CITY OF SOMERVILLE, MASSACHUSETTS
MAYOR KATJANA BALLANTYNE

SUSAN YERKES
DIRECTOR

Date: April 14, 2025
To: School Building Facilities and Maintenance Committee
From: Sue Yerkes, Parks & Recreation Director
RE: Items 25-0466, 25-0642, 25-0727, 25-0729

Dear Members of the School Building Facilities and Maintenance Committee,

The following information from the Parks and Recreation Department, Department of Public Works (DPW), and Inspectional Services Department (ISD) is being provided to the members of the School Building Facilities and Maintenance Committee in response to the above referenced item(s).

Item #25-0727: That the Administration report to this Council on the cause of the reported chemical imbalance at the Ginny Smithers Pool and the process being used to address the imbalance.

Item #25-0729: That the Administration develop a new process to address ongoing maintenance at the Ginny Smithers Pool and report to this Council to describe that process.

The Parks and Recreation Department follows guidelines set by the state health code. One of the chemicals that the Department monitors daily is combined chlorine (also known as chloramine). As referenced in the attached Inspection Report, higher levels of chloramine were detected in the Ginny Smithers Pool on February 27, 2025. While the chemical imbalance in the pool water was not immediately dangerous, it was out of range for health and safety standards. Chloramines can enter the water in a number of different ways, such as individuals not showering before entering the water, the municipal water source, and insufficient pool ventilation. We continue to investigate the reason for the sustained high levels of chlorine and chloramines. The City understood the tap water coming into the pool has generally had a relatively high chloramine content, but in the past, that has been controlled through testing and intervention. The safety of our patrons is our number one priority. While we continue to investigate the cause, we have also taken immediate steps to both balance the chemical levels in the pool and rigorously reinforce pool safety standards. I want to express my gratitude to our colleagues in DPW and ISD for their partnership and expertise in this matter.

To address the chloramines level, the Parks and Recreation Department worked with the Department of Public Works and ISD to close the pool at 5:00pm on February 27, 2025, following the discovery of a chemical imbalance. We have been working to remedy the chemical imbalance since. DPW reached out to its pool service company, Weston Sampson, who advised performing a Break Point Chlorination (better known as “shocking” or “super shocking”) on the pool as a potential remedy. Based on this recommendation from Weston Sampson and DPW, Parks and Recreation started treating the pool water by "shocking” the pool. This shock procedure was performed twice: once on February 28, 2025, and again on March 4, 2025, but chemical levels remained high. DPW also immediately checked the filters and pump system for the pool on February 28, 2025, and found that both were operating at optimal standards. Our departments then reached out to a variety of local experts for assistance to both advise on bringing down levels of chloramine and ensure that our staff were correctly testing the pool water. These outside experts included colleagues in the City of Medford, who manage their pool facilities. When there continued to be no reduction in chloramines, Parks and Recreation brought in an outside expert, Robert Freligh, from National Aquatics Consulting.

The outside expert, Robert Freligh, suggested alternative strategies to help mitigate the chemical imbalance. One of these strategies was the use of Sphagnum Moss to help bring down chloramines. DPW is currently working on pricing and acquiring Sphagnum Moss through the City’s procurement process. In the interim, the Department of Public Works decided to drain the Ginny Smithers Pool, with help from the Somerville Fire Department. This process began on March 21, 2025, and the pool was fully drained on March 26, 2025. In the meantime, DPW decided to take further action to mitigate future closures, such as the annual closure of the pool in August for maintenance. DPW staff are working to complete grout work and deep cleaning of the pool and have ordered a new Virginia Baker pool drain cover in accordance with federal law. DPW is hoping to start refilling the pool at the end of the week; this process takes approximately 3-4 days. Once the pool has been refilled and has a new water base, ISD will perform an inspection in order to reopen the pools. Parks and Recreation will monitor the pool water to ensure that the chemical imbalance has been resolved. In the meantime, Parks and Recreation will continue to explore other means of keeping pool chemicals at an acceptable range as necessary.

The attached Inspectional Services report has highlighted several ways that our department can do better. First, I have instructed our staff to immediately comply with all directions from inspectors. I want to thank Director Antanavica for his partnership as we went through our Lifeguard Manual and protocols one by one to reinforce proper procedures. While the pool has been closed, I have used this opportunity to retrain all staff with duties at the pool and conduct in-service trainings. We have also purchased a digital pool chemical reader, confirmed that all test kits are up to date, verified that staff are trained on how to use the test kits, and ensured that chemical logbooks are accessible in digital format for ease of use and transparency. The Parks and Recreation Department will monitor the chemicals daily as required by law and continue to work with other City departments to ensure the pool remains open. Parks and Recreation will also be purchasing a new pool scrubber and DPW will be reviewing with Parks and Recreation staff how to maintain the highest standard of cleanliness for the pool deck.

Item #25-0466: That the Director of Parks and Recreation report on the process by which Ginny Smithers Pool patrons are promptly notified of pool cancellations or schedule changes, including any modifications that could be made to that process in light of the March 2025 temporary pool closure.

Item #25-0642: That the Director of Parks and Recreation and the Commissioner of Public Works update this Council on the continued closure of Ginny Smithers Sanders Pool and address the lack of communication with users of the pool.

In the event of closure, Parks and Recreation follows a multi-channel communication protocol. Notifications are first shared with program participants in affected programs. This includes direct phone calls and emails to reach affected participants. To receive an email notification, participants must have opted in to email notification at the time of registration for a program.

In addition to the direct individual outreach to registered program participants, notifications are shared via the following channels and methods:

- Recreation's Facebook Page: https://www.facebook.com/SomervilleRec/
- Recreation's Instagram: https://www.instagram.com/somervillerecreation
- The Parks and Recreation Website: https://somervillema.myrec.com
- Postings/signs at facility entrances
- Updates to Somerville Public Schools Administration staff
- Information shared with 311 Constituent Services, so that all Customer Service Representatives are able to update those who contact 311

On the date of the closure of the Ginny Smithers Pool (February 27, 2025), the Parks and Recreation Department sent email notifications of the closure and cancelled programming to participants that had opted-in to email notifications. Parks and Recreation also called participants and left voicemails notifying them that programming had been cancelled for the day. A sign was posted on the door immediately. The Parks and Recreation Department informed school and administrative contacts and 311 of the pool closure. The closure was posted on the Department's Facebook and Instagram pages.

In the weeks following the initial closure, the Parks and Recreation Department has continued to notify participants of cancelled programming. Weekly emails have been sent to the school and to patrons, and this information remains on the Parks and Recreation website and Facebook page for anyone to view. Notifications have been emailed to participants that are opted in to email notification. The Department has also continued to notify 311 and school and administrative contacts of the ongoing closure and cancelled programs on a weekly basis. Regular updates from the Aquatics Team were posted on the Department's Facebook and Instagram pages.

The Parks and Recreation Department will continue to communicate updates on scheduled programming to the residents. In the future, the Department will ensure that participants who have not

opted in to email notifications are contacted by phone. In addition, the Department will post updates on social media as posts, rather than stories, to provide the most up to date information to residents. The Parks and Recreation Department will take feedback from pool users. We are also scheduled to meet with the City's Communications Department to review other potential outreach strategies. In addition, Parks and Recreation will be meeting with the Somerville Public Schools Administration to discuss how to optimize communications to best meet the schools' operational needs. The Parks and Recreation Department intends to make up any swimming lessons that were cancelled due to the pool's closure.

