69775-1 10/11/2012 1/21

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

October 11, 2012

Micah T Reynolds
Technology Sciences Group, Inc
c/o Apex Chemical Corporation
1150 18th Street, NW, Suite 1000
Washington, DC 20036

Subject APEX Chlorinating Liquid
EPA Registration Number 69775-1
Application Date July 13, 2012
EPA Receipt Date July 13, 2012

Dear Mr Reynolds

The following label amendment, submitted in connection with registration under section 3 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended is acceptable with the following comments listed below

I *Proposed Label Amendments*

- Expand Uses in accordance with the Guidance for the Reregistration of Pesticide Products Containing Sodium and Calcium Hypochlorite Salt as the Active Ingredient (February, 1986)
- Add Three Alternate Brand Names

II *Labeling Comments*

The following labeling revisions must be made

1 In accordance with PR Notice 2000-5 Suggestive terms such as "should," may" or "recommend" may be confusing or ambiguous, or potentially conflict with mandatory labeling statements, thus, they are to be avoided Therefore the terms "should," "may" or "recommend" where appropriate, must be deleted from the labeling directions and replace with the term ***"MUST"*** wherever it appears on the label, such sites as "Sanitization of Dialysis Machines, General Potable Water Treatment Compounds, etc

2 Under the heading "Sanitization of Nonporous Food Contact Surfaces", first paragraph (Rinse Method), first sentence, delete the phrase "chlorine may be" and replace it with the term ***"must be"***

3 The precautionary statement heading must in the same large bold type print to read as follows

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER CORROSIVE

4 Add the statement, ***"May be fatal if swallowed"*** after the "do not get in eyes, on skin, or clothing" statement in the precautionary statement paragraph

5 The following alternate brand names are acceptable

- APEX CHLORINATING LIQUID
- APEX CONCENTRATE
- LO TEMP SANITIZER

A stamped accepted copy of the label with conditions is enclosed for your record

Submit one copy of your final printed labeling before distributing or selling this product bearing the revised labeling This amendment and a copy of this letter have been placed in this product's file for future reference

Should you have any questions or comments concerning this letter, please contact Adam Heyward via email at *heyward.adam@epa.gov* or by telephone at (703) 347-0274 during the hours of 6 00 am to 2 30 pm EST

Sincerely,

Monisha Harris
Product Manager (32)
Regulatory Management Branch II
Antimicrobials Division (7510P)

Enclosure A copy of the stamped label

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

[INSERT COMPANY LOGO]

APEX LIQUID CHLORINIZOR
(MASTER LABEL)

Alternate Brand Names
APEX CHLORINATING LIQUID
APEX CONCENTRATE
DESERT FORMULA LIQUID CHLORINIZOR
POOL BOSS LIQUID CHLORINZOR
LO TEMP SANITIZER

ACCEPTED
with COMMENTS
In EPA Letter Dated
OCT 11 2012

Under the Federal Insecticide Fungicide and Rodenticide Act as amended for the pesticide registered under EPA Reg No 69775-1

ACTIVE INGREDIENT

Sodium Hypochlorite	10 0% by wt
OTHER INGREDIENTS	90 0% by wt
TOTAL	100 0% by wt

KEEP OUT OF REACH OF CHILDREN
DANGER

FIRST AID
IF IN EYES Hold eye open and rinse slowly and gently with water for 15-20 minutes Remove contact lenses if present after first 5 minutes then continue rinsing Call a poison control center or doctor for treatment advice
IF ON SKIN OR CLOTHING Take off contaminated clothing Rinse skin immediately with plenty of water for 15-20 minutes Call a poison control center or doctor for treatment advice
IF SWALLOWED Call a poison control center or doctor immediately for treatment advice Have person sip a glass of water if able to swallow Do not induce vomiting unless told to do so by poison control center or doctor Do not give anything to an unconscious person
IF INHALED Move person to fresh air If person is not breathing call 911 or an ambulance then give artificial respiration preferably mouth-to-mouth if possible Call a poison control center or doctor for further treatment advice
IN CASE OF AN EMERGENCY CALL CHEMTREC AT 1-800-424-9300
NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage Have the container or label with you when you call a poison control center or doctor or going to treatment

See (back panel) (side panel) (other side) (insert) for (additional precautionary statements) (and directions for use)

EPA Reg No 69775-1
EPA Est No 69775-AZ-001

[Manufactured] (or) [Mfg] by
APEX Chemical Corporation
Scottsdale AZ 85258

Net Contents _____
[Lot] (or) [Batch] _____ *(note to reviewer the lot or batch number may instead appear directly on the product container)*

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

PRECAUTIONARY STATEMENTS

Hazardous to humans and domestic animals DANGER CORROSIVE Causes irreversible eye damage and skin burns Do not get in eyes on skin or on clothing Wear safety glasses or goggles and rubber gloves when handling this product Avoid breathing vapors Vacate poorly ventilated areas as soon as possible Do not return until odors have dissipated Wash thoroughly with soap and water after handling and before eating drinking chewing gum using tobacco or using the toilet Remove and wash contaminated clothing before reuse

PHYSICAL AND CHEMICAL HAZARDS STRONG OXIDIZING AGENT Mix only with water according to label directions Mixing this product with chemicals (ie ammonia acids detergents etc) or organic matter (ie Urine feces etc) will release chlorine gas which is irritating to eyes lungs and mucous membranes

ENVIRONMENTAL HAZARDS

(Note to reviewer The following text for residential/consumer products) This pesticide is toxic to fish and aquatic organisms To protect the environment do not allow pesticide to enter or run off into storm drains drainage ditches gutters or surface waters Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems

(Note to reviewer The following text for commercial products) This pesticide is toxic to fish and aquatic organisms *(Add the following text for containers 5 gallons or greater)* Do not discharge effluent containing this product into lakes streams ponds estuaries oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority For guidance contact your State Water Board or Regional Office of the EPA

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling

Product degrades with age and exposure to sunlight and heat Use a chlorine test kit and increase dosage as necessary to obtain required level of available chlorine

(Optional advisory statements)
Do not tip (or product may leak)
Keep upright to prevent leakage
Do not pick package showing signs of damage
Carry in separate baggage compartment securely braced in upright position

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Table of Proportions	
PPM Desired	**Add Product to Water**
0 2 0 6	1 fl Oz per 2 000 gallons water
1	3 fl Oz per 2 500 gallons water
1 5	5 fl Oz per 2 500 gallons water
3	4 fl Oz per 1 000 gallons water
4	5 fl Oz per 1 000 gallons water
5	6 fl Oz per 1 000 gallons water
10	29 fl Oz per 2 500 gallons water
15	17 fl Oz per 1 000 gallons water
16	18 fl Oz per 1 000 gallons water
25	29 fl Oz per 1 000 gallons water
35	40 fl Oz per 1 000 gallons water
50	58 fl Oz per 1 000 gallons water
100	1 fl Oz per 10 gallons water
100	115 fl Oz per 1 000 gallons water
200	1 fl Oz per 5 gallons water
200	230 fl Oz per 1 000 gallons water
240	278 fl Oz per 1 000 gallons water
250	287 fl Oz per 1 000 gallons water
500	6 fl Oz per 10 gallons water
600	4 fl Oz per 5 gallons water
800	5 fl Oz per 5 gallons water
1 000	6 fl Oz per 5 gallons water
5 000	29 fl Oz per 5 gallons water
10 000	58 fl Oz per 5 gallons water

POOLS, SPAS, HOT-TUBS, IMMERSION TANKS

POOLS To super-chlorinate use table of proportions and add product to achieve 5 to 10 ppm residual chlorine To maintain chlorination add sufficient product to yield an available chlorine residual of 1 ppm Maintain 1 to 3 ppm in an unstabilized pool and 1 to 1 5 ppm in a stabilized pool as determined by a suitable chlorine test kit Adjust and maintain pool water pH to between 7 2 to 7 6 and alkalinity to between 50 to 100 ppm Do Not enter pool until chlorine residual is less than 4 ppm Add this product at night with filter running Check in morning for any adjustment needed

SPAS/HOT-TUBS See table of proportions to obtain a free available chlorine concentration of 5 ppm as determined by a suitable chlorine test kit Adjust and maintain pool water pH to

between 7 2 and 7 8 Some oils lotions and fragrances cleaners etc may cause foaming or cloudy water as well as reduce the efficiency of the product To maintain the water see table of proportions to maintain a chlorine concentration of 5 ppm

After each use see table of proportions and apply product to raise to 16 ppm available chlorine to control odor and algae Do not enter spa or tub until chlorine concentration is back to 5 ppm Re-entry into treated pools is prohibited above levels of 5 ppm due to risk of bodily harm

During extended periods of non-use see table of proportions and add this product to maintain a 3 ppm chlorine concentration

HUBBARD & IMMERSION TANKS See table of proportions to obtain a chlorine residual of 25 ppm as determined by a suitable test kit Adjust and maintain the water pH to between 7 2 and 7 6 After each use drain the tank Prepare a bucket of 1000 ppm solution (see table of proportions) and circulate this solution through the agitator of the tank for 15 minutes and then rinse out the solution Clean tank thoroughly and dry with clean cloths

HYDROTHERAPY TANKS See table of proportions to obtain a chlorine residual of 1 ppm as determined by a suitable chlorine test kit Pool should not be entered until the chlorine residual is below 3 ppm Adjust and maintain the water pH to between 7 2 and 7 6 Operate pool filter continuously Drain pool weekly and clean before refilling

SANITIZING RINSE

FOOD AND DAIRY PROCESSORS APEX CONCENTRATE may be used to sanitize all equipment utensils pipes pans tanks or flat surfaces which are hard nonporous and will not absorb sanitizer solution but which do come in contact with food products

Use 200 ppm solution for nonporous surfaces

For effective sanitation all surfaces must be wet thoroughly Depending on equipment setup immersion or flooding is best A heavy spray is acceptable if properly applied to stationary equipment

Gross food particles and soil must be removed by a pre-flush or pre-scrape as necessary prior to sanitizing

Sanitizers for all surfaces not always requiring a rinse – Before using these compounds food products and packaging materials must be removed from the room or carefully protected potable water rinse is not required following use of these compounds for sanitizing previously cleaned hard surfaces provided that the surfaces are adequately drained before contact with food so little or no residue remains which can adulterate or have a deleterious effect on edible products These compounds may be used for microbial control on ceilings floors and walls at concentrations considerably higher than those allowed for sanitizing food contact surfaces

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without a potable water rinse unless in the opinion of the Inspector-In-Charge such use may result in contamination of food products A potable water rinse is required following use of these compounds under conditions other than those stated above The compounds must always be used at dilutions (see table of proportions) and according to applicable directions provided on the EPA registered label

Do not re-use solution Provide fresh solution for each application

DAIRY FARMS, RESTAURANTS AND TAVERNS All equipment utensils etc to be sanitized must first be pre-scraped or pre-flushed or if necessary pre-soaked in order to remove gross food particles soil or other organic substances A thorough washing with a compatible detergent is recommended followed by potable water rinse prior to sanitization Use 200 ppm solution for two minutes

SANITIZATION OF NONPOROUS FOOD CONTACT SURFACES

RINSE METHOD A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to insure that the available chlorine does not drop below 50 ppm See table of proportions and prepare a 100 ppm solution If no test kit is available see table of proportions and prepare a sanitizing solution to provide approximately 200 ppm available chlorine by weight

Clean equipment surfaces in a normal manner Prior to use rinse all surfaces thoroughly with the sanitizing solution maintaining contact with the sanitizer for at least 2 minutes If solution contains less than 50 ppm available chlorine as determined by a suitable test kit either discard the solution or add sufficient product to reestablish a 200 ppm residual Do not rinse equipment with water after treatment and do not soak equipment overnight

Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes

IMMERSION METHOD A solution of 100 ppm available chlorine (see table of proportions) may be used in the sanitizing solution if a chlorine test kit is available Solutions containing an initial concentration of 100 ppm available chlorine must be adjusted periodically to insure the available chlorine does not drop below 50 ppm See table of proportions and prepare a 100 ppm sanitizing solution If no test kit is available see table of proportions and prepare 200 ppm available chlorine by weight

Clean equipment in the normal manner Prior to use immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain If solution contains less than 50 ppm available chlorine as determined by a suitable test kit either discard the solution or add sufficient product to reestablish a 200 ppm residual Do not rinse equipment with water after treatment

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes

FLOW/PRESSURE METHOD Disassemble equipment and thoroughly clean after use Assemble equipment in operating position prior to use Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment See table of proportions Pump solution through the system until full flow is obtained at all extremities the system is completely filled with the sanitizer and all air is removed from the system Close drain valves and hold under pressure for at least 2 minutes to insure contact with all internal surfaces Remove some cleaning solution from drain valve and test with a chlorine test kit Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine

SANITIZATION OF NONPOROUS FOOD CONTACT SURFACES (cont'd)

CLEAN-IN-PLACE METHOD Thoroughly clean equipment after use See table of proportions to prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment Pump solution through the system until full flow is obtained at all extremities the system is completely filled with the sanitizer and all air is removed from the system Close drain valves and hold under pressure for at least 10 minutes to insure contact with all internal surfaces Remove some cleaning solution from drain valve and test with a chlorine test kit Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine

SPRAY/FOG METHOD Preclean all surfaces after use Use a 200 ppm available chlorine solution to control bacteria mold or fungi and a 600 ppm solution to control bacteriophage Use spray or fogging equipment which can resist hypochlorite solutions Always empty and rinse spray/fog equipment with potable water after use Thoroughly spray or fog all surfaces until wet allowing excess sanitizer to drain Vacate area for at least 2 hours Prior to using equipment rinse all surfaces treated with a 600 ppm solution with a 200 ppm solution (See table of proportions)

SANITIZATION OF POROUS FOOD CONTACT SURFACES

RINSE METHOD See table of proportions and prepare a 600 ppm solution Clean surfaces in the normal manner Rinse all surfaces thoroughly with the 600 ppm solution maintaining contact for at least 2 minutes Prepare a 200 ppm sanitizing solution (See table of proportions) Prior to using equipment rinse all surfaces with a 200 ppm available chlorine solution Do not rinse and do not soak equipment overnight

IMMERSION METHOD See table of proportions and prepare a 600 ppm solution Clean equipment in the normal manner Immerse equipment in the 600 ppm solution for at least 2 minutes Prepare a 200 ppm sanitizing solution (see table of proportions) of this product with 10

gallons of water Prior to using equipment immerse all surfaces in a 200 ppm available chlorine solution Do not rinse and do not soak overnight

SPRAY/FOG METHOD Preclean all surfaces after use See table of proportions and prepare a 600 ppm available chlorine sanitizing solution of sufficient size Use spray or fogging equipment which can resist hypochlorite solutions Always empty and rinse/spray fog equipment with potable water after use Thoroughly spray or fog all surfaces until wet allowing excess sanitizer to drain Vacate area for at least 2 hours Prior to using equipment see table of proportions and rinse all surfaces with a 200 ppm available chlorine solution

SANITIZATION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD See table of proportions and prepare a sanitizing solution to provide approximately 200 ppm available chlorine by weight Clean equipment surfaces in the normal manner Prior to use rinse all surfaces thoroughly with the sanitizing solution maintaining contact with the sanitizer for at least 2 minutes Do not rinse equipment with water after treatment and do not soak equipment overnight

IMMERSION METHOD See table of proportions and prepare a sanitizing solution to provide approximately 200 ppm available chlorine by weight Clean equipment in the normal manner Prior to use immerse equipment in the sanitizing solution for at least 2 minutes and allow sanitizer to drain Do not rinse equipment with water after treatment

SPRAY/FOG METHOD Preclean all surfaces after use See table of proportions and prepare a 200 ppm available chlorine sanitizing solution of sufficient size Use spray or fogging equipment which can resist hypochlorite solutions Prior to using equipment thoroughly spray or fog all surfaces until wet allowing excess sanitizer to drain Vacate area for at least 2 hours

DISINFECTION OF NONPOROUS NON-FOOD CONTACT SURFACES

RINSE METHOD See table of proportions and prepare a disinfecting solution to provide approximately 600 ppm available chlorine by weight Clean equipment surfaces in the normal manner Prior to use rinse all surfaces thoroughly with the disinfecting solution maintaining contact with the solution for at least 10 minutes Do not rinse equipment with water after treatment and do not soak equipment overnight

IMMERSION METHOD See table of proportions and prepare a disinfecting solution in an immersion tank to provide approximately 600 ppm available chlorine by weight Clean equipment in the normal manner Prior to use immerse equipment in the disinfecting solution for at least 10 minutes and allow the sanitizer to drain Do not rinse equipment with water after treatment

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SANITIZATION OF POROUS NON-FOOD CONTACT SURFACES

RINSE METHOD See table of proportions and prepare a sanitizing solution to provide approximately 600 ppm available chlorine by weight Clean surfaces in the normal manner Prior to use rinse all surfaces thoroughly with the sanitizing solution maintaining contact with the sanitizer for at least 2 minutes Do not rinse equipment with water after treatment and do not soak equipment overnight

IMMERSION METHOD See table of proportions and prepare a sanitizing solution to provide approximately 600 ppm available chlorine by weight Clean equipment in the normal manner Prior to use immerse equipment in the sanitizing solution for at least 2 minutes and allow sanitizer to drain Do not rinse equipment with water after treatment

SPRAY/FOG METHOD After cleaning sanitize non-food contact surfaces with 600 ppm available chlorine see table of proportions Use spray or fogging equipment which can resist hypochlorite solutions Always empty and rinse spray/fog equipment with potable water after use Prior to using equipment thoroughly spray or fog all surfaces until wet allowing excess sanitizer to drain Vacate area for at least 2 hours

SEWAGE & WASTEWATER EFFLUENT TREATMENT

The disinfection of sewage effluent must be evaluated by determining the total number of coliform bacteria and/or fecal coliform bacteria as determined by the Most Probable Number (MPN) procedure if the chlorinated effluent has been reduced to or below the maximum permitted by the controlling regulatory jurisdiction

On the average satisfactory disinfection of secondary wastewater effluent can be obtained when the chlorine residual is 0 5 ppm after 15 minutes contact Although the chlorine residual is the critical factor in disinfection the importance of correlating chlorine residual with bacteria kill must be emphasized The MPN of the effluent which is directly related to the water quality standards requirements should be the final and primary standard and the chlorine residual should be considered an operating standard valid only to the extent verified by the coliform quality of the effluent

The following are critical factors affecting wastewater disinfection

1 Mixing It is imperative that the product and the wastewater be instantaneously and completely flash mixed to assure reaction with every chemically active soluble and particulate component of the wastewater

2 Contacting Upon flash mixing the flow through the system must be maintained

3 Dosage/Residual Control Successful disinfection is extremely dependent on response to fluctuating chlorine demand to maintain a predetermined desirable chlorine level Secondary effluent should contain 0 2 to 1 0 ppm chlorine residual

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after a 15 to 30 minute contact time A reasonable average of residual chlorine is 0 5 ppm after 15 minutes contact time

SEWAGE & WASTEWATER TREATMENT

EFFLUENT SLIME CONTROL Apply a 100 to 1000 ppm available chlorine solution at a location which will allow complete mixing Once control is evident apply a 15 ppm available chlorine solution See table of proportions

FILTER BEDS SLIME CONTROL Remove filter from service Drain to a depth of 1 ft above filter sand and add product to obtain 500 ppm evenly over the surface (See table of proportions) Wait 30 minutes before draining water to a level that is even with the top of the filter Wait for 4 to 6 hours before completely draining and backwashing filter

DISINFECTION OF DRINKING WATER
(EMERGENCY/PUBLIC/INDIVIDUAL SYSTEMS)

PUBLIC SYSTEMS See table of proportions Prepare a 10 ppm solution Begin feeding this solution into the system until a free available chlorine residual of at least 0 2 ppm and no more than 0 6 ppm is attained throughout the distribution system Check water frequently with a chlorine test kit Bacteriological sampling must be conducted at a frequency no less than that prescribed by the National Primary Drinking Water Regulations Contact your local Health Department for further details

INDIVIDUAL SYSTEMS DUG WELLS Upon completion of the casing (lining) wash the interior of the casing (lining) with a 100 ppm available chlorine solution (see table of proportions) using a stiff brush After covering the well pour the treatment solution into the well through both the pipesleeve opening and pipeline Wash the exterior of the pump cylinder also with the treatment solution Start pump and pump water until strong odor of chlorine have been removed from water Consult your local Health Department for further details

INDIVIDUAL WATER SYSTEMS DRILLED DRIVEN & BORED WELLS Run pump until water is as free from turbidity as possible Pour a 100 ppm available chlorine solution into the well (See table of proportions) Add 5 to 10 gallons of clean chlorinated water to the well in order to force the solution into the rock formation Wash the exterior of the pump cylinder with the treatment solution Drop the pipeline into well start pump and pump water until strong odor of chlorine in water is noted Stop pump and wait at least 24 hours After 24 hours flush well until all traces of chlorine have been removed from water Deep wells with higher water levels may necessitate the use of special methods for introduction of the treatment solution into the well Consult your local health department for further details

INDIVIDUAL WATER SYSTEMS FLOWING ARTESIAN WELLS Artesian wells do not require disinfection If analyses indicate persistent contamination the well should be disinfected Consult your local Health Department for further details

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EMERGENCY DISINFECTION When boiling water for 1 minute is not practical water can be made potable by using this product Prior to addition of the solution remove all suspended material by filtration or by allowing it to settle to the bottom Decant the clarified contaminated water to a clean container Then add this product to make a 0 6 ppm solution (see table of proportions) Allow the treated water to stand for 30 minutes Properly treated water should have a slight chlorine odor If not repeat dosage and allow water to stand an additional 15 minutes The treated water can then be made palatable by pouring it between clean containers for several times

PUBLIC WATER SYSTEMS

RESERVOIRS – ALGAE CONTROL Hypochlorinate streams feeding the reservoir Suitable feeding points should be selected on each stream at least 50 yards upstream from the points of entry into the reservoir

MAIN Thoroughly flush section to be treated by discharging from hydrants Permit and water flow of at least 2 5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator Stop water flow when a chlorine residual test of 50 ppm is obtained at the low pressure end of the new main section after a 24 hour retention time When chlorination is completed the system must be flushed free of all heavily chlorinated water

NEW TANKS BASINS ETC Remove all physical soil from surfaces Use a 500 ppm available chlorine solution (see table of proportions) Fill to working capacity and allow to stand for at least 4 hours Drain and flush with potable water and return to service

NEW FILTER SAND Apply 80 oz of this product for each 150 to 200 cubic feet of sand The action of the product dissolving as the water passes through the bed will aid in treating the new sand

NEW WELLS Flush the casing with a 50 ppm available chlorine solution of water (see table of proportions) The solution should be pumped or fed by gravity into the well after thorough mixing with agitation The well should stand for several hours or overnight under chlorination It may then be pumped until a representative raw water sample is obtained Bacterial examination of the water will indicate whether further treatment is necessary

EXISTING EQUIPMENT Remove equipment from service thoroughly clean surfaces of all physical soil Treat by using a solution of approximately 500 ppm available chlorine (see table of proportions) Fill to working capacity and let stand for at least 4 hours Drain and place in service If the previous treatment is not practical surfaces may be sprayed with a solution containing approximately 1000 ppm available chlorine After drying flush with water and return to service

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EMERGENCY DISINFECTION AFTER FLOODS

WELL Use table of proportions and thoroughly flush contaminated casing with a 500 ppm available chlorine solution Backwash the well to increase yield and reduce turbidity adding sufficient chlorinating solution to the backwash to produce a 10 ppm available chlorine residual as determined by a chlorine test kit After the turbidity has been reduced and the casing has been treated add sufficient chlorinating solution to produce a 50 ppm available chlorine residual Agitate the well water for several hours and take a representative water sample Retreat well if water samples are biologically unacceptable

RESERVOIRS In case of contamination by overflowing streams establish hypochlorinating stations upstream of the reservoir Chlorinate the inlet water until the entire reservoir obtains a 0 2 ppm available chlorine residual as determined by a suitable chlorine test kit In case of contamination from surface drainage apply sufficient product directly to the reservoir to obtain a 0 2 ppm available chlorine residual in all parts of the reservoir

BASINS TANKS FLUMES ETC Thoroughly clean all equipment then see table of proportions and apply product to obtain 500 ppm available chlorine as determined by a suitable test kit After 24 hours drain flush and return to service If the previous method is not suitable spray or flush the equipment with a solution containing 1000 ppm available chlorine (see table of proportions) Allow to stand for 2 to 4 hours flush and return to service

FILTERS When the sand filter needs replacement apply 80 oz of this product for each 150 to 200 cubic feet of sand When the filter is severely contaminated additional product should be distributed over the surface at the rate of 80 oz per 20 sq ft Water should stand at a depth of 1 foot above the surface of the filter bed for 4 to 24 hours When filter beds can be backwashed of mud and silt apply 80 oz of this product per each 50 sq ft allowing the water top stand at a depth of 1 foot above the filter sand After 30 minutes drain water to level of the filter After 4 to 6 hours drain and proceed with normal backwashing

DISTRIBUTION SYSTEM Flush repaired or replaced section with water Establish a hypochlorinating station and apply sufficient product until a consistent available chlorine residual of at least 10 ppm remains after a 24 hour retention time Use a chlorine test kit

EMERGENCY DISINFECTION AFTER FIRES

CROSS CONECTONS OR EMERGENCY CONNECTIONS Hypochlorination or gravity feed equipment should be set up near the intake of the untreated water supply Apply sufficient product (see Table of Proportions) to give a chlorine residual of at least 0 1 to 0 2 ppm at the point where the untreated supply enters the regular distribution system Use a chlorine test kit

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EMERGENCY DISINFECTION AFTER DROUGHTS

SUPPLEMENTARY WATER SUPPLIES Gravity or mechanical hypochlorite feeders should be set up on a supplementary line to dose the water to a minimum chlorine residual of 0 2 ppm (see Table of Proportions) after a 20 minute contact time Use a chlorine test kit

WATER SHIPPED IN BY TANKS TANK CARS TRUCKS ETC Thoroughly clean all containers and equipment Spray a 500 ppm available chlorine solution (see Table of Proportions) and rinse with potable water after 5 minutes During the filling of the containers dose with sufficient amounts of this product to provide at least 0 2 ppm chlorine residual Use a chlorine test kit

EMERGENCY DISINFECTION AFTER MAIN BREAKS

MAINS Before assembly of the required section flush out mud and soil Permit a water flow of at lest 2 5 feet per minute to continue under pressure while injecting this product by means of a hypochlorinator Stop water flow when a chlorine residual test of 50 ppm (see Table of Proportions) is obtained at the low pressure end of the new main section after a 24 hour retention time When chlorination is completed the system must be flushed free of all heavily chlorinated water

COOLING TOWER/ EVAPORATE CONDENSER WATER

SLUG FEED METHOD Initial Dose When system is noticeably fouled see table of proportions and apply this product to obtain from 5 to 10 ppm available chlorine Repeat until control is achieved

Subsequent Dose When microbial control is evident add this product as needed to maintain control and keep the chlorine residual at 1 ppm Badly fouled systems must be cleaned before treatment is begun

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INTERMITTENT FEED METHOD Initial Dose When system is noticeably fouled see table of proportions and apply this product to obtain from 5 to 10 ppm available chlorine Apply half (or1/3 ¼ or 1/5) of this initial dose when half (or 1/3 1/4 or 1/5) of the water in the system has been lost by blowdown

Subsequent Dose When microbial control is evident see table of proportions and add this product to water in the system to obtain a 1 ppm residual Apply half (or 1/3 1/4 or 1/5) of the dose when half (or 1/3 1/4 or 1/5) of the water in the system has been lost by blowdown Badly fouled systems must be cleaned before treatment is begun

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CONTINUOUS FEED METHOD Initial Dose When system is noticeably fouled see table of proportions and apply this product to obtain 5 to 10 ppm available chlorine in system water

Subsequent Dose See table of proportions and maintain this treatment level by starting a continuous feed of water lost by blowdown to maintain a 1 ppm residual Badly fouled systems must be cleaned before treatment is begun

LAUNDRY SANITIZERS

Household Laundry Sanitizers

IN SOAKING SUDS – Use table of proportions and provide 200 ppm available chlorine solution Wait 5 minutes then add soap or detergent Immerse laundry for at least 11 minutes prior starting the wash/rinse cycle

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IN WASHING SUDS – Use table of proportions and add sufficient product to wash water containing clothes to provide 200 ppm available chlorine Wait 5 minutes then add soap or detergent and start the wash/rinse cycle

Commercial Laundry Sanitizers

Wet fabrics or clothes should be spun dry prior to sanitization Thoroughly mix sufficient proportion of this product with 10 gallons of water to yield 200 ppm available chlorine (see table of proportions) Promptly after mixing the sanitizer add the solution into the prewash prior to washing fabrics/clothes in the regular wash cycle with a good detergent Test the level of available chlorine if the solution has been allowed to stand Add more of this product if the available chlorine level has dropped below 200 ppm

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FARM PREMISES

Remove all animals poultry and feed from premises vehicles and enclosures Remove all litter and manure from floors walls and surfaces of barns pens stalls chutes and other facilities occupied or traversed by animals or poultry Empty all troughs racks and other feeding and watering appliances Thoroughly clean all surfaces with soap or detergent and rinse with water To disinfect saturate all surfaces with a solution of at least 1000 ppm available chlorine for a period of 10 minutes (see table of proportions) Immerse all halters ropes and other types of equipment used in handling and restraining animals or poultry as well as the cleaned forks shovels and scrapers used for removing litter and manure Ventilate buildings cars boats and other closed spaces Do not house livestock or poultry or employ equipment until chlorine has

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dissipated All treated feed racks mangers troughs automatic feeders fountains and waterers must be rinsed with potable water before reuse

PULP AND PAPER MILL PROCESS WATER SYSTEMS

SLUG FEED METHOD – Initial Dose When system is noticeably fouled use table of proportions and apply adequate proportions of this product per 10 000 gallons of water in the system to obtain from 5 to 10 ppm available chlorine Repeat until control is achieved

Subsequent Does When microbial control is evident use table of proportions and add adequate proportion of this product per 10 000 gallons of water in the system daily or as needed to maintain control and keep the chlorine residual at 1 ppm Badly fouled systems must be cleaned before treatment is begun

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INTERMITTENT FEED METHOD – Initial Dose When system is noticeably fouled see table of proportions and apply adequate proportion of this product per 10 000 gallons of water in the system to obtain 5 to 10 ppm available chlorine Apply half (or 1/3 1/4 or 1/5) of this initial dose when half (or 1/3 1/4 or 1/5) of the water in the system has been lost by blowdown

Subsequent Dose When microbial control is evident see table of proportions and add adequate proportions of this product per 10 000 gallons of water in the system to obtain a 1 ppm residual Apply half (or 1/3 1/4 or 1/5) of this initial dose when half (or 1/3 1/4 or 1/5) of the water in the system has been lost by blowdown Badly fouled systems must be cleaned before treatment is begun

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CONTINUOUS FEED METHOD – Initial Dose When system is noticeably fouled see table of proportions and apply adequate proportion of this product per 10 000 gallons of water in the system to obtain 5 to 10 ppm available chlorine

Subsequent Dose Maintain this treatment level by starting a continuous feed of this product (see table of proportions) per 1 000 gallons of water lost by blowdown to maintain a 1 ppm residual Badly fouled systems must be cleaned before treatment is begun

AGRICULTURAL USES

POST-HARVEST PROTECTION – Potatoes can be sanitized after cleaning and prior to storage by spraying with a sanitizing solution at a level of 1 gallon of sanitizing solution per ton of potatoes Use table of proportions and thoroughly mix an adequate proportion of this product to 2 gallons of water to obtain 500 ppm available chlorine

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

Disinfect leafcutting bee cells and bee boards by immersion in a solution containing 1 ppm available chlorine for 3 minutes Allow cells to drain for 2 minutes and dry for 4 to 5 hours or until no chlorine odor can be detected This solution is made by thoroughly mixing this product (see table of proportions) to 100 gallons of water The bee domicile is disinfected by spraying with a 0 1 ppm solution until all surfaces are thoroughly wet Allow the domicile to dry until all chlorine odor has dissipated

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FRUIT AND VEGETABLE WASHING – Thoroughly clean all fruits and vegetables in a wash tank See table of proportions and prepare a solution with 25 ppm available chlorine After draining the tank submerge fruit or vegetables for two minutes in a second wash tank containing the recirculating sanitizing solution with 25 ppm sanitizing solution Spray rinse vegetables with the sanitizing solution prior to packaging Rinse fruit with potable water only prior to packaging

EGG SANITIZING

I INSTRUCTION FOR EGG SANITIZING WITH APEX CONCENTRATE

The sanitizing solution recommended for use for shell egg sanitizing is a 200 ppm solution of APEX CONCENTRATE (See Table of Proportions) APEX CONCENTRATE is not deleterious to shell eggs or egg-products

II RECOMMEND PROCEDURES FOR WASHING & SANITIZING FOOD EGGS

1 Wash eggs promptly after gathering
2 Water with an iron content in excess of 2 parts per million shall not be used unless equipment capable of removing the excess iron is installed on the water system The sanitizing solution must be at least 20°F warmer than the shell eggs with a minimum solution temperature of 90°F
3 Spray rinse washed eggs with warm sanitizer so that the eggs are thoroughly wetted The sanitizer temperature should not exceed 130°F
4 Allow eggs to thoroughly dry before casing or breaking
5 Never reuse sanitizing/washing solution

EGG DESTAINING

I INSTRUCTION FOR EGG DESTAINING WITH APEX CONCENTRATE

The destaining solution recommended for use for shell egg destaining is a 250 ppm solution of [this product] [APEX CONCENTRATE] (See Table of Proportions) [This product] [APEX CONCENTRATE] is not deleterious to shell eggs or egg-products

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

II RECOMMEND PROCEDURES FOR DESTAINING SHELL EGGS

1 The destainer solution must be at least 20°F warmer than the shell eggs with a minimum solution temperature of 90°F
2 Total elapsed time in the destainer solution may not exceed 5 minutes
3 Eggs are to be rewashed and spray rinsed after destaining
4 Destainer solution should be replaced daily or whenever it becomes dirty
5 Destaining is to be done after the initial washing has been completed
6 It is recommended that all eggs be shell protected after they have been destained
7 Never reuse sanitizing/washing solution

AQUACULTURAL USES

FISH PONDS – Remove fish from ponds prior to treatment Use table of proportions and thoroughly mix adequate proportion of this product to 10 000 gallons of water to obtain 10 ppm available chlorine Add more product to the water if the available chlorine level is below 1 ppm after 5 minutes Return fish to pond after the available chlorine level reaches zero

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FISH POND EQUIPMENT – Thoroughly clean all equipment prior to treatment Use table of proportions and thoroughly mix an adequate proportion of this product to 10 gallons of water to obtain 200 ppm available chlorine Porous equipment should soak for one hour

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MAINE LOBSTER PONDS – Remove lobsters seaweed etc from ponds prior to treatment Drain the pond Use table of proportions and apply an adequate proportion of this product to 10 000 gallons of water to obtain at least 600 ppm available chlorine Apply so that all barrows gates rock and dam are treated with product Permit high tide to fill the pond and then close gates Allow water to stand for 2 to 3 days until the available chlorine reaches zero Open gates and allow 2 tidal cycles to flush the pond before returning lobsters to pond

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CONDITIONING LIVE OYSTERS – See table of proportions and thoroughly mix an adequate proportion of this product to 10 000 gallons of water at 50 to 70°F to obtain 0 5 ppm available chlorine Expose oysters to this solution for at least 15 minutes monitoring the available chlorine level so that it does not fall below 0 05 ppm Repeat entire process if the available chlorine level drops below 0 05 ppm or the temperature falls below 50°F

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

CONTROL OF SCAVENGERS IN FISH HATCHERY PONDS – Prepare a solution containing 200 ppm of available chlorine by mixing an adequate proportion of this product (see table of proportions) with 10 gallons of water Pour into drained pond potholes Repeat if necessary Do not put desirable fish back into refilled ponds until chlorine residual has dropped to 0 ppm as determined by test kit

SANITIZATION OF DIALYSIS MACHINES

Flush equipment thoroughly with water prior to using this product Thoroughly mix an adequate proportion of this product (see table of proportions) to 10 gallons of water to obtain at least 600 ppm available chlorine Immediately use this product in the hemodialysate system allowing for a minimum contact time of 15 minutes at 20°C Drain system of the sanitizing solution and thoroughly rinse with water Discard and DO NOT reuse the spent sanitizer Rinsate must be monitored with a suitable test kit to insure that no available chlorine remains in the system

This product is recommended for decontaminating single and multipatient hemodialysate systems This product has been shown to an effective disinfectant (vircide fungicide bactericide pseudomonicide) when tested by AOAC and EPA test methods This product may not totally eliminate all vegetative microorganisms in hemodialysate delivery systems due to their construction and/or assembly but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed This product should be used in a disinfectant program which includes bacteriological monitoring of the hemodialysate delivery system This product is NOT recommended for use in hemodialysate or reverse osmosis (RO) membranes

Consult the guidelines for hemodialysate systems which are available from the Hepatitis Laboratories CDC Phoenix AZ 85021

This product is not to be used as a terminal sterilant/high level disinfectant on any surface or instrument that (1) is introduced directly into the human body either into or in contact with the bloodstream or normally sterile areas of the body or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body This product may be used to preclean or decontaminate critical or semi-critical medical devices prior to sterilization or high level disinfection

ASPHALT OR WOOD ROOFS AND SIDINGS

To control fungus and mildew first remove all physical soil by brushing and hosing with clean water and apply a 5000 ppm available chlorine solution Brush or spray roof or siding After 30 minutes rinse by hosing with clean water

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

BOAT BOTTOMS

To control slime on boat bottoms sling a plastic tarp under boat retaining enough water to cover the fouled bottom area not allowing water to enter enclosed area This envelope should contain approximately 500 gallons of water for a 14 foot boat Use table of proportions and add an appropriate proportion of this product to this water to obtain a 35 ppm available chlorine concentration Leave immersed for 8 to 12 hours Repeat if necessary Do not discharge the solution until free chlorine level has dropped to 0 ppm as determined by a swimming pool test kit

ARTIFICIAL SAND BEACHES

To sanitize the sand spray a 500 ppm available chlorine solution containing and adequate proportion of this product (see table of proportions) per 10 gal of water at frequent intervals Small areas can be sprinkled with a watering can

WATER TREATMENT COMPOUNDS

FOOD PROCESSING PLANTS
CHLORINE POTABLE WATER TREATMENT COMPOUND

PROCESS WATER OR DRINKING WATER System in establishments operating under the Federal Meat Poultry Shell Egg Grading and Egg Product Inspections Program See table of proportions and treat poultry process water to a dosage of 5 ppm calculated as available chlorine Chlorine may be used in poultry chiller intake water and in carcass wash water in poultry plants at levels up to 50 ppm calculated as available chlorine Chlorine must be dispensed at a constant and uniform level and the method or system must be such that a controlled rate is maintained Chlorine may be present in process water of meat plants at concentrations up to 5 parts per million calculated as available chlorine Under reliable controls the chlorine level may be increased in water used on meat carcasses up to 50 ppm

GENERAL POTABLE WATER TREATMENT COMPOUNDS

Compounds used in such treatment should not remain in the water in concentrations greater than required by a good practice Compounds containing substances which may subsequently result in the adulteration or contamination of meat or poultry products may not be introduced into the system

(Note to Reviewer [bracketed text] is optional wording (parenthetical text) is informational)

STORAGE AND DISPOSAL

Do not contaminate water food or feed by storage and disposal

(Note to reviewer The following statements for residential use containers)

STORAGE Store this product in a cool dry area away from direct sunlight and heat to avoid deterioration In case of spill flood areas with large quantities of water Do not store next to acid Close cap tightly after each use

PRODUCT DISPOSAL Product or rinsates that cannot be used must be diluted with water before disposal in a sanitary sewer

CONTAINER HANDLING Nonrefillable container Do not reuse or refill this container Offer for recycling if available or reconditioning if appropriate or place in trash

(Note to reviewer The following statements for commercial containers ≤5 gal)

STORAGE Store in a cool dry area away from direct sunlight and heat to avoid deterioration In case of spill flood areas with large quantities of water Do not store next to acid Close container tightly after each use

PRODUCT DISPOSAL Product or rinsates that cannot be used must be diluted with water before disposal in a sanitary sewer

CONTAINER HANDLING Nonrefillable container Do not reuse or refill this container Fill the container ¼ full with water and recap Shake for 10 seconds and dispose of rinsate in sanitary sewer Offer container for recycling if available or reconditioning if appropriate or place in trash

(Note to reviewer The following statements for commercial containers >5 gal)

STORAGE Store in a cool dry area away from direct sunlight and heat to avoid deterioration In case of spill flood areas with large quantities of water Do not store next to acid Close container tightly after each use

PRODUCT DISPOSAL Product or rinsates that cannot be used must be diluted with water before disposal in a sanitary sewer

CONTAINER HANDLING Nonrefillable container Do not reuse or refill this container Fill the container ¼ full with water Replace and tighten closures Tip container on its side and roll it back and forth ensuring at least one complete revolution for 30 seconds Stand the container on its end and tip it back and forth several times Turn the container over onto its other end and tip it back and forth several times Dispose of rinsate in sanitary sewer Offer container for recycling if available or reconditioning if appropriate or place in trash

(Optional language/marketing claims)

- For use in swimming pools
- Swimming pool disinfectant
- Disinfectant for swimming pools
- Ultra filtered
- Store upright in a cool place
- Satisfaction guaranteed