015000415	218	WWWF-01	<0.0002
2015000416	218	ROOM128-1	0.0009
2015000417	175	WOMENSGYMLOCKER-1	<0.0002
2015000418	218	R125-01	0.0007
2015000425	211	ROOM055-1	0.0003
2015000426	211	ROOM055-2	0.0028
2015000427	318	R1116-1	0.0008
2015000428	220	R237-LEFT-2	0.026
2015000429	220	R237-RIGHT-1	0.035
2015000430	220	R240-LEFT-2	0.061
2015000431	220	R240-RIGHT-1	0.013
2015000432	218	WESTSIDEHWAY-2	0.0006
2015000433	218	1STFLRBROOM-1	0.0017
2015000434	218	1STFLRBROOM-2	0.0036

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000435	218	2NDFLRSTFRM-1	0.0009
2015000436	218	R103-RESTROOM-1	0.0011
2015000437	218	R103-RESTROOM-2	0.0023
2015000438	218	ROOM101-1	0.0005
2015000439	218	WESTSIDEHWAY-1	0.0002
2015000440	216	RM101A-1	0.0057
2015000441	216	2NDFEMALE-1	0.0023
2015000442	216	2NDFEMALE-2	0.001
2015000443	216	2NDFEMALE-3	0.0033
2015000444	216	2NDWATERFTN-1	0.0015
2015000445	216	2NDWATERFTN-2	0.0019
2015000446	216	369-1	0.0038
2015000447	216	370-1	0.0097
2015000448	216	371-1	0.0065
2015000449	216	3RDFEMALE-1	0.0043
2015000450	216	3RDFEMALE-1	0.0032
2015000451	216	3RDFEMALE-2	0.0051
2015000452	216	3RDFOUNTAIN-1	0.0008
2015000453	216	3RDFOUNTAIN-2	0.0022
2015000454	216	3RDSTAFFBATH-1	0.0035
2015000455	216	4THFEMHEAD-1	0.0022
2015000456	216	4THFEMHEAD-3	0.0045
2015000457	216	4THFOUNTAIN-1	0.0014
2015000458	216	4THFOUNTAIN-2	0.0011
2015000459	216	FEMALEHEAD4TH-2	0.0034
2015000460	216	MALEBRM3RD-3	0.0038
2015000461	216	MALEHEAD2ND-1	0.0029
2015000462	216	MALEHEAD2ND-2	0.0055
2015000463	216	MALEHEAD2ND-3	0.0043
2015000464	216	MALEHEAD4TH-1	0.0056
2015000465	216	MALEHEAD4TH-2	0.002
2015000466	216	MALEHEAD4TH-3	0.0065
2015000467	216	MRESTRM3RD-1	0.0047
2015000468	216	MRESTRM3RD-2	0.0062
2015000469	216	R165-1	0.0041
2015000470	216	R165-2	0.0039
2015000471	216	R165-2	0.0038
2015000472	216	R166-1	0.042
2015000473	216	R167-1	0.0079
2015000474	216	R169-1	0.0026
2015000475	216	R170-1	0.0026
2015000476	216	R171-1	0.0077
2015000477	216	R172-1	0.0075
2015000478	216	R265-1	0.0063
2015000479	216	R266-1	0.0021
2015000480	216	R267-1	0.0015

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000481	216	R268-1	0.0016
2015000482	216	R269-1	0.0024
2015000483	216	R270-1	0.0022
2015000484	216	R272-1	0.0038
2015000485	216	R301STAFF-1	0.002
2015000486	216	R365-1	0.0039
2015000487	216	R366-1	0.0077
2015000488	216	R367-1	0.012
2015000489	216	R368-1	0.0026
2015000490	216	R372-1	0.0093
2015000491	175	BOWLINGALLEY-2	0.0005
2015000492	175	001MALEHEAD-3	0.0002
2015000493	175	2NDFLOOR-1	0.0011
2015000494	175	2NDFLOOR-2	0.0003
2015000495	175	2NDFLFEMALE-2	0.0003
2015000496	175	2NDFLFEMALEHHD-1	0.0008
2015000497	175	2NDFLFEMALEHHD-3	0.0003
2015000498	175	2NDFLFEMALEHHD-4	0.0006
2015000499	175	2NDFLOORGYM-1	<0.0002
2015000500	175	2NDFLOORGYM-2	<0.0002
2015000501	175	2NDFLMENSRM-1	0.005
2015000502	175	2NDFLMENSRM-2	<0.005
2015000503	175	2NDFLMENSRM-3	<0.005
2015000504	175	2NDFLOMENSRM-4	0.013
2015000505	175	ARCADE-1	<0.005
2015000506	175	ARCADE-2	<0.005
2015000507	175	ARCADEFEMALEH-1	<0.005
2015000508	175	ARCADEFEMALEH-2	<0.005
2015000509	175	ARCADEMENHD-1	<0.005
2015000510	175	ARCADEMENHD-2	<0.005
2015000511	175	BOWLINGALLEY-1	<0.005
2015000512	175	BOWLINGALLEY-3	<0.005
2015000513	175	BOWLINGALLEY-4	<0.005
2015000514	175	FEMALEHEAD-4	0.007
2015000515	175	GYM1STFLWFTN-1	<0.005
2015000516	175	GYM1STFLWFTN-2	<0.005
2015000517	175	ITTHEAD-1	0.006
2015000518	175	ITTWTRCOOLER-1	<0.005
2015000519	175	ITTWTRCOOLER-2	0.007
2015000520	175	MENSGYMLOCKER-1	<0.005
2015000521	175	MENSGYMLOCKER-2	<0.005
2015000522	175	MENSGYMLOCKER-3	<0.005
2015000523	175	MENSGYMLOCKER-4	<0.005
2015000524	175	MENSGYMLOCKER-5	<0.005
2015000525	175	MENSGYMLOCKER-6	<0.005
2015000526	175	PIAZZAPIZZA-1	<0.005

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015000527	175	PIAZZAPIZZA-2	<0.005
2015000528	175	PIAZZAPIZZA-3	<0.005
2015000529	175	PIAZZAPIZZA-4	<0.005
2015000530	175	PIAZZAPIZZA-5	<0.005
2015000531	175	PIAZZAPIZZA-6	<0.005
2015000532	175	PIAZZAPIZZA-7	<0.005
2015000533	175	POOLFEMALEHD-1	<0.005
2015000534	175	POOLFEMALEHD-2	<0.005
2015000535	175	POOLFEMALEHD-3	<0.005
2015000536	175	POOLMALEHEAD-1	<0.005
2015000537	175	POOLMALEHEAD-2	0.008
2015000538	175	POOLMALEHEAD-4	<0.005
2015000539	175	STAFFLOUNGE-1	<0.005
2015000540	175	THEATER-1	0.006
2015000541	175	THEATER-2	<0.005
2015000542	175	THEATER-3	<0.005
2015000543	175	THEATERFHEAD-1	<0.005
2015000544	175	THEATERFHEAD-2	<0.005
2015000545	175	THEATERMHEAD-1	<0.005
2015000546	175	THEATERMHEAD-2	<0.005
2015000547	175	WGYMLOCKER-224	<0.005
2015000548	175	WGYMLOCKER-3	<0.005
2015000549	175	WGYMLOCKER-1	<0.005
2015000550	175	WGYMLOCKER-2	<0.005
2015000551	175	WLOCKERROOM-3	<0.0002
2014009971	157	Sig-157-2female-1	0.0007
2014009972	157	Sig-157-1stfount-2	0.0045
2014009973	157	Sig-157-Chartroom-5	0.0045
2014009974	157	Sig-157-1stfount-1	0.0013
2014009975	157	Sig-Chartroom-3	0.0031
2014009976	157	Sig-157-Chartroom-2	0.003
2014009977	157	Sig-157-2ndfemale-2	0.0005
2014009978	157	Sig-157-Connect-4	0.0012
2014009979	157	Sig-157-2ndfount-2	0.0049
2014009980	157	Sig-Connect-6	0.0016
2014009981	157	Sig-157-2ndfount-1	0.0016
2014009982	157	Sig-157-Connect-5	0.0024
2014009983	157	Sig-Chartroom-1	0.013
2014009984	157	Sig-157-2ndmale-1	0.0009
2014009985	157	Sig-157-Connect-2	0.0006
2014009986	157	Sig-157-2ndmale-2	0.0003
2014009987	157	Sig-Chartroom-4	0.0065
2014009988	157	Sig-157-Connect-3	0.0006
2014009989	157	Sig-157-Connect-1	0.0007
2014009990	157	Sig-157-Connect-7	0.0043
2014009991	318	Sig-318-2ndfemale-3	0.0003

LAB ID	Bldg #	Sample ID	Result (mg/L)
2014009992	318	Sig-318-SACplay-2	0.0036
2014009993	318	Sig-318-SACfemale-1	0.0003
2014009994	318	Sig-318-2ndfemale-1	<0.0002
2014009995	318	Sig-318-SACmale-3	<0.0002
2014009996	318	Sig-318-2ndmale-1	0.0002
2014009997	318	Sig-318-1stfount-1	0.0003
2014009998	318	Sig-318-2ndmale-2	0.0003
2014009999	318	Sig-318-SACmale-1	0.0006
2014010000	318	Sig-318-2ndfount-1	0.0005
2014010001	318	Sig-318-1206-1	0.0007
2014010002	318	Sig-318-2ndmale-3	0.0003
2014010003	318	Sig-318-SACmale-2	0.0006
2014010004	318	Sig-318-SACplay-1	0.0083
2014010005	318	Sig-318-SAC-kitch-1	<0.0002
2014010006	318	Sig-318-SACplay-3	0.0025
2014010007	318	Sig-318-SACfemale-3	<0.0002
2014010008	318	Sig-318-SACfemale-2	<0.0002
2014010009	318	Sig-318-2ndfemale-2	0.0004
2014010010	318	Sig-318-1210-1	0.0007
2014010011	318	Sig-318-1stfemale-1	0.0018
2014010012	318	Sig-318-library-2	0.0016
2014010013	2569	Sig-2569-Kitchen-3	0.0017
2014010014	2569	Sig-2569-12-1	0.0006
2014010015	2569	Sig-2569-R15-1	0.004
2014010016	2569	Sig-2569-Kitchen-2	0.0035
2014010017	2569	Sig-2569-Kitchen-1	0.0043
2014010018	2569	Sig-2569-StaffLounge	0.0034
2014010019	2569	Sig-2569-R14-1	0.004
2015001003	216	KTCH-02-FD2	0.0014
2015001004	216	KTCH-02-30	0.0003
2015001005	216	GALLEY-3-FD2	0.0079
2015001006	216	GALLEY-3-30	0.0011
2015001007	216	GALLEY-7-FD2	0.011
2015001008	216	GALLEY-7-30	0.0011
2015001009	216	R166-1-FD2	0.048
2015001010	216	R166-1-30	0.0011
2015001011	218	R106-2-FD2	0.0022
2015001012	218	R106-2-30	0.0002
2015001013	220	R237-LEFT-2-FD2	0.019
2015001014	220	R237-LEFT-2-30	0.0008
2015001015	220	R237-RIGHT-1-FD2	0.013
2015001016	220	R237-RIGHT-1-30	0.001
2015001017	220	PREPROOM-01-FD2	0.022
2015001018	220	PREPROOM-01-30	0.0022
2015001019	220	ROOM240-1-FD2	0.034
2015001020	220	ROOM240-1-30	0.0012

