GENERAL INFORMATION: Apply spray when weeds are small and tender for best results. For older and hard-to-kill weeds use higher dilution rate. When St. Augustine is growing rapidly or in cases of accidental overdose, some temporary discoloration of the foliage might occur. **DO NOT USE ON DICHONDRA OR NEWLY SEEDED LAWNS NOR ON LAWNS WHERE DESIRABLE CLOVERS ARE PRESENT.** Newly seeded lawns may be treated after they have been mowed at least three times and are well established. Spray when air temperature is between 50-90°F. Avoid applying during hot or dry periods unless irrigation is used a few days before.

Do not water for 24 hours after treatment. Spray works faster with temperature above 70°F. Spray when air is calm to avoid drift. Spray will injure clover, dichondra, most ornamental and vegetable crops. This product works slowly. Effects begin to show after a few days and weeds gradually die. Clean and rinse spray equipment using soap or detergent and water, and rinse thoroughly before reuse for other sprays. Failure to observe the above precautions may result in injury.

HOW TO MIX: (1) For use on St. Augustine grass, bent grass, buffalo grass and grass seedlings, mix 1-1/2 ounce (3 tablespoons) in 1 gallon of water and uniformly spray 300 square feet. (Example: an area 10 feet wide and 30 feet long.) If necessary, repeat treatment in 2 to 3 weeks, if hard-to-kill weeds persist. (2) For use on all other grasses such as bermuda, bahia, blue grass, centipede, fescue, rye, mix 2 ounces (4 Tablespoons) in 1 gallon of water and spray uniformly over 300 square feet. On hard-to-kill species, or under poor growing conditions, or on older weeds, mix 2-1/2 ounces in 1 gallon of water and spray on 300 square feet with special attention to thorough coverage of hard-to-kill weeds.

WEEDS CONTROLLED: Black Medic, Buckhorn, Burdock, Buttercup, Canada Thistle, Carpet Weeds, Chickweed, Chicory, Clover, Cocklebur, Dandelion, Dock, Dog Fennel, English Daisy, Florida Pursley, Frenchweed, Ground Ivy, Hawkweed, Heal-All, Heartloaf Drymary, Henbit, Jimson Weed, Knotweed, Lambsquarter, Mallow, Morning Glory, Mustard, Oxalis, Pennywort, Pepperweed, Pigweed, Plantain, Poison Ivy, Poison Oak, Purslane, Rag Weed, Red Clover, Red Sorrell, Sheep Sorrell, Smartweed, Speedwell, Spurge, Spur Weed, Stitchwort, Toadflax, Veronica, Wild Aster, Wild Carrot, Wild Garlic, Wild Geranium, Wild Lettuce, Wild Onion, Wild Radish, Wood Sorrell, Yarrow, and many other broadleaf weeds.

EPA

COMPANY NUMBER 33753

PRODUCT SERIAL NO. 5

LABEL APPROVAL DATE 10-15-90

FM 31 33753-5 1 of 5

UNITED STA[illegible] ENVIRONMENTAL PROTECTION AGE[illegible]

OCT 15 1990

The Boots Company PLC
Boots Microcheck Group
Thane Road
Nottingham NG2 3AA England

Attention: **W.G. Guthrie/Dave Smith**
R&D Manager

Gentlemen:

Subject: Myacide As Plus
EPA Registration No. 33753-5
Your Letter Dated August 29, 1990

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

   a. Delete the statement:

      Measures against circulatory shock, respiratory depression and convulsion may be needed.

   b. Include the appropriate "Conventional American Units" with the metric units (Net Contents section).

61569:I:V.G.:L31-9:KENCO:10/10/90:11/09/90:ejh:VO:EK:DD

	CONCURRENCES							
SYMBOL								
SURNAME								
DATE								

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U.S. GPO 1986-159-319

c. Add the following additional statements to the precautionary labeling section:

> Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

d. Delete: milk.

e. Revise (paper mill - Bulk pulp section):

> To prevent foul odours and general . . .

to read:

> To control foul odours and general . . . .

f. Revise (paper mill - Bulk pulp section):

> . . . single slug dose will provide protection for up to 3 days . . . .

to read:

> . . . single slug dose will provide control for up to 3 days . . . .

Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

If you have any questions concerning this letter, contact Valdis Goncarovs at (703) 557-3663.

Sincerely yours,

John H. Lee
Product Manager (31)
Antimicrobial Program Branch
Registration Division (H7505C)

Enclosure

MYACIDE™ AS PLUS

MYACIDE AS PLUS™

MYACIDE AS PLUS is a concentrated free-flowing crystalline solid bacteriacide for use in controlling bacteria found in Industrial Process water, oil and gas processing applications including drilling muds, fracturing fluids, produced waters, injection waters ,water bottoms in storage tanks and metal working fluids.

ACTIVE INGREDIENT:	
2-Bromo-2-nitropropane-1,3-diol	95.0 %
INERT INGREDIENTS:	5.0 %
TOTAL	100.0 %

KEEP OUT OF REACH OF CHILDREN

DANGER

STATEMENT OF PRACTICAL TREATMENT

If swallowed	- Drink milk, egg whites, gelatin solution, or if these are not avilable drink large quantities of water. Call a Physician.
If inhaled	-Remove person to fresh air.
If on skin	-Immediately flush skin with plenty of water for 15 minutes.
If in eyes	-Immediately flush eyes with plenty of waier for 15 minutes. Call a Physician.

Note to Physician

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiration depression and convulsion may be needed.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

MYACIDE AS PLUS IS A RESEARCH DISCOVERY OