

BY HAND

Michael (Mickey) Wood
(Seasonal USPS address) P. O. Box 5065
Bradenton, FL 34281-5065
U.S.A.

March 15, 2011

Florida: (941) 799-2034 **Please, NO CALLS**
Ontario: (613) 487-3718 **BEFORE 11:00 hrs.**

Ms. TJ Miller
Office Manager
Trailer Estates Parks & Recreation District
1903 - 69th Avenue West
Bradenton, FL 34207

Tel.: (941) 756-7177
Fax.: (941) 755-2937

Seasonal civic address: 6615 Washington Street
Bradenton, Florida
34207

Northern residence address: 3796 Bouvier Road
Bourget, Ontario K0A 1E0
Canada

Dear Ms. Miller:

On this date (Tuesday, March 15th, 2011) this writer is delivering **BY HAND**, to you, the below mentioned three (03) page letter with 16 pages of attachments, to Ms. Martha Brauer, Chairperson/Trustee, duly dated March 15, 2011. I have made twelve (12) true copies of the letter and attachments.

I request that you personally see to it that ALL of the Board/Trustee members and Mr. Mark Yawderg, Maintenance Foreman, are provided with these copies simultaneously.

Letter dated March 15, 2011 to Ms. Martha Brauer, Chairperson/Trustee

**SUBJECT: COMMUNITY POOL and SPA - CHLORINE CHEMICALS
verses SALT CHLORINE GENERATOR (i.e.: salt water)**

Thank you,

**ORIGINAL SIGNED BY
MICHAEL (MICKEY) WOOD**

Michael (Mickey) Wood

Attached: 12 true copies, Martha Brauer letter, dated March 15, 2011

cc: Ms. Martha Brauer, Chairperson/Trustee

BY HAND

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**SUBJECT: COMMUNITY POOL and SPA - CHLORINE CHEMICALS
verses SALT CHLORINE GENERATOR (i.e.: salt water)**

My wife (Laura) and I became an owner and seasonal residents here in the Park February, 2009. We have, as other residences, witnessed our park fees and other escalate substantially over the past two (02) years. In an effort to help find various ways to get the most 'bang' out of our fees; we would like to submit the following for the Board/Trustees' due consideration.

I have come to learn the following:

-) **TRAILER ESTATES TRIBUNE, MARCH, 2011**, cover page, **Bullets, FEBRUARY 7, 2011** @ item #3 "The salt system recommended by a resident for the pool cannot be done due to the policies of Manatee County."

At this time, I will not ask or request where/by whom, or to the source of this information came from. However; I do reserve the privilege to request that information at a later date and time. Thank you.

-) While visiting another trailer park for 55+ and older in Tavares, Florida a few weeks ago; I personally met the resident who added the salt chlorine generator (aka salt water) to their community pool & spa. I shall elaborate later in this letter.

Trailer park, 55+:

Imperial Terrace East
2612 Vindales Road
Tavares, FL 32778
Tel.: (352) 343-8206 Annex location

While visiting friends at Imperial Terrace East park, while swimming in that pool, I had the occasion to meet 'John', who is also a resident. John's profession up north is pool installations in all aspects. John informed me that he himself was the person who presided over the entire project at this park. He said, **FIRST** you hire a qualified engineer to design a plan to have the salt chlorine generator added to your pool's/spa's present system as a SECONDARY SOURCE for a safe and sanitary swimming environment. Your present system of adding liquid chlorine remains your PRIMARY SOURCE for a safe and sanitary swimming environment. After your design plan is completed, **SECOND** you submit your completed plan to the county for approval. Assuming that you now have the equipment purchased, **THIRD** you have it installed as per the design plan. Now, here is what will happen in reality. Even though your salt chlorine generator is deemed to be secondary ... it will become the primary and the 'old system' (the original system) will now become the secondary. Why? Because the new salt chlorine generator for the most part should produce enough chlorine to more than satisfy county and state regulations and codes. The savings are ENORMOUS! John said that on average before they changed over ... it was averaging approximately \$3 to \$5 per day for the chlorine and chemicals. Once they added the salt chlorine generator ... less than \$1 per day! Also noting here, once you add the required amount of salt to your body of water, it never evaporates. The only time you would have to add any salt is ONLY IF WATER IS LOST OR ADDED. I REPEAT, SALT DOES NOT EVAPORATE! Imperial Terrace East park's pool is not as big as Trailer Estate's pool, so the dollar a day in costs per day may not be that little ... for obvious reasons.

According to Mark Yawderg, TE maintenance person for the pool, we average daily; at present 35 to 40 gallons of liquid chlorine per week on the pool (pool holds 74,800 gallons of water). TE also averages daily, at present 2 to 3 gallons of liquid chlorine per week for the hot tub spa (spa holds 2,190 gallons of water). I have 'ball park figures' that liquid chlorine costs are about \$10 per one gallon container OR \$35 per five gallon container OR by special permit only \$250 per 55 gallon container. It looks to me that the TE's lowest amount of chlorine usage per year all inclusive would be 2,024 gallons of liquid chlorine. That's the equivalent of 36.8 55 gallon containers of liquid chlorine @ \$250 per container = \$9,800 approximately per year. Keeping in mind that this is the least it would cost! If purchasing by 5 gallon containers ... it now jumps to = approximately \$14,150 per year. These are ALL approximate figures, but it is ALL expenditures that take place each and every year!

I would also like to add that many of the cruise ships lines now are implementing the salt chlorine generators to their on board pools. Do you really think they would be doing this if it was not cost effective?

I have taken the liberty in communicating with the 'right person' with Manatee County, Mr. Harry Messick, Environmental Health Services. Please see and READ his wording in the enclosed attached herein duly dated March 14, 2011.

I have taken the liberty in communicating with an equipment pool supplier, Mr. Sean Griffin at POOLCENTER.com. Please see and READ his wording and the equipment "Pool Pilot Soft Touch" and "Pool Pilot TC" as noted in his communication enclosed attached herein duly dated March 14, 2011. Please also note Mr. Harry Messick's comment(s) on these items.

With all due respect to the TE Board/Trustees; your cursory examination on the resident's request on this subject: **"The salt system recommended by a resident for the pool cannot be done due to the policies of Manatee County."** is without merit!

Do the math! We cannot afford to NOT adapt a salt chlorine generator to our pool and spa system(s) ASAP! I therefore adamantly request that you (i.e.: ALL OF THE BOARD/TRUSTEE MEMBERS) carefully consider our submission herein to better serve the owners and park residents now and for years to come!

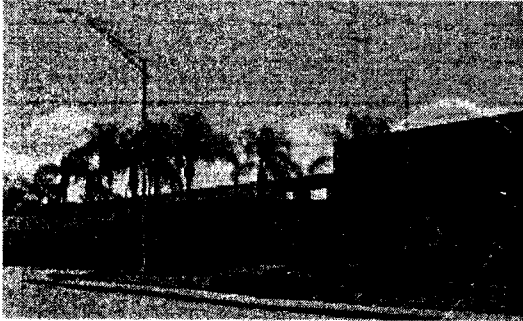
Laura and I request that this correspondence be entered into the Park's records as being received. Additionally, we request an acknowledgement **in writing** that it has been received. Regular updates on any and all Board/Trustees' consideration on this subject demands that ALL park residents and owners be advised on regular basis.

Yours very truly,

**ORIGINAL SIGNED BY
MICHAEL (MICKEY) WOOD**

Michael (Mickey) Wood
Enclosure(s) 16 pages



Manatee County Health Department




Manatee County Health Department
410 6th Ave East
Bradenton, FL 34208
(941) 748-0747

PUBLIC SWIMMING POOLS

Commercial public swimming pools and spas and the Lake Manatee State Park swimming area are permitted annually and inspected twice a year. The pools are located at apartment complexes, condominiums, motels, hotels, mobile home/RV parks and recreational facilities. New pools and those being renovated receive engineering plan reviews for construction permitting and construction inspections. Public swimming pools or spas that resurface are required to inform the local health department for resurfacing surveys and inspections

- Inspections Contact: **Tom Larkin** (941)748-0747 ext 1325
- Engineering Construction Review: **Brian Dietz, P.E.** (941)748-0747 ext 1324
- Resurfacing Inspections Contact: **Harry Messick** (941)748-0747 ext 1355
-
- [State Website on Swimming Pools](#) 
- [Resurfacing Inspection Request Forms \(pdf - 29kb\)](#) 

IN THE NEWS: 10/16/2008

- [FAQ for Public Pools regarding the new Virginia Graeme Baker Pool Act](#) 

The following is email correspondence From & To Mickey Wood and Harry Messick on March 14, 2011

from Harry_Messick@doh.state.fl.us
to mikeandlaurawood@gmail.com
date Mon, Mar 14, 2011 at 1:51 PM hide details 1:51 PM (18 minutes ago)
subject Trailer Estates Swimming Pool
mailed-by doh.state.fl.us

The proposed salt chlorine generator would have to meet the provisions within Chapter 64E-9 of the Florida Administrative Code. The installation of this device would be considered a modification to the pool which would have to be permitted by the Health Department. Part of this permitting process would involve the submittal of plans from a PE registered within the State of Florida and the fee of \$150.00. The current chlorinator would have to remain caused by the language within the code: "the feeders shall be capable of continuously feeding a dosage of 6 mg/L to the minimum required turnover flow rate of the filtration systems." There are no known generator feeders of this type that can achieve this rate by them selves.

If you have any questions do not hesitate to contact me.

Harry Messick

Environmental Health Services

Manatee County Health Dept.

(941) 748-0747 extension 1355

March 14, 2011

TO: Harry Messick
FROM: Mickey Wood

Thank you for your email.

Harry, I am by no means any kind of an expert on this subject of chlorine generators/salt water pools. May I also suggest that Trailer Estate's Board/Trustee members are not either. I fear that these Board/Trustees may misinterpret your email ass ... [the chlorine generator (aka salt water) therefor cannot be Incorporated by any means into the Trailer Estates pool and hot tub spa] ... I request for you to elaborate on the following, please.

) If a licensed and qualified engineer is contracted by Trailer Estates to design a plan/system to adapt/incorporate a chlorine generator (aka salt water) designed for this pool's 74,800 gallon capacity **AND** the separate hot tub spa's 2,190 gallon capacity >>> whereas this design plan for these chlorine generator(s) will be used as the secondary system and the already existing chlorine system will continue as the primary source; would this concept/plan/design qualify to meet and/or exceed the county's and state's regulations, etc?

) Are you aware of any other community pools in the Manatee County that has in use a chlorine generator (aka salt water) as in the capacity as I have indicated above. If so; would this information be made available to our Board/Trustees for their information inquiry?

Anything additional that you may consider helpful would be most appreciated.
Your earliest reply would be appreciated,

Mickey Wood

Harry_Messick@doh.state.fl.us

to me

Yes, separate permitting would be needed if both the pool and the spa were modified by installing a chlorine generator. Both would be allowed and I would say that the salt chlorine generator could be used as a primary source and the existing chlorine systems would be back up. The minimum chlorine for a pool is 1.0 mg/L and for a spa the level is 2.0 mg/L but the code requires a system that can produce up to 6.0 mg/L. The terms primary and secondary would be determined by the chlorine demand and the size of the generator and its ability to produce a certain level of chlorine. In larger pools there are usually a series of these devices installed.

The latest location with this type of installation is Tidy Island. There are a few others but I would have to ask our PE that reviews these modifications for a further list. They are not identified as such in the data base.

Harry Messick

Manatee County Health Dept.

The following is emails To & From Mickey Wood/Sean Griffin and Harry Messick on March 14, 2011

from Mickey Wood <mikeandlaurawood@gmail.com>
to Harry_Messick@doh.state.fl.us
date Mon, Mar 14, 2011 at 4:29 PM 4:29 PM (4 hours ago)
subject Fwd: salt chlorine generator, FROM Mickey Wood
mailed-by gmail.com
March 14, 2011

FROM: Mickey Wood
TO: Harry Messick

Harry, find enclosed some info and products (salt chlorine generators) from Poolcenter.com in Springfield, VA. The person I talked to was Sean in Sales. I read him some of the specs in your email you made reference to regarding the:

"the feeders shall be capable of continuously feeding a dosage of 6 mg/L to the minimum required turnover flow rate of the filtration systems." There are no known generator feeders of this type that can achieve this rate by them selves."

as you wrote in your email.

Harry, I told him the TE's pool is 74,800 gallons. Sean said the salt chlorine generator he suggests (attached herein) would meet that standard for up to 100,000 gallons. What do you think?

Thanking you in advance,

Mickey Wood

----- Forwarded message -----

From: **Sean Griffin - POOLCENTER.com** <sean@poolcenter.com>
Date: Mon, Mar 14, 2011 at 4:09 PM
Subject: Clorine genterator
To: mikeandlaurawood@gmail.com

(703) 838-0083

Association of Pool and Spa Proffessionals

PLEASE SEE FOLLOWING ATTACHMENT FROM SEAN AND HARRY MESSICK'S REPLY



Laura Wood <mikeandlaurawood@gmail.com>

Fwd: salt chlorine generator, FROM Mickey Wood

2 messages

Laura Wood <mikeandlaurawood@gmail.com>
To: Harry_Messick@doh.state.fl.us

Mon, Mar 14, 2011 at 4:29 PM

March 14, 2011

FROM: Mickey Wood
TO: Harry Messick

Harry, find enclosed some info and products (salt chlorine generators) from Poolcenter.com in Springfield, VA. The person I talked to was Shawn or Sean in Sales. I read him some of the specs in your email you made reference to regarding the:

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Thanking you in advance,

Mickey Wood

----- Forwarded message -----
From: Sean Griffin - POOLCENTER.com <sean@poolcenter.com>
Date: Mon, Mar 14, 2011 at 4:09 PM
Subject: Chlorine generator
To: mikeandlaurawood@gmail.com

(703) 838-0083

Association of Pool and Spa Professionals

AutoPilot Pool Pilot Soft Touch

Pool Pilot Soft Touch - This versatile chlorine generator is one of the best values available today.

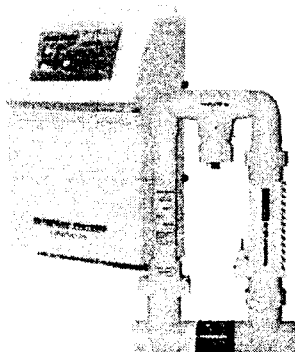
Incorporating microprocessor technology and 'soft touch' push-button features with LED read-out, this in-line unit is very 'user friendly'. The Pool Pilot Soft Touch gives you accurate salt-level readings, has multiple boost cycles and our patented temperature compensation that operates in water temperatures up to 104°F.

Features:

- More purifier output than any other unit - up to 2lbs./day
- Utilizes patented bypass manifold for optimum chlorine production
- Patented temperature compensation
- Operates at any water temperature up to 104°
- Operates at all salt levels: 2,000-35,000 ppm
- Lifetime trade-in value on cell
- Soft reverse cell cleaning

Benefits:

- Never buy chlorine again
- Soft, Silky feeling water
- No more red eyes
- No more itchy skin
- No more green hair
- No more vacation worries
- No more faded swim wear
- Energy efficient
- Environmentally friendly
- Automatic cell cleaning



AutoPilot's patented bypass manifold is a pre-assembled unit designed to control the flow rate delivered to our cell. The spring check valve in the manifold allows excess flow, over 20 GPM, to by-pass the cell. The water in turn flows at a controlled rate through the cell where it is super chlorinated. The in-line strainer on the inlet side of the manifold protects the tri-sensor and production cell from debris that might bypass the filter. The location of the strainer next to a connection union makes periodic cleaning easy. The design of our patented bypass manifold guarantees optimum chlorine production and simplifies the installation process of the AutoPilot® Purifying System.

Manifold features include:

1. In-line Strainer - The in-line strainer protects the Tri-Sensor and the Cell from debris that may by-pass the filter and obstruct either component. The location of the strainer in the connecting union makes it easy to remove for periodic cleaning.
2. Tri-Sensor - The Tri-Sensor is a three way sensing device which measures flow, salt level, and water temperature.

- 3. Chlorine Production Cell - The cell produces 100% pure Sodium Hypochlorite in your pool plumbing returning it to your pool.
- 4. Check Valve - The check valve in the Manifold allows all water flowing through the plumbing at a rate greater than 20 gallons per minute to by-pass the production cell to maximize the production of chlorine.

Which size AutoPilot Pool Pilot Digital do I need?

- The SC-36 is rated for pools up to 34,500 gallons.
- The SC-48 is rated for pools up to 42,100 gallons.
- The SC-60 is rated for pools up to 51,800 gallons.
- The CC-15 is rated for pools OVER 51,800 gallons.

ST2CC16SUS

AutoPilot Soft Touch CC-15 Salt Chlorine Generator

\$1483.00

Top of Form

Top of Form

Autopilot Soft Touch w/ convection cell trisensor Assembly

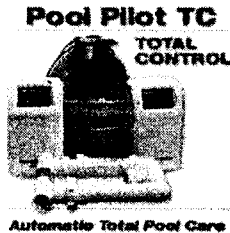
\$1697.00

Bottom of Form

Bottom of Form

Total Control 220V w/ Cell & 15G Tank Acid Relay

The most accurate and reliable way to maintain perfectly balanced pool and spa water is with AutoPilot's Total Control System. No other salt chlorine system comes packed with features like the AutoPilot Total Control System. Maintaining your pool has never been easier!



- No More Buying Chlorine
- No More Manually Adding Acid into the pool
- No More Water Chemistry Worries
- Patented temperature compensation for chlorine output (not applicable w/ ORP Controller)
- Programmable Microprocessor Control# Multi-Language digital display (English, Spanish, French, German)
- Digital control power to the SuperCell
- Tri-sensor circuitry to monitor water flow, water temperature, and salt level
- Internal relay for controlling an external pump or acid feeder
- On-board diagnostics and test programs
- Electronic controller interface for Jandy™, Polaris™, or Pentair IntelliTouch™ controllers
- pH Sensor Constantly measures pH level
- pH Sensor Activates acid pump when pH level rises above set point
- ORP Sensor Constantly measures active sanitizer level in pool water
- ORP Sensor Signals Digital Chlorine Generator to produce chlorine based on demand
- Flow Cell Sensor protection
- Flow Cell Provides proper monitoring environment for sensors
- Flow Water sample tap for manually monitoring water chemistry

TCP2SC60ST2US

Total Control 220V with SC-60 cell & 15G 220V tank acid relay

Sean Griffin

POOLCENTER, INC.

Product Support Specialist

(703) 778-2579 Ext 146

(703) 778-2585 Fax

Our Product Support Department exists to help our customers without cost to them. Because we are not at your pool, and often have sparse information regarding age, application, installation and numerous other factors, we cannot be responsible for advising incorrectly on which item to purchase. Contact the product manufacturer for Technical Support.

Harry_Messick@doh.state.fl.us <Harry_Messick@doh.state.fl.us>
To: mikeandlaurawood@gmail.com

Mon, Mar 14, 2011 at 4:47 PM

The largest unit is rated for over 51,800 gallons but does not specify the amount. The manufacturer usually rates their devices on a 24 hour run time. Our state code is based on the minimum required turnover flow rate which is six hours for a pool. Home owners have had trouble when they use this rating system and the do not run their pumps 24 hours causing them to not have enough chlorine especially in the summer.

From: Laura Wood [mailto:mikeandlaurawood@gmail.com]
Sent: Monday, March 14, 2011 4:29 PM
To: Messick, Harry P

↓

Subject: Fwd: salt chlorine generator, FROM Mickey Wood

[Quoted text hidden]

POOLCENTER.com
7101 Wimsatt Road
Springfield, VA 22151
Phone: (703) 778-2579

Customer Care and Product Support Center
Available **9am - 5pm** Monday - Friday (EST)

24/7 Ordering - Call Anytime to Place your Order
Toll-Free Ordering: **877- POOLCTR** ~ 877-766-5287

Saltwater Chlorine Generator Equipment
Saltwater Chlorine Generator Parts

Chlorine Generators

One of the first alternative sanitizers introduced to the pool and spa industry was the chlorine generator. Chlorine generators are attractive to pool owners simply because they eliminate the need to store, buy, transport and handle chlorine. They are not an alternative to chlorine, but actually make their own chlorine from regular table salt. The pool water passes through a generator cell that creates the chlorine within the pool water.

How Does It Work?

As pool water passes through the chlorine generator cell, pumped through by your filter pump, the salt in the water is turned into Hypochlorous acid. Hypochlorous acid is the exact same component that is produced when any chlorine is added to pool water, whether you use sticks, tablets, granular or liquid. As the water returns to the pool, it will introduce the newly produced chlorine, preventing algae, bacteria and killing micro-organisms, creating a safe and sanitary swimming environment.

OK? How does it really work?

This mild, pleasant saline water is sanitized through the process of electrolysis, as mentioned above. The electrolytic cell, through the use of a small electric current, breaks down the water into its basic elements, Hydrogen and Oxygen. By adding small quantities of granulated salt (much like household table salt - NaCl), Hypochlorous Acid (common chlorine) is produced. During the process, the Hypochlorous Acid (Chlorine) is ultimately converted back to salt. Thus, the salt does not get "used up". Salt only needs to be "topped off" once or twice a year and only to replace salt lost due to water splash-out, bather drag off or filter backwashing.

Salt in My Pool?

The salt level required to maintain a safe, chlorinated pool is about 2500 to 4000 PPM (parts per million). The human body cannot taste salt until the PPM is around 5000. As a reference point, the ocean is around 40000 ppm. The amount of salt in the pool is usually not noticeable. Once the salt is added to the pool, there is no need to add salt on a yearly basis unless the pool is drained or a significant amount of water is removed. Also, the salt level is low enough so there is no danger of equipment corrosion. Chlorine generator users also report the water is softer, leaving a more refreshed feeling after swimming.

Is There Any Maintenance Required?

Chlorine generators require very little maintenance. We at Poolcenter.com recommend the generator cell be removed and cleaned on a yearly basis, usually at start up. Remove the cell from the pool plumbing and run a plastic brush through the cell. For calcium deposits, a mild solution of muriatic acid and water will do the job, or to be careful, use the Lo-Chlor Green Cell Plus. The power supply unit requires no regular maintenance.

Frequently Asked Questions

What Type of salt do I add?

Avoid Rock Salt as it contains too many impurities! Acceptable salts include Food grade salt, Water softener pellets, Solar salt flakes, Water conditioner salt, or Brine blocks. Make sure that your salt contains no iodine and is as pure as possible. Sure Soft Pool Salt is accepted by all Chlorine Generator manufacturers.

Where do I add the salt?

What is most important when adding salt is to brush it around until it is dissolved. This is accelerated by turning your pump on, opening the bottom drain and adding the salt over the drain, rather than walking around the perimeter while adding the salt. It is recommended that you continue to run the pump for 24 hours so the salt can spread evenly throughout the pool. With Granular salt, 60 - 70% will have dissolved before hitting bottom. The remaining salt can simply be brushed into the drain which will then complete dissolution. With all other forms of salt, it will take longer to dissolve but the same process will accelerate the dissolve rate. Simply brush the salt in a pyramid pattern over the drain to increase dissolution.

How much salt do I add?

Enough for 4000 ppm (parts per million) as a starting point. So depending on the initial salt level of your water, you only add the amount needed to establish 4000 ppm. For new pools or freshly filled pools, the salt level will most likely be zero. In this case, 50lbs of salt per 2,000 gallons of water will establish 4000 ppm. For existing pools, the previous usage of chlorine bleach or tablets will have already introduced a level of salt into the water. Have the water tested first then add the appropriate amount to establish 4000 ppm. You can test the salt level of your pool using salt test strips, or your local pool store may have the ability to test a sample for you.

What happens if I add too much salt?

Over-salting will not harm your chlorine generating system, but will lead to a salty tasting water. For some, this is not undesirable as it will more closely match our bodies natural salinity level, making it more comfortable to swim in. If it is too excessive (over 6000 ppm), you can sustain corrosion damage to metallic equipment such as stainless steel handrails, ladders and filters, light rings, or copper heat exchangers. To reduce the salt level, dilution is the solution. Drain some water and refill with fresh water.

How often will I need to add salt?

After the initial dosage of salt, you will only need to add salt when necessary. The most common ways salt is lost is through leaks, rainwater overflow, filter backwashing, and bather splash-out/carryout. Normal water evaporation does not lose salt, it increases the concentration. The make up water added to bring the water level back to normal will then reduce the salt concentration back to 4000 ppm. Most chlorine

generator units have low salt indicators, with Digital Units going further to provide the user with the proper salt amount needed to reestablish 4000 ppm.

Do I eliminate the need to add chemicals?

Chlorine generators do one thing, generate chlorine. However, the purity of this chlorine has less effect on the overall water chemistry balance; therefore, FEWER chemicals are needed re-balance the water. **Poolcenter.com recommends periodic (weekly or bi-weekly) testing of stabilizer levels (60 - 80 ppm), Free Chlorine (2 - 4 ppm for pools and 3 - 6 ppm for spas), pH (7.2 - 7.6), and salt levels (2500 - 4000 ppm).** Since salt generating chlorine systems do not affect the Total Alkalinity or Calcium Hardness, a monthly check is sufficient. In some cases, you might still need to add chlorine for shocking purposes due to extremely heavy bather loads, rainstorms, or accidents, (fertilizer, excessive organic debris or human waste). Shocking the pool will not affect your chlorine generator.

Will I have to run my equipment more?

Your chlorine generator does not rely upon a higher salt level AND extended pump run times in order to generate enough chlorine, provided the cell is properly sized to the pool. Most units allows for multiple configuration set-ups so that you can generate sufficient amounts of chlorine during your current pump circulation time. For regions that have short circulation times, you can increase the output power of the generator to compensate.

How long will the cell last?

The residential cell is rated for approximately 10,000 hours of operation. This typically translates to 3 - 5 years, depending on pool volume, cell size and the sanitizer demands of your pool. Water chemistry balance, salt levels and stabilizer levels are all key factors in ensuring maximum cell life. Proper water chemistry is the key here. The harder you use the cell, the more you ask of it, the shorter its life span. Annual inspection and cleaning of your salt cell is one of the best things you can do to help delay cell degradation.

- [Plumbing / Valves »](#)
- [Pool Chemistry »](#)
- [Pool Equipment »](#)
- [Pool Maintenance »](#)
- [Pool Repair »](#)
- [Pool Safety »](#)
- [Pool Surface Finishes »](#)
- [Pool Glossary](#)
- [Pool Library / Links](#)

CHLORINE GENERATORS

Chlorine Generators for Commercial Pools

The ChlorKing chlorine generators are designed specifically for commercial pools and spas. The systems range in sizes and outputs to suite virtually any commercial pool and spa application. The ChlorKing systems constantly manufacture sodium hypochlorite (hypochlorous acid) through the patented ChlorKing cell to provide consistent chlorine residual in the pool water, and provide the most enjoyable swimming experience available. The ChlorKing Chlorine Generators are available to retrofit existing pump rooms or to design into a new swimming pool facility. Systems carry both NSF 50 and UL 1081 certification.

Features

And Benefits ...

- *Easy to install*

The ChlorKing systems are mounted onto any wall surface in the pump room, and plumbed into an existing circulation system, without cutting into existing pipes. ChlorKing systems use bypass flow and are not in-line.

- *Easy to use*

ChlorKing offers the simplest operation available, using the KIS (keep it simple) process. A dial is mounted on the system, similar to a light dimmer at home, and a simple turn of the dial increases, or decreases chlorine production.

- *Wide range of outputs*

ChlorKing offers systems that produce from 1.5 lb's to 25 lb's of equivalent chlorine per day, in a single cell, the largest available in the market.

- *Reliable performance*

All components used in the manufacture of the ChlorKing systems are of industrial standard, and designed for 24/7 operation, allowing the ChlorKing systems to operate at maximum output continuously.

- *Models available*

1.5 lb / day 7.5 lb / day
2.5 lb / day 10 lb / day
3.5 lb / day 15 lb / day
5.0 lb / day 25 lb / day

- *ORP inputs*

All ChlorKing systems have a separate ORP input which allows a regular controller to activate the chlorKing system. This allows pools to keep existing controllers to maintain ORP and PH levels.

- *Bather friendly*

of an outdoor pool, very heavy rainfall. During these occasions it will be necessary to add salt to the pool water to bring the concentration back to the desired level of 5000 ppm.

ChlorKing Specifications

Dimensions:

Mounting board:

36"W x 16"H - horizontal

16"W x 42"H - vertical

Power requirements:

110V, 8 - 12 amps on 1.5, 2.5 & 5.0 models

220V, 6 - 30 amps on 3.5 - 25 models

Power Enclosures:

NEMA 3R (suitable for indoor and outdoor Installation)

Reverse Polarity:

Self cleaning timer default set at 3 hours.

Control:

Chlorine production available from 1 - 100% to ensure continuous sanitization levels.

Flow Requirements:

20 - 30 gpm at 30 psi max.

Cell Specifications

Plates:

Titanium coated with ruthenium dioxide.

Cell Housing:

Combination PVC schedule 40 & 80.

Operating temperature:

59-104°F

Water Chemistry requirements:

PH: 7.2 - 7.6 (7.3 ideal)

Alkalinity: 80 - 120

Hardness: 180 - 250 ppm

Stabilizer: 30 - 80 ppm

Salt: 4000 - 6000 ppm

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Chlorine Generators

A Salt-Water Pool is the Pool of Choice for Many

From Kevin Woodhurst

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(Continued from Page 1)

On the previous page we introduced the concept of building salt-water pools using chlorine generators. Here is some additional information for consideration when selecting a chlorine generator for your swimming pool.

Types of Chlorine Generators

There are two types of chlorine generators in use today on residential pools. The first one is a brine unit. This unit does not require the pool to have salt added to it. A tank or chamber at the pool equipment area has a predetermined amount of salt in it. Through electrolysis, chlorine is produced and immediately injected into the pool circulation system. These units are messy and produce by-products that are not simple to dispose of. These are the less common of the two types.

The recommended unit is the type requiring that salt be added to the pool. There are two types of these units. One has the chlorine-producing cell and the electronics installed at the equipment while the other has the cell installed in the deck near the pool with the electronics usually located at the equipment. The deck unit works on the principle of convection. It makes chlorine even if the pump is off while the other more common unit makes chlorine as water is passed through the cell with the circulation system (pool pump on.) In both cases the cell **must** remain free of mineral deposits or it will not work properly. Of these two units, the inline unit with 24-hour circulation is the preferred choice. (Did you know that every commercial swimming pool in the United States requires 24-hour circulation?)

What About Polarity?

There are non-reverse polarity units and reverse polarity units. A reverse polarity unit reverses the electron flow through the cell causing mineral deposits to flake off. In some instances the now larger particles will get caught in the filtration system. So the claim that the units help keep calcium scum off the tile is partially correct. These cells do not require as much cleaning. (Don't believe a claim that a unit doesn't ever need to be cleaned.) A reverse polarity unit will cost nominally more than a non-reverse unit.

Bottom Line

Chlorine generators can help fight against waterline scum build-up. They create a better, healthier swimming experience for most people. It isn't necessary to handle or buy chlorine, and, if the unit is functioning correctly, chlorine residual will always be present in the pool, eliminating algae. This makes it nearly impossible to get burning red eyes from chloramines, which is usually the culprit. Even with a chlorine generator, you still must maintain your pool. You still must maintain correct water balance, and you must maintain the chlorine generator. The best pool will have 24/7 circulation, correct hydraulic design with an in-floor cleaning system for bottom up cleaning and circulation, a quality ozone system, and a chlorine generator for sanitizer residual. You can expect to pay at least \$1,000, and up to several thousand dollars, for a quality chlorine generator unit.

DISCLAIMER: If you do not maintain a chlorine generator or maintain your pool chemistry you can destroy your pool's interior finish, decking and pool equipment. Chlorine generators and salt-water pools are great but they need care.

You now have the recipe for a low maintenance pool. Enjoy, and swim safe!

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Chlorine Generators

A Salt-Water Pool is Often the Pool of Choice

From Kevin Woodhurst

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It can be complicated deciding which pool is best for your family. Many questions revolve around salt-water pools or chlorine free pools. Salt-water pools are NOT chlorine free pools. A salt-water pool is simply one that utilizes a chlorine generator. Chlorine generators have been around for decades. As technology and materials continue to evolve, chlorine generators continue to improve in performance.

Why Salt-Water?

Ocean water has a salt content of around 35,000 parts per million ("ppm"). Humans have a salt taste threshold of around 3,500 ppm. Most chlorine generators require a salt content of 2500 - 6000 ppm in the pool. A unit that needs less than 3500 ppm to operate effectively is optimal. If the salt content is higher, that warm, salty water will be pretty distasteful!

Swimming in a mild saline solution is much like taking a shower in soft water. Generally, when people swim in a non-chlorine generator pool (a pool with no salt water in it) they feel like their skin dries quicker upon exiting the pool. They may feel and/or see a whitish residual, chlorine flaking, on the skin. In a salt-water pool (one with a chlorine generator) the water feels smooth, your skin feels smooth and many people feel more refreshed.

What Does a Chlorine Generator Do?

A chlorine generator's main function is to produce chlorine for the pool so you do not have to buy it, store it or handle it. These are big advantages for many pool owners. Chlorine generators, when functioning correctly, produce chlorine constantly (when the pump is running) with most units. This keeps a residual of chlorine in the pool that prevents algae from growing. The secret is keeping the cell free of calcium and mineral deposits--the cell itself is made up of precious metals--it must be maintained so it can continue to make chlorine.

Through the process of electrolysis, water passing over the chlorine generator cell produces chlorine that is instantaneously transformed into Hypochlorous acid. When any type of chlorine is added to water it ALL makes the SAME thing: Hypochlorous acid. It does not matter if it is Sodium Hypochlorite (liquid chlorine), Tri-chlor and DI-chlor or Lithium based, Cal-hypo or even gas chlorine--it all makes Hypochlorous acid. Hypochlorous acid is the active sanitizer; this is what kills algae and other harmful stuff in the water. Its effectiveness is totally predicated on balanced water conditions and, more importantly, proper pH. So, with a salt water system or chlorine generator, you still must maintain your water balance (pool chemistry) properly. As long as you do this, a chlorine generator is a good choice.

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Salt Machines

Salt machines eliminate the need for using harsh, chemically produced chlorine to sanitize your pool and spa. In the Sarasota and Manatee county areas, we can quickly and easily install a salt machine for a new or existing pool or spa.

Don't want to fuss with liquid or tablet chlorine to keep your pool or spa sanitized? Let us install a salt machine to do it for you. Call 941-924-3016.

Florida has notoriously hard water, which is not good for pools and spas. But ordinary salt can be used in a salt machine to create a self-regenerating supply of sanitizer that keeps your water clear, clean and incredibly soft. Isn't that better than exposing yourself and your family to chemicals?

When you use traditional chlorine, you have to follow a careful routine to monitor and keep the levels where they should be. Instead, a salt machine converts common table salt into chlorine to keep your pool and spa water free from bacteria.

The salt machine uses what we call a Turbo Cell™, a patented converter that is connected to the control unit. Water passes through the Turbo Cell, and a safe electrical charge converts salt that had been previously added to the water into sanitizing chlorine that is released into the pool or spa. So why is this solution so economical? It only takes one teaspoon of salt per gallon of water to keep your entire pool or spa safe – no expensive or harsh chemicals to buy, no worries about making sure the levels are correct. You can use ordinary table salt that you would buy at the grocery store, or solar or water softener salt. Most distributors sell their salt in 40- to 80-pound bags.

Because of the low operating costs, salt machines quickly pay for themselves, and there is really no maintenance required for them. Plus, you don't have to deal with that potent chlorine smell.

Not that you plan to drink your pool or spa water, but we've often been asked whether the use of salt will make the water taste salty. The answer is a resounding no. In fact, the salt concentration in your pool or spa is 1/10 the amount that you would find in the ocean. You can even challenge anyone who is using your pool to do a "taste test," and they will see they can't even detect the salt on their tongue.

And because salt machines eliminate the need for chemical chlorine, you can open your eyes under water without having them burn the way they would in a traditional swimming pool. Plus, it won't irritate your skin the way traditional chlorine does. Certainly you've noticed that over time, your swimsuit fades from the chlorine. With salt machines, this won't happen, either. All of these issues are caused by what are known as chloramines, a chemical compound that is a byproduct of traditional chlorine. When you use a salt machine, these chloramines are continually oxidized, meaning the chlorine won't be an irritant.

Would you like to learn more about salt machines and receive a free estimate? Then give us a call today to schedule a time convenient for you: 941-924-3016.

Our state-licensed company has been doing business in Sarasota and Manatee counties since 1978.

FREE Estimate



BY HAND

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March 15, 2011

Florida: (941) 799-2034 **Please, NO CALLS**
Ontario: (613) 487-3718 **BEFORE 11:00 hrs.**

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34207

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Canada

Dear Ms. Miller:

On this date (Tuesday, March 15th, 2011) this writer is delivering **BY HAND**, to you, the below mentioned three (03) page letter with 16 pages of attachments, to Ms. Martha Brauer, Chairperson/Trustee, duly dated March 15, 2011. I have made twelve (12) true copies of the letter and attachments.

I request that you personally see to it that ALL of the Board/Trustee members and Mr. Mark Yawderg, Maintenance Foreman, are provided with these copies simultaneously.

Letter dated March 15, 2011 to Ms. Martha Brauer, Chairperson/Trustee
**SUBJECT: COMMUNITY POOL and SPA - CHLORINE CHEMICALS
verses SALT CHLORINE GENERATOR (i.e.: salt water)**

Thank you,

**ORIGINAL SIGNED BY
MICHAEL (MICKEY) WOOD**

Michael (Mickey) Wood

Attached: 12 true copies, Martha Brauer letter, dated March 15, 2011

cc: Ms. Martha Brauer, Chairperson/Trustee