LAB ID	Bldg #	Sample ID	Result (mg/L)
2015001021	220	R240-LEFT-2-FD2	0.039
2015001022	220	R240-LEFT-2-30	0.0022
2015001023	314	SUMMERR-4-FD2	0.004
2015001024	314	SUMMERR-4-30	0.14
2015001025	314	LAUNDRY-1-FD2	0.0052
2015001026	314	LAUNDRY-1-30	0.0004
2015001027	314	SIG-B314-RM6-1-FD2	0.0074
2015001028	314	SIG-B314-RM6-1-30	0.0004
2015001029	314	SIG-B314-RM6-2-FD2	0.079
2015001030	314	SIG-B314-RM6-2-30	0.0019
2015001031	314	B314-1STEP-1-FD2	0.017
2015001032	314	B314-1STEP-1-30	0.0009
2015001033	314	B314-1STEP-2-FD2	0.018
2015001034	314	B314-1STEP-2-30	0.0008
2015001035	314	B314-1STEP-4-FD2	0.48
2015001036	314	B314-1STEP-4-30	0.0074
2015002391	314	B314-1STEP-4-30-3	0.0007
2015002392	314	B314-1STEP-4-FD3	0.039
2015002393	314	B314-1STEP-2-30-3	0.0005
2015002394	314	B314-1STEP-2-FD3	0.011
2015002395	314	B314-1STEP-1-30-3	0.0006
2015002396	314	B314-1STEP-1-FD3	0.015
2015002397	314	SIG-B314-RM6-2-30-3	0.0008
2015002398	314	SIG-B314-RM6-2-FD3	0.023
2015002399	314	SUMMERR-4-FD3	0.062
2015002400	314	SUMMERR-4-30-3	0.0011
2015002568	314	SUMMERR-4-FD4	0.015
2015002569	314	B314-1STEP-4-FD4	0.051
2015002570	314	SIG-B314-RM6-2-FD4	0.014
2015004380	314	B314-1Step-4-FD5	0.04
2015004381	220	ROOM240-1-FD5	0.025
2015004382	220	PREPROOM-1-FD5	0.051
2015004383	220	R240-LEFT-2-FD5	0.019
2015004384	220	R237-LEFT-2-FD5	0.017
2015004385	216	R166-1-FD5	0.011
2015005410	314	B314-1Step-4-FD6	0.021
2015005411	220	ROOM240-1-FD6	0.021
2015005412	220	PREPROOM-01-FD6	0.019
2015008643	314	B314-1Step-4-FD7	0.011
2015009885	220	Room240-1-FD8	0.0084

APPENDIX B: 19 September 2014 *The Signature* Article

Article from the September 19, 2014 *The Signature*

http://issuu.com/nas_sigonella/docs/sigo_web_sept19

Lead testing for NAS Sigonella

From: NAS Sigonella Commanding Officer

Dear Sigonella Citizens,

The safety and wellness of our children is of the utmost priority to all of us here at NAS Sigonella, and I want to assure you that we will always make providing a healthy environment for our children at base facilities priority #1. With this in mind, I want to share with you a new Navy program recently enacted. The new policy requires the testing of base drinking water Navy-wide every five years to ensure our children are protected from any harmful effects contaminated drinking water may pose. The policy aligns with the U.S. Environmental Protection Agency recommendation to sample for lead in drinking water at youth program sites and childcare facilities. We will complete this testing before Dec. 31, 2014, and, intend to begin this month.

To be clear, the upcoming testing for lead is simply the Navy's way of being proactive, and transparent, so that our community is both safe and informed. The most recent NAS Sigonella lead testing was August 2013 and showed all of NASSIG's four sampled sites (NAS 1, NAS 2, Marinai, and Niscemi) indicate lead levels well below the Maximum Contaminant Level (MCL). In fact, the levels are below half the allotted MCL.

I would like to stress that we are not testing for lead because we have any indication that we have a lead problem at NASSIG. Rather, we are testing for lead as part of a Navy-wide program intended to add an extra level of scrutiny and reassurance that those most vulnerable to lead in water, children, are protected. So, even though current data indicates our youth program sites and childcare facilities are safe, we intend to aggressively sample and analyze the drinking water for lead in specific base locations where our children are likely to consume tap water. The testing, due to its intensity, will identify any potential waterborne lead concerns to our children, allowing us to then take all actions necessary to safeguard the wellness of your children and the rest of our community should we have positive results. Testing samples will be drawn from fountains, faucets, and outlets where water is used for drinking or cooking. As we conduct testing, however, it means that the roughly 500 water samples needed by Dec. 31 will require scheduling and execution, which may cause disruptions inside the facilities where some conduct business. We ask for your patience and cooperation in helping us complete this mandatory and very important testing.

The following locations at our installation will be tested:

- . Sigonella Middle/High School
- . Sigonella Elementary School
- . NEX Food Court
- . Child Development Center, Marinai
- . Teen/Tween Center
- . Midtown
- . School Age Care Center

If you would like to learn more, please visit: <http://www.piersystem.com/go/doc/4275/2213397>.

Testing results, updates, and actions necessary to address any concerns will be available on our website as well as at the front desk of our childcare facilities and affected youth program sites as soon as results are available.

If you have questions, please visit our website, or call 624-6986 or 095-86-6986.

Please know, we, your entire water production team, are 100% committed to keeping your drinking water safe and you well-informed.

Most sincerely,

Captain CJ Dennis

APPENDIX C: 23 January 2014 *The Signature Article*

SAFE DRINKING WATER – CHECKING FOR LEAD



The United States Navy is committed to protecting the health of their Sailors, civilian staff, and their families by providing safe drinking water. Drinking water quality, including testing for lead, is monitored throughout the installation. It is Navy policy to follow Environmental Protection Agency (EPA) optional guidelines for testing and sampling of water outlets from which children may drink at childcare facilities, schools, hospital pediatric wards, and maternity wards.

WHAT IS NAS SIGONELLA DOING?

- NAS Sigonella is testing water from sinks, faucets, and other sources at the Child Development Center (CDC), School Age Care (SAC) Center, Youth and Teen Center, playground areas, schools and other locations throughout the installation.
- Test results will be available at locations where testing was conducted.
- This is an ongoing program that will include yearly updates and complete re-testing every five years.

WHAT IS LEAD?

- Lead is a naturally occurring metal that is harmful if inhaled or swallowed.
- Lead can be found in air, soil, dust, food, and water, and is common in older plumbing materials and water service lines.
- Exposure to elevated levels of lead can result in adverse health effects.

WHAT ARE THE HEALTH RISKS OF LEAD EXPOSURE?

- Lead poses a significant health risk to young children up to the age of 6, especially infants and fetuses, where the posed danger is severe.
- Growing children absorb lead more rapidly and are negatively impacted by a level of lead exposure that would have little effect on an adult.
- A child's mental and physical development can be irreversibly impaired by overexposure to lead.
- EPA estimates that drinking water can make up 20% or more of a person's total lead exposure.
- Infants who consume mostly mixed formula can receive 40% to 60% of their exposure to lead from drinking water.

HOW DOES LEAD GET INTO A FACILITY'S DRINKING WATER?

- Even though drinking water from water treatment plants may meet federal, state, local and overseas standards, a facility may still encounter elevated lead levels at the outlet or spigot due to lead in plumbing materials.
- The most common cause is corrosion of materials containing lead in the water distribution system, such as plumbing pipes, solder, water coolers, and faucets.
- Many factors contribute to corrosion, including the acidity of the water, and when water stands in the plumbing system for prolonged periods of time.

HOW MUCH LEAD IN DRINKING WATER IS TOO MUCH?

- EPA set a screening level of 20 parts per billion (ppb) in childcare settings to protect children who are exposed to lead in drinking water on a chronic basis.
- EPA recommends that childcare facilities collect first-draw samples from water fountains and outlets, which maximizes the likelihood that the highest concentrations of lead are found because water remained in plumbing overnight.
- When sampling results show lead levels exceeding 20 ppb, those fountains and outlets are taken out of service until remediation is complete.

WHAT IS REMEDIATION?

- Remediation refers to both short- and long-term actions taken to reduce the levels of lead in drinking water if test results indicate that there is a lead issue at a childcare facility.
- EPA's childcare facility sampling protocol was designed to identify specific fountains and faucets that require remediation, such as water cooler replacement.

WHERE CAN I FIND MORE INFORMATION?

- Contact your primary care manager through Medical Homeport. They can perform blood tests for lead.
- NAS Sigonella's Public Works Director can provide information about your facility's water supply. You can contact CDR Deanna Carpenter at 624-2906.
- More information on the health effects of lead can be found on the EPA website at <http://water.epa.gov/drink/infos/lead/index.cfm>