Again, I want to thank DPW, ISD, and SPS for their partnership in working to reopen the Ginny Smithers Pool. I recognize that this pool is an important community resource, and we are committed to a safe and accessible experience for all. Please let the IGA team know if there are any further questions on any of the above information.

Thank you,

Sue Yerkes
Director

CITY OF SOMERVILLE, MASSACHUSETTS
INSPECTIONAL SERVICES DEPARTMENT
KATJANA BALLANTYNE - MAYOR

TO: Susan Yerkes, Director of Parks & Recreation
FROM: Inspectional Services Department - Health Division
SUBJECT: Ginny Smithers Swimming Pool at the Kennedy School Inspection Report
SITE ADDRESS: 5 Cherry St, Somerville MA 02145
DATE: March 14, 2025

2/27 Inspections:

11:00am: Inspector Stephanie Estrela and I went to the Ginny Smithers Swimming Pool at the Kennedy School and spoke to Pool Manager Arnold Cohen and Assistant Pool Manager Andrew Galanek, who are both Certified Pool Operators (CPO) for the pool. I informed them we were there for a pool inspection. CPO Cohen stated he did not have time, as he had a meeting. I asked if we should schedule an inspection and scheduled it for Tuesday at 10am. Inspector Estrela and I informed Chief Code Enforcement Inspector Michelle Bowler and due to previous concerns about proper testing were directed to go back and perform the inspection.

I further requested to see the CPO certificates and the Virginia Baker receipts. CPO Cohen stated Chief Bowler told him he does not need any documentation for the inspection. CPO Cohen stated he did not have the documents and would need to get them. CPO Cohen further stated that every time he has a pool permit inspection that it is scheduled. - Inspector Victoria Luis (VL)

11:00am: On the initial visit with Inspector Victoria Luis, I examined the testing log books and took photos of the logs from Sunday 2/16 through Thursday 2/27. CPO Cohen stated he didn't have time to do the inspection as he had a meeting. I inquired if he was formally denying the inspection and he stated he was because he had a meeting. Inspector Luis then scheduled an inspection for Tuesday. - Inspector Stephanie Estrela (SE)

11:40am: Upon direction from Chief Bowler, Inspector Estrela and I went back to the pool to meet Superintendent of Buildings Matthew Bennett from DPW, who stated CPO Cohen left for his meeting. There was further discussion with Chief Bowler and Superintendent Bennett and the decision was made that DPW was closing the pool down for precautionary measures, due to previous concerns of pool maintenance coupled with the uncertainty surrounding an incomplete inspection and documentation. Inspector Estrela and I went and spoke to the lifeguard Shane and explained the pool is to be shut down once the current class was completed, which was in about an hour. - VL

1:10pm: Inspector Estrela and I went back for another inspection per Chief Bowler to have testing of the pool conducted to further investigate the safety conditions of the pool. We met CPO Galanek and asked him to test the water. While CPO Galanek was obtaining the testing kit supplies, I asked to check the expiration dates first. It was observed that a significant amount of

the testing kits items was expired. Inspector Estrela took pictures of the items.

CPO Galanek then gathered the expired bottles and went to obtain replacements from storage. While awaiting CPO Galanek's return, Inspector Estrela and I observed that CPO Cohen had returned to the pool and was standing on the deck. I started to explain to CPO Cohen that there needs to be a 4 foot clearance around the pool as there was a chair within the clearance. CPO Cohen responded he was only there because Inspector Estrela and I were there, but he would not be speaking to us. I then informed CPO Galanek that the chair needed to be moved.

CPO Galanek then started to test the water; however, CPO Cohen told him to stop and said that ISD will test the water. CPO Galanek stated CPO Cohen was his supervisor and as such he stopped the testing. CPO Cohen stated that the ISD was lying and that we told people he yelled at us and he didn't feel he was yelling at us. CPO Cohen further stated he did not deny the inspection. I clarified CPO Cohen stated he didn't have time for inspection because he had meeting and couldn't walk around with us, and we tried to schedule a date and time. - VL

1:10 pm: At the follow-up inspection with Inspector Luis, CPO Cohen arrived while the inspection was occurring. While Inspector Luis was attempting to speak with CPO Cohen, he stated he wasn't speaking to us and was only there because we (ISD) were there.
CPO Cohen said to Inspector Luis and me that he was informed we said he yelled at us, which he disagreed with. I clarified to CPO Cohen that Inspector Luis and I did not state he yelled at us. CPO Cohen further stated he was informed if he wasn't present for the inspection ISD was going to shut the pool down. I told CPO Cohen he was misinformed and didn't know who told him that. I then clarified Inspector Luis and I were here with Superintendent Bennett earlier and the pool was already shut down.

I further informed CPO Cohen that Inspector Luis and I were instructed to come back here by Chief Bowler, Director of Parks and Recreation Susan Yerkes (who is his boss) and DPW Director Jill Lathan and do the inspection.

While in the middle of the inspection with CPO Galanek, CPO Cohen directed for the testing by CPO Galanek to stop and stated ISD should test the pool instead. There was then a significant back and forth over who should do the testing and whether the previous inspection was denied, the significance of which is that ISD reaffirmed that ISD observing the CPO conducting the testing is essential to ensure the CPO is doing the testing correctly as part of the inspection. CPO Cohen also informed us that he didn't have the required paperwork, which also would be condition for a shut down of the pool. I then called Chief Bowler who determined the pool was shut down by ISD because of the expired testing kit. - SE

4:20pm: Inspector Estrela and I went back for a third time to the pool for an inspection per Chief Bowler. We met with Director Yerkes and she had a lifeguard do the pool testing. Inspector Estrela and I checked the expiration dates on the test kit items and confirmed none were expired. The lifeguard tested the big pool first. The free chlorine was a reading of 4.4 which is out of range. I asked the lifeguard to test again but to go lower to get the water. The second test got a free chlorine reading of 4.2, which is still out of range. The chemical standard

range of free chlorine is required to be 1.0 – 3.0 (ppm)(mg/l) per the Massachusetts Minimum Standards for Swimming Pools 105 CMR 435.00 (specifically 105 CMR 435.29).

Inspector Estrela and I asked what the reading at the last testing, and it was stated that CPO Cohen did it at 4pm before leaving and it was 3.8. I asked what the procedure was when the levels are too high, and the lifeguard said they remove everyone from the pool and put a chemical in it. I asked why CPO Cohen did not follow that procedure before, and the lifeguard and Director Yerkes did not know. ***[See previous log book pages for 2/23, 2/24, 2/25, 2/26]***

The lifeguard then proceeded with testing the combined chlorine, which was 0.8. This level is also too high as well. Combined Chlorine is required to be 0.0 – 0.2.

The rest of the testing levels were within range: pH 7.4, Alkalinity 90, Calcium Hardness 170. We then had the lifeguard check the smaller pool which had the following results: Free Chlorine 3.0, Combined Chlorine 0.6 (which is too high), pH 7.4, Alkalinity 120, Calcium Hardness 180. I then went and used the office phone to call Chief Bowler and let her know the results. She said she would find out how to proceed and reached out to ISD Director Nick Antanavica.

Inspector Estrela and I then continued to do the rest of the inspection. We walked around with a lifeguard, who brought us into the filter room. Everything was labeled and organized and had a clear log book. A broken drain cover and a hose on the ground were observed. It was communicated to Director Yerkes that the hose needs some type of marking on it and to be secured on the ground. Inspector Estrella tripped on it during the inspection.

We then went into the chemical storage area, which was clean and organized. We then walked the pool deck, and the lifeguard picked up a piece of plastic and hair elastic left on the deck. I communicated to the lifeguard that the deck needs to be clean at all times. We then proceeded to a custodians' closet, which had little foam balls all over the ground. It was communicated that those needed to be cleaned up. We then went into the locker rooms. The women's room was clean and sanitary. The men's locker room was clean and sanitary, but the bottom of a locker was observed to be rusted and sharp. I addressed it to Director Yerkes, who stated there is a 311 work order request about it. We then went back out to the pool deck and a lifeguard grabbed a long pole to check the drain covers, which were also checked by Inspector Estrela.

At the end of our inspections, we went over missing documents which should always be on-site: Virginia Baker drain paperwork and CPO certificates. The phone that is for emergency on the pool deck is hard to hear while on it. They need to replace the phone. We also informed the lifeguard and Director Yerkes to pour the testing water in the drain, not on the tiles, as they form puddles and can be a slipping hazard. - VL

4:20pm: Inspection with Inspector Luis, Director Yerkes, and on-site Lifeguard to do the testing and inspection. We went over to testing kit and testing log book. It was observed while reviewing the log book that there was information added that was not there while conducting our first inspection at 11am. I informed Director Yerkes that the statement under notes stating '11:00AM Chlorine unplugged' was added to the log for 2/27 after our 11:00am inspection (photos from 11am and then again 4:20pm our uploaded to the Citizenserve file).

While Inspector Luis was checking the men's locker room, I called Chief Bowler to inform her about the test levels. She informed me that they need to have everyone get out of the pool and that the pool will be shut down until the levels are regulated to allowable rages.
We went over with Director Yerkes that the required paperwork should be available at all times at the pool area. We also went over other minor items that need to be addressed but would not impact the License. - SE

2/28 Inspections:

10:20am: Inspector Estrela and I went back to the pool for the re-inspection. CPO Cohen had provided me with the CPO certificates and the Virginia baker paperwork. I had asked for Harry's CPO certificate since he had added chemicals in and CPO Cohen asked where it states that only a CPO can add chemicals to the pool. I said I will get that information and let them know. We then went to the pool deck and CPO Cohen tested the big pool first, results: free chlorine 1.4, combined chlorine 0.2, pH 7.4, alkalinity 90, calcium hardness 180. As this is within the allowed limits the big pool was allowed to be reopened. CPO Cohen then went to the filter room to note the results. Inspector Estrela and I stated we would be back sometime next week regarding the other issues that need to be resolved. CPO Cohen then asked if I could show him the issues in the filter room. I brought him over to the hose and said it needs to be secure and maybe spray paint it or some type of marking and showed him the drain cover that needs to be replaced. CPO Cohen then checked the small pool, chlorine 1.6, combined chlorine 0.4 (which is still high), pH 7.4, alkalinity 120, calcium hardness 180-190. He then retested the combined chlorine and it was still too high.

Inspector Estrela and I spoke to Chief Bowler and they are to close the small pool. CPO Cohen had questions regarding the 0.1 or 0.2 for the drops in the testing kit. We called Michelle on speaker, and she said she would check with Nick and then let us know. While waiting for the call back, Director Yerkes changed out the receiver on the phone and now it works properly. We told CPO Cohen about the locker and asked if he had some duct tape to put on it to help it not be so sharp, and he did not have any. I showed CPO Cohen the locker so he was aware of the locker we were talking about. Chief Bowler then called back and stated the kit lets you know what the drops are. The boxes state 0.2, so the pool is over on combined chlorine and is to be closed.
I informed Director Yerkes that I will find out if they are closed till Monday, or if we can come out before then and check the levels, so they can reopen the pool. CPO Cohen said we could do the lessons in the big pool, and asked if they could use the ramp from the small pool and lift up the boards for handicap accessibility. I said no one can go in the small pool. We went up to the office and met with the custodian. He will get tape or something else for the time being to put on the locker rust so it's not sharp. I talked to Chief Bowler in regards to opening before Monday and she suggested Director Yerkes reach out to Director Antanavica, which I emailed to Director Yerkes. - VL

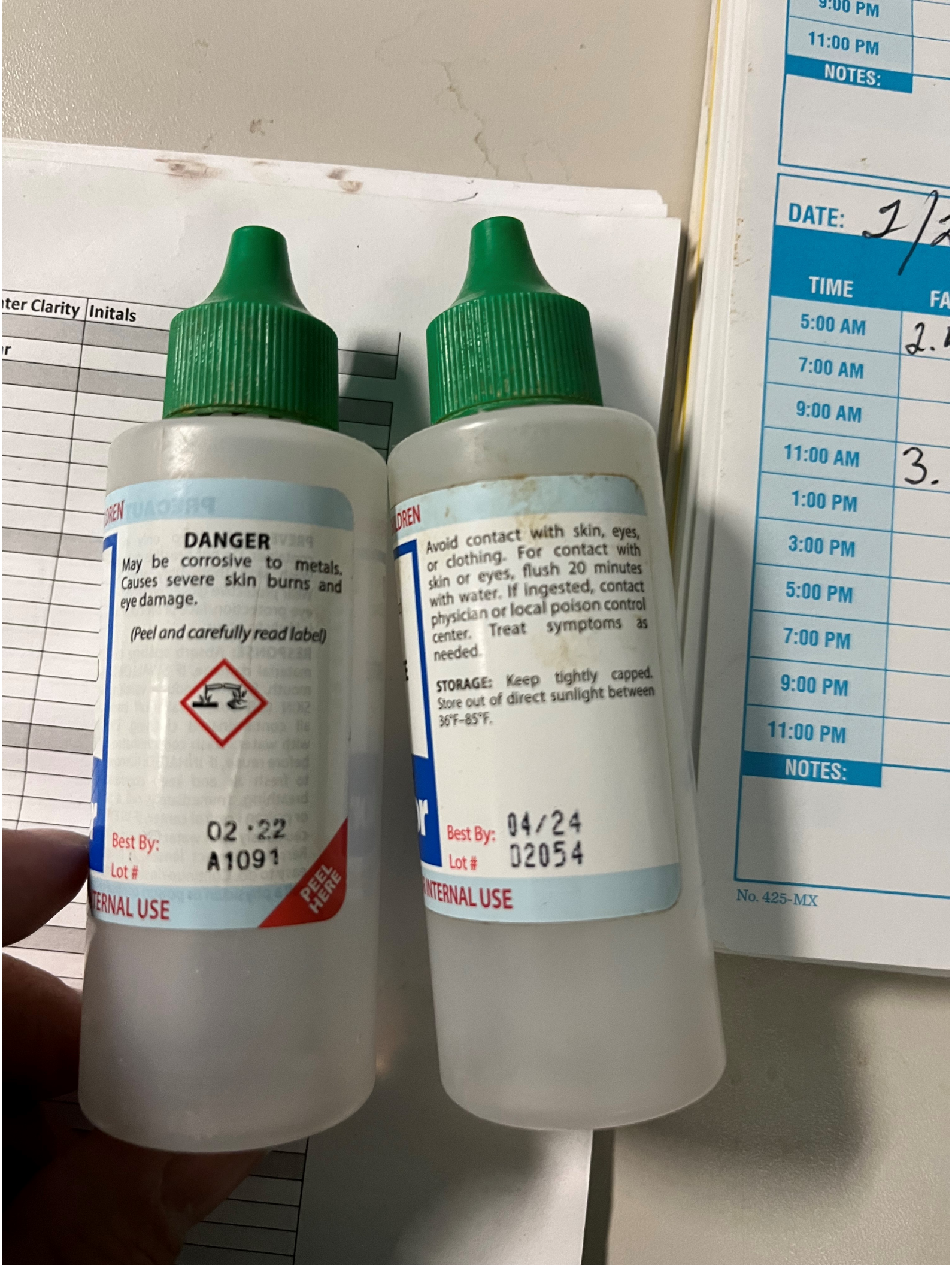
10:20am: While conducting the Friday inspection with Inspector Luis, I re-checked the test log book and times were off. I asked why the test log book showed testing results already for 2/28 at 11am when right now its 10:45am. Photo of logs attached to Citizenserve file. ISD discussed with Director Yerkes regarding the pool phone, which needs to be addressed ASAP. They need

to put in an ITHELPDESK request. There are two lines (extensions), the phone is required to be direct dial to 911.

CPO Cohen asked questions regarding combined chlorine we called Chief Bowler. His question was that bottles state 0.2 measurement is needed for the drops for testing, but he spoke with other pool managers and they state they utilize 0.1. CPO Cohen was informed the instructions on the test kit should be followed and each kit instructions could be different. The levels of the little pool exceeded the allowable limit and the pool was closed. – SE

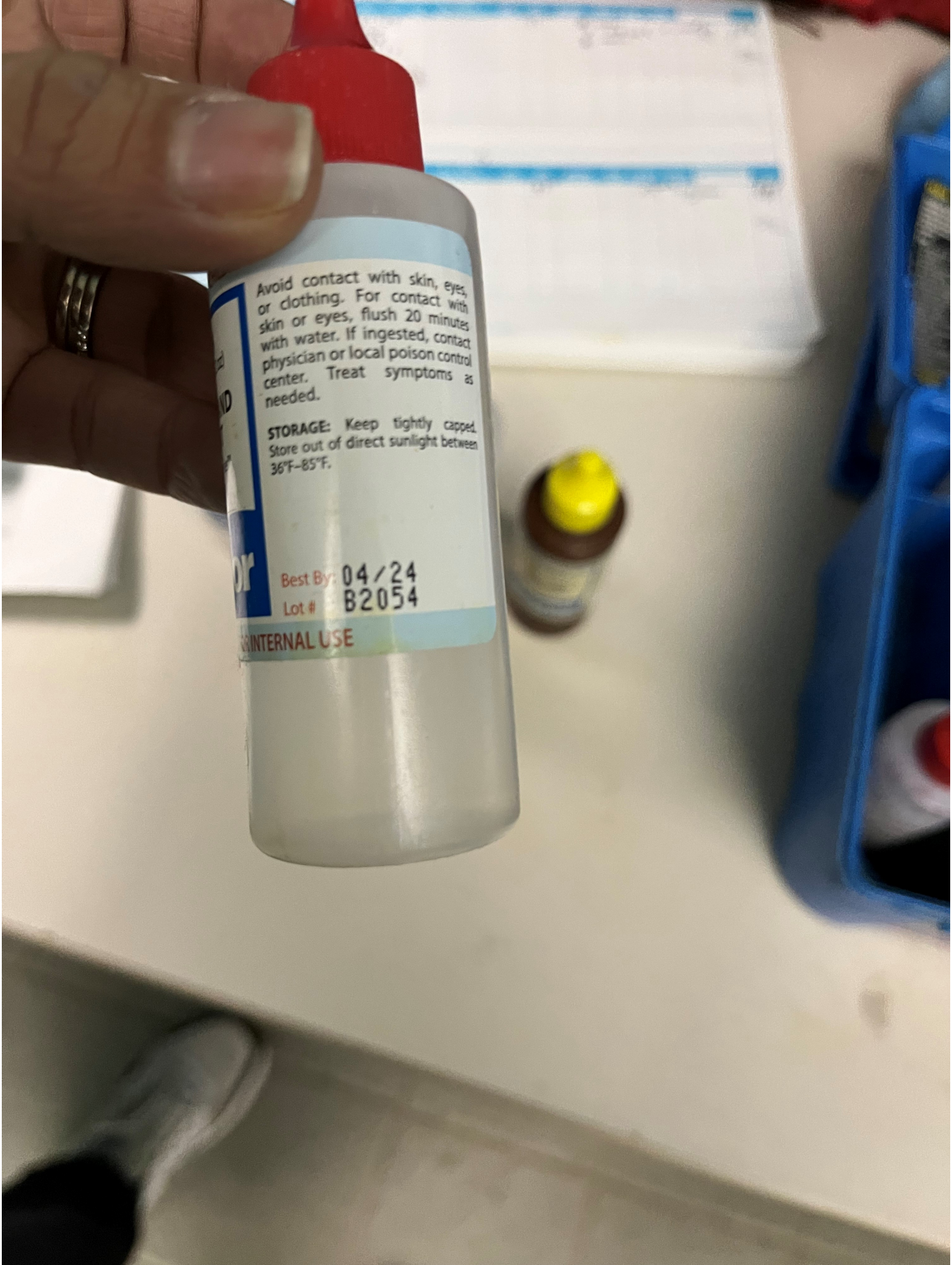
As of 3/13/25 the matter is still to considered to be open due to the condition of the small pool still having elevated combined chlorine chemical levels. Parks and Rec is to contact ISD prior to re-opening the small pool to the public in order to conduct a follow-up inspection.

CC: Department of Public Works


DANGER
May be corrosive to metals. Causes severe skin burns and eye damage.
(Peel and carefully read label)
Best By: 02·22
Lot # A1091
PEEL HERE
Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.
STORAGE: Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Best By: 04/24
Lot # 02054
DATE:
TIME
5:00 AM
7:00 AM
9:00 AM
11:00 AM
1:00 PM
3:00 PM
5:00 PM
7:00 PM
9:00 PM
11:00 PM
NOTES:
No. 425-MX


DANGER
Highly flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
WARNING
Cancer – www.P65Warnings.ca.gov
(Peel and carefully read label)
Best By:
Lot #
PEEL HERE
INTERNAL USE


WARNING
Suspected of causing cancer.
Suspected of damaging fertility
or the unborn child.
Best By: 05/24
Lot #: 62064
INTERNAL USE


Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.
STORAGE: Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Best By: 04/24
Lot # B2054
INTERNAL USE

#5324

Guidebook (#2004B) amplifies these instructions and should be read to use this product properly.

TIPS

1. Keep test kit out of reach of children.
2. Read precautions on all labels.
3. Store test kit in cool, dark place.
4. Replace reagents once each year.
5. Do not dispose of solution in pool or spa.
6. Rinse tubes before and after each test.
7. Obtain samples 18" (45 cm) below water surface.
8. Hold dropper bottle vertically when dispensing reagent.
9. Match colors in sunlight while facing north.

This test kit may not contain all tests shown.

taylor 102419

Free, Combined & Total Chlorine (DPD)

1. Fill small tube to 5 mL mark with sample water.
2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
3. Match color.* Record as ppm free chlorine (Cl_2).
4. Add 5 drops R-0003. Cap and invert to mix.
5. Match color immediately. Record as ppm total chlorine (Cl_2).
6. Subtract free chlorine (FC) from total chlorine (TC). Record as ppm combined chlorine (CC) as (Cl_2). Formula: TC – FC = CC.

Total Bromine

1. Fill small tube to 5 mL mark with sample water.
2. Add 5 drops R-0001 and 5 drops R-0002. Cap and invert to mix.
3. Match color.* Record as ppm total bromine (Br_2).

If color is off-scale: Repeat test using 4.5 mL sample diluted to 5 mL mark with tap water. Multiply reading by 2 to obtain approximate sanitizer level.

If color is still off-scale: Repeat test using 1.8 mL sample diluted to 5 mL mark with tap water. Multiply reading by 5 to obtain approximate sanitizer level.

OR

Free & Combined Chlorine (FAS-DPD)

1. Fill large tube to desired mark with sample water. NOTE: For 1 drop = 0.2 ppm, use 25 mL sample. For 1 drop = 0.5 ppm, use 10 mL sample.
2. Add 2 drops R-0870. Swirl until dissolved. If free chlorine is present, sample will turn pink. NOTE: If pink color disappears or no pink color develops, add R-0870 until color turns pink.
3. Add R-0871 dropwise, swirling and counting after each drop, until color changes from pink to colorless.
4. Multiply drops in Step 3 by drop equivalence (Step 1). Record as ppm free chlorine (Cl_2).
5. Add 5 drops R-0003. Swirl to mix. If combined chlorine is present, sample will turn pink.
6. Add R-0871 dropwise, swirling and counting after each drop, until color changes from pink to colorless.
7. Multiply drops in Step 6 by drop equivalence (Step 1). Record as ppm combined chlorine (Cl_2).

pH

1. Fill large tube to 44 mL mark with sample water.
2. Add 5 drops R-0004. Cap and invert to mix.
3. Match color. Record as pH units. If color is between two values, pH is average of the two. To LOWER pH: See Acid Demand. To RAISE pH: See Base Demand.

Acid Demand

1. Use treated sample from pH test.
2. Add R-0005 dropwise. After each drop, count, cap and invert to mix, and compare color until desired pH is matched. See Treatment Tables in Guidebook (#2004B) to continue.

Base Demand

1. Use treated sample from pH test.
2. Add R-0006 dropwise. After each drop, count, cap and invert to mix, and compare color until desired pH is matched. See Treatment Tables in Guidebook (#2004B) to continue.

Total Alkalinity (TA)

1. Fill large tube to 25 mL mark with sample water.*
2. Add 2 drops R-0007. Swirl to mix.
3. Add 5 drops R-0008. Swirl to mix. Sample will turn green.
4. Add R-0009 dropwise, swirling and counting after each drop, until color changes from green to red.
5. Multiply drops in Step 4 by 10. Record as ppm total alkalinity as calcium carbonate ($CaCO_3$).

When high TA is anticipated: Use 10 mL sample, 1 drop R-0007, 3 drops R-0008, and multiply drops in Step 4 by 25.

Calcium Hardness (CH)

1. Fill large tube to 25 mL mark with sample water.*
2. Add 20 drops R-0010 (or use pipet filled to 1 mL mark). Swirl to mix.
3. Add 5 drops R-0011L. Swirl to mix. If calcium hardness is present, sample will turn red.
4. Add R-0012 dropwise, swirling and counting after each drop, until color changes from red to blue.
5. Multiply drops in Step 4 by 10. Record as ppm calcium hardness as calcium carbonate ($CaCO_3$).

When high CH is anticipated: Use 10 mL sample, 10 drops R-0010 (or use pipet filled to 0.5 mL mark), 3 drops R-0011L, and multiply drops in Step 4 by 25.

Cyanuric Acid (CYA)

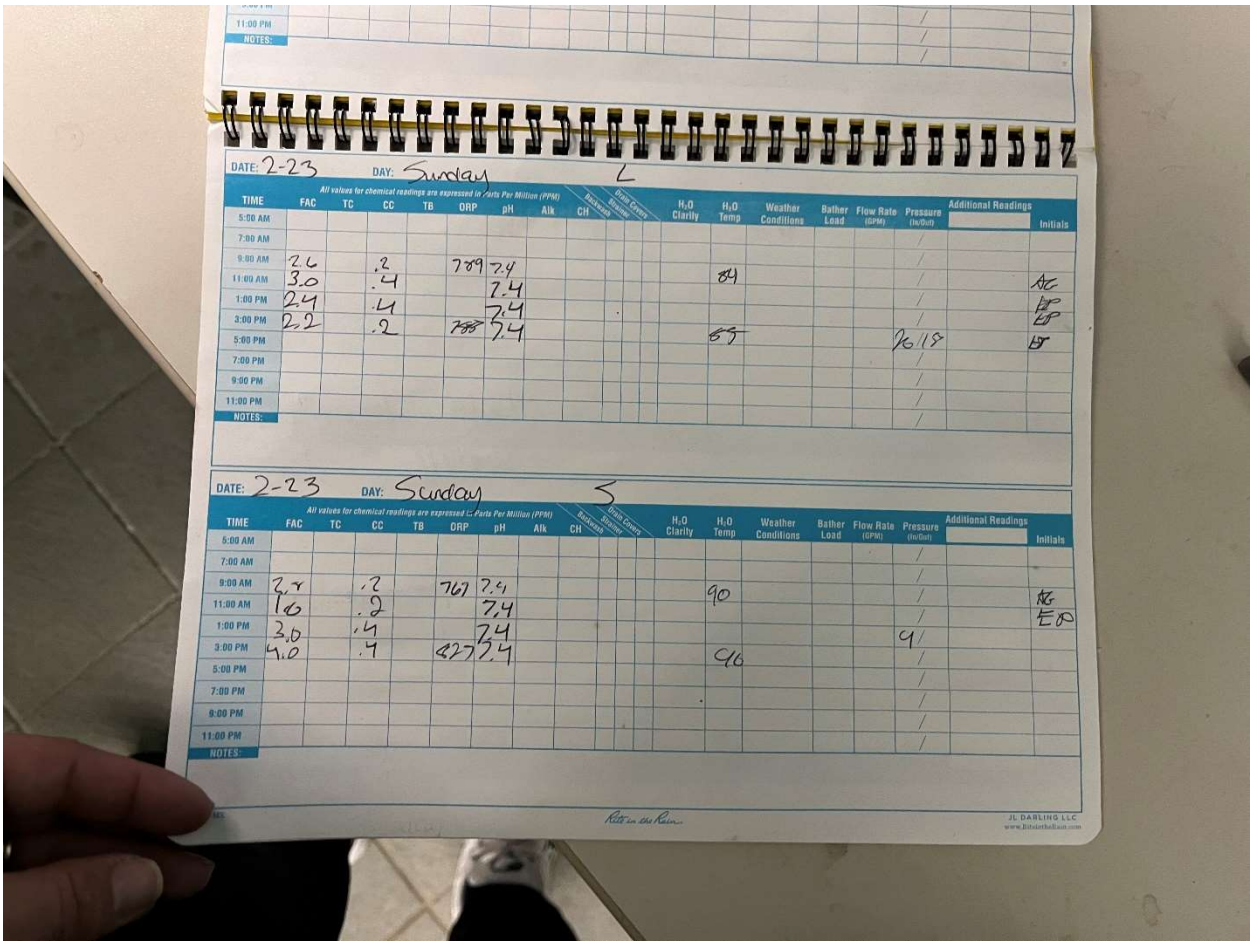
1. Fill bottle (#9191) to 7 mL mark with sample water.
2. Add R-0013 to 14 mL mark. Cap and mix for 30 seconds.
3. Transfer cloudy solution to small tube until black dot on bottom just disappears when viewed from top.
4. Read tube at liquid level on back of comparator block. Record reading as ppm cyanuric acid (CYA).

Sodium Chloride (Salt)

For 1 drop = 200 ppm

1. Fill tube (#9196) to 10 mL mark with sample water.
2. Add 1 drop R-0620. Swirl to mix. Sample will turn yellow.
3. Add R-0718 dropwise, swirling and counting after each drop, until color changes from yellow to a milky salmon (brick red). NOTE: A white precipitate will form as R-0718 Silver Nitrate Reagent is added to the sample. First change from yellow to a milky salmon (brick red) is the endpoint.
4. Multiply drops of R-0718 by 200. Record as ppm sodium chloride (NaCl).

See reverse.



DATE: 2-23 DAY: Sunday

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Drain Covers	Strainer	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM																	/		
7:00 AM																	/		
9:00 AM	2.6		.2		709	7.4											/		
11:00 AM	3.0		.4			7.4							84				/		AC
1:00 PM	2.4		.4			7.4											/		EP
3:00 PM	2.2		.2		788	7.4							89				16/18		EP
5:00 PM																	/		
7:00 PM																	/		
9:00 PM																	/		
11:00 PM																	/		

NOTES:

DATE: 2-23 DAY: Sunday

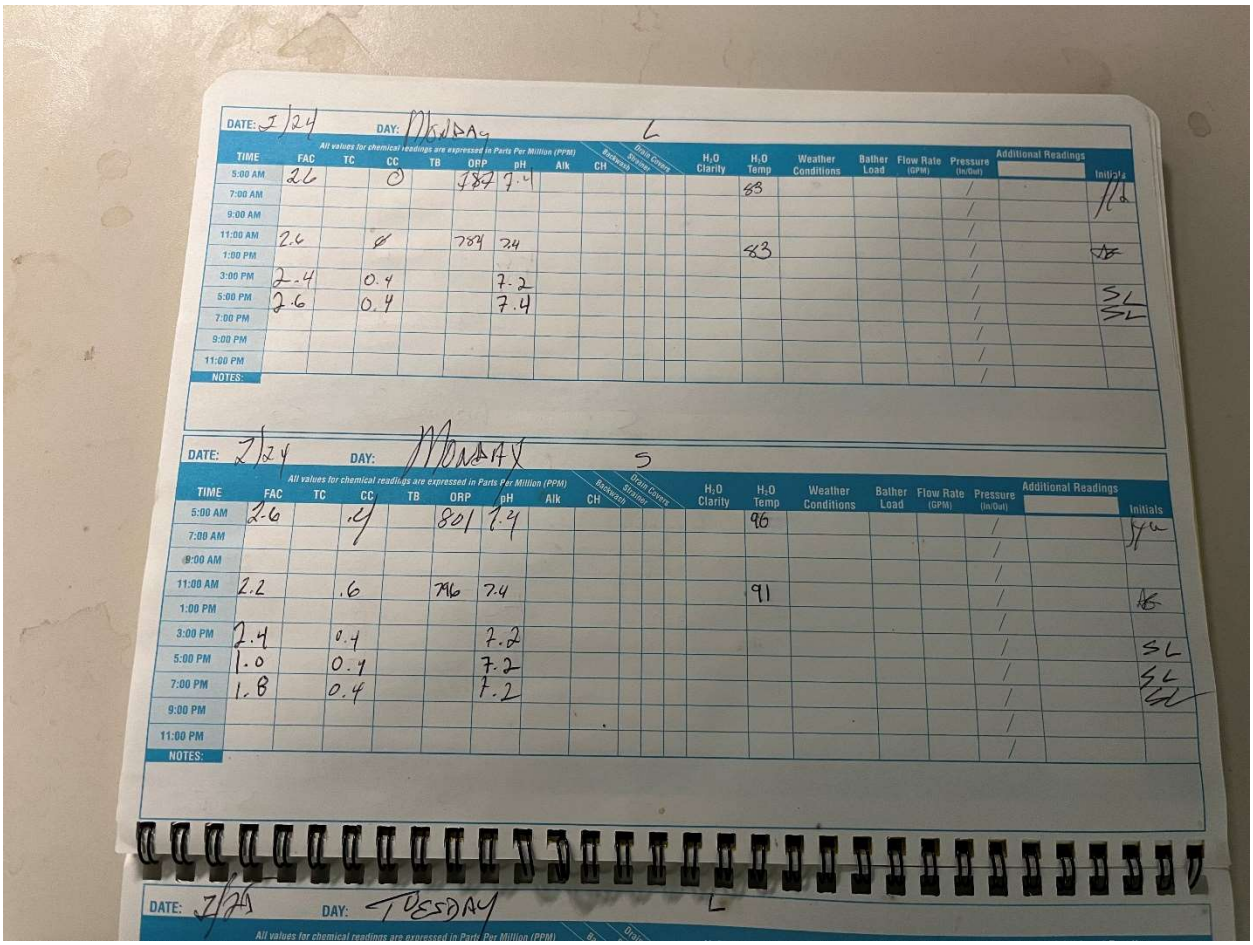
All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Drain Covers	Strainer	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM																	/		
7:00 AM																	/		
9:00 AM	2.4		.2		761	7.4							90				/		AG
11:00 AM	1.6		.2			7.4											/		EP
1:00 PM	3.0		.4			7.4											9/		
3:00 PM	4.0		.4		427	7.4							96				/		
5:00 PM																	/		
7:00 PM																	/		
9:00 PM																	/		
11:00 PM																	/		

NOTES:

Rite in the Rain

JL DARLING LLC



DATE: 7/24 DAY: MONDAY L

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Drain Covers: Backwash	Drain Covers: Strainer	H₂O Clarity	H₂O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.6		0		787	7.4						83				/		
7:00 AM																/		
9:00 AM																/		
11:00 AM	2.6		Ø		784	7.4										/		
1:00 PM												83				/		
3:00 PM	2.4		0.4			7.2										/		
5:00 PM	2.6		0.4			7.4										/		SL
7:00 PM																/		SL
9:00 PM																/		
11:00 PM																/		

NOTES:

DATE: 7/24 DAY: MONDAY S

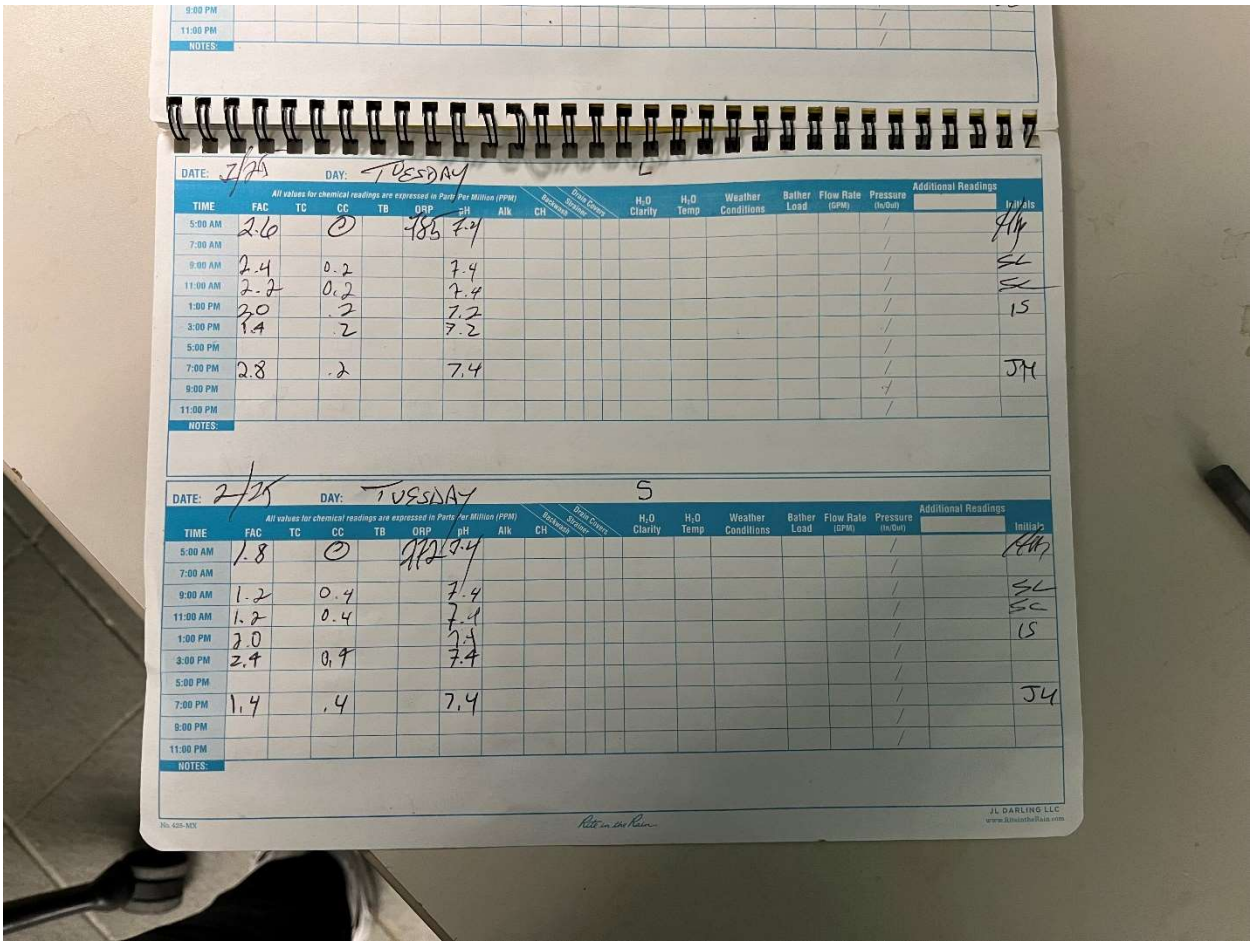
All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Drain Covers: Backwash	Drain Covers: Strainer	H₂O Clarity	H₂O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.6		.4		801	7.4						96				/		
7:00 AM																/		
9:00 AM																/		
11:00 AM	2.2		.6		796	7.4						91				/		
1:00 PM																/		
3:00 PM	2.4		0.4			7.2										/		SL
5:00 PM	1.0		0.4			7.2										/		SL
7:00 PM	1.8		0.4			7.2										/		SL
9:00 PM																/		
11:00 PM																/		

NOTES:

DATE: 7/25 DAY: TUESDAY L

All values for chemical readings are expressed in Parts Per Million (PPM)



9:00 PM
11:00 PM
NOTES:

DATE: 2/25 DAY: TUESDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Drain Covers Backwash	Drain Covers Strainer	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.6		0		785	7.2										/		JH
7:00 AM																/		
9:00 AM	2.4		0.2			7.4										/		SL
11:00 AM	2.2		0.2			7.4										/		SL
1:00 PM	3.0		.2			7.2										/		IS
3:00 PM	1.4		.2			7.2										/		
5:00 PM																/		
7:00 PM	2.8		.2			7.4										/		JH
9:00 PM																/		
11:00 PM																/		

NOTES:

DATE: 2/25 DAY: TUESDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Drain Covers Backwash	Drain Covers Strainer	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	1.8		0		772	7.4										/		JH
7:00 AM																/		
9:00 AM	1.2		0.4			7.4										/		SL
11:00 AM	1.2		0.4			7.4										/		SL
1:00 PM	2.0					7.4										/		IS
3:00 PM	2.4		0.4			7.4										/		
5:00 PM																/		
7:00 PM	1.4		.4			7.4										/		JH
9:00 PM																/		
11:00 PM																/		

NOTES:

No. 425-MX

Rite in the Rain

JL DARLING LLC
www.riteintherain.com

DATE: 7/26 DAY: WEDNESDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Drain Covers/Strainer	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.6		0		783	7.4	~~200~~ 50	200	✓	✓		~~85~~				/		AL
7:00 AM																/		
9:00 AM																/		
11:00 AM	1.8		.1		-	7.4										/		LS
1:00 PM	1.8		.1			7.4										/		LS
3:00 PM	2.2		.2		761	7.4										24/7		LS
5:00 PM	1.8		.2			7.4										/		HB
7:00 PM																/		
9:00 PM																/		
11:00 PM																/		

NOTES:

DATE: 7/26 DAY: WEDNESDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Drain Covers/Strainer	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.2		0		776	7.4	50	200	✓	✓		~~89~~				/		HB
7:00 AM																/		
9:00 AM																/		
11:00 AM	1.0		0			7.8										/		LS
1:00 PM	1.0		0			~~7~~ 1.0										/		LS
3:00 PM	1.0		.2		760	7.2						91				9/		LS
5:00 PM	1.8		.4			7.2										/		HB
7:00 PM																/		
9:00 PM																/		
11:00 PM																/		

NOTES:

1400 - bleach added

DATE: 2/27 **DAY:** THURSDAY L

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Strainer	Drain Covers	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.0		0		765	74							85	*	REPLACE		/		[illegible]
7:00 AM					750*									>	INJECTOR		L + 100 lbs	SOD BIC	
8:00 AM					777*									*			/		
11:00 AM	4.2		0.2			7.4											/		[illegible]
1:00 PM																	/		
3:00 PM																	/		
5:00 PM																	/		
7:00 PM																	/		
9:00 PM																	/		
11:00 PM																	/		

NOTES:

DATE: 2/22 **DAY:** THURSDAY S

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Strainer	Drain Covers	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.4		0		797	74							89			25 lbs	/ SOD	BARC	[illegible]
7:00 AM																	/		
9:00 AM																	/		
11:00 AM	3.6		0.4			7.4											/		[illegible]
1:00 PM																	/		
3:00 PM																	/		
5:00 PM																	/		
7:00 PM																	/		
9:00 PM																	/		
11:00 PM																	/		

NOTES:

DATE: 2/27 DAY: THURSDAY L

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash / Strainer / Drain Covers	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readin
5:00 AM	2.0		0		~~765~~ 774						85	*	REPLACE INJECTOR	L	/	+ 100# SOB BIC
7:00 AM					750*							>			/	
8:00 AM					777*							*			/	
11:00 AM	4.2		0.2			7.4									/	
1:00 PM															/	
~~4:00 2:00 PM~~	3.8		.6			7.4									/	
5:00 PM															/	
7:00 PM															/	
9:00 PM															/	
11:00 PM															/	

NOTES: 11:00 AM Chlorine unplugged

DATE: 2/27 DAY: THURSDAY S

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash / Strainer / Drain Covers	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional
5:00 AM	2.4		0		797	7.4					89			25	#3/SOB BARA	
7:00 AM															/	
9:00 AM															/	
11:00 AM	3.6		0.4			7.4									/	
1:00 PM															/	
~~4:00~~ PM	2.8		.2			7.4									/	
5:00 PM															/	
7:00 PM															/	
9:00 PM															/	
11:00 PM															/	

NOTES:

DATE: 2/28 DAY: FRIDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Strainer	Drain Covers	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings
5:00 AM	3.6		.2		798	7.4											/	
7:00 AM	3.0		.2														/	
8:00 AM	1.2		.2		768	7.4											/	
10:00 AM	0.9		0.2		752	7.4											/	
10:30 AM	0.6		0.6		764	7.4											/	
3:00 PM																	/	
5:00 PM																	/	
7:00 PM																	/	
9:00 PM																	/	
11:00 PM																	/	

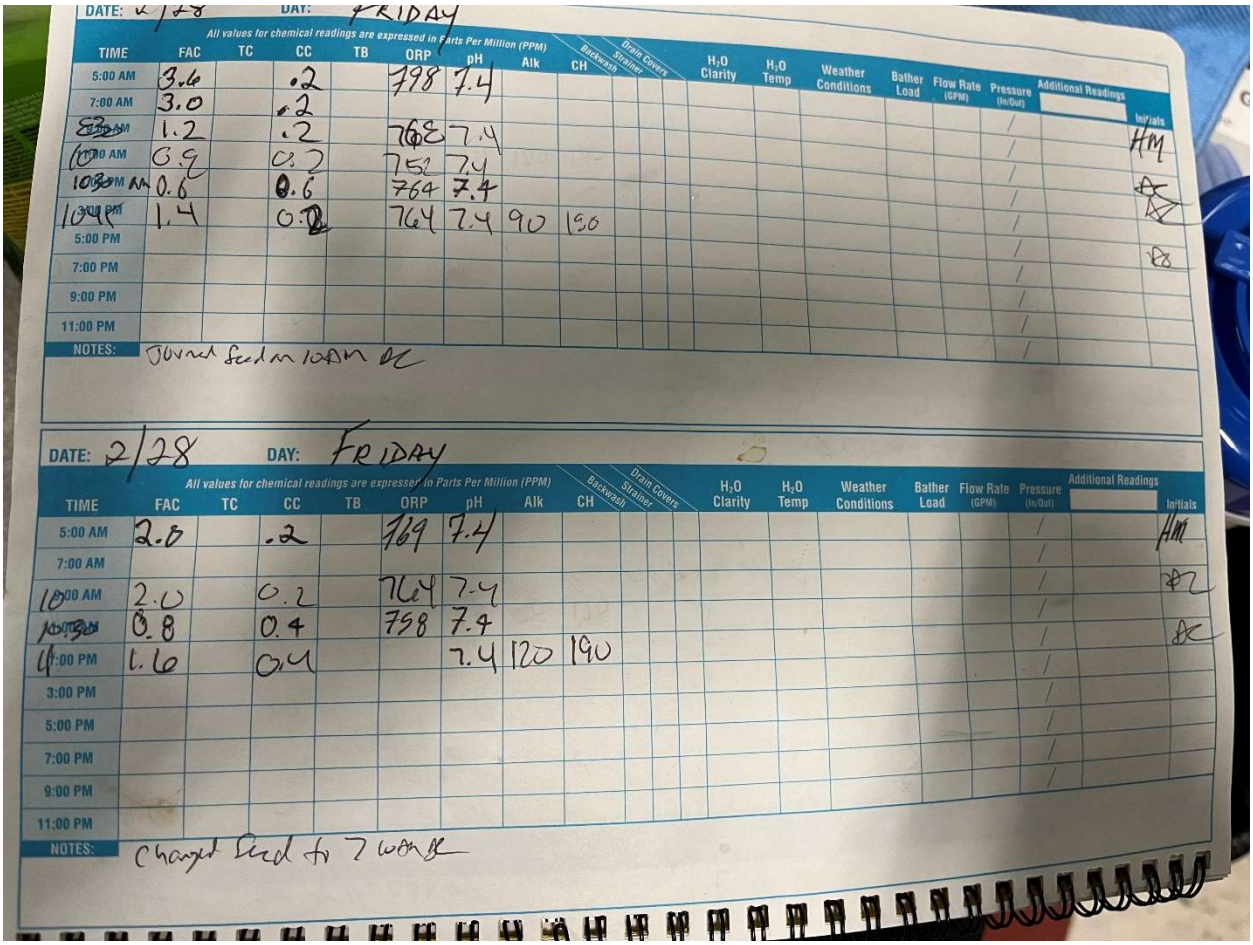
NOTES: Turned feed on 10AM DC

DATE: 2/28 DAY: FRIDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Backwash	Strainer	Drain Covers	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings
5:00 AM	2.8		.2		769	7.4											/	
7:00 AM																	/	
10:00 AM	2.0		0.2		764	7.4											/	
10:30	0.8		0.4		758	7.4											/	
1:00 PM																	/	
3:00 PM																	/	
5:00 PM																	/	
7:00 PM																	/	
9:00 PM																	/	
11:00 PM																	/	

NOTES: Changed feed to 7 orange



DATE: 2/28 DAY: FRIDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Drain Covers / Strainer / Backwash	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	3.6		.2		798	7.4									/		HM
7:00 AM	3.0		.2												/		
[illegible]	1.2		.2		768	7.4									/		
[illegible] AM	0.9		0.2		752	7.4									/		
[illegible] AM	0.6		0.6		764	7.4									/		
[illegible] PM	1.4		0.8		764	7.4	90	150							/		
5:00 PM															/		
7:00 PM															/		
9:00 PM															/		
11:00 PM															/		

NOTES: Poured feed in 10AM DC

DATE: 2/28 DAY: FRIDAY

All values for chemical readings are expressed in Parts Per Million (PPM)

TIME	FAC	TC	CC	TB	ORP	pH	Alk	CH	Drain Covers / Strainer / Backwash	H_2O Clarity	H_2O Temp	Weather Conditions	Bather Load	Flow Rate (GPM)	Pressure (In/Out)	Additional Readings	Initials
5:00 AM	2.0		.2		769	7.4									/		HM
7:00 AM															/		
10:00 AM	2.0		0.2		764	7.4									/		DZ
[illegible]	0.8		0.4		758	7.4									/		DC
4:00 PM	1.6		0.4			7.4	120	190							/		
3:00 PM															/		
5:00 PM															/		
7:00 PM															/		
9:00 PM															/		
11:00 PM															/		

NOTES: Changed feed to 7 AM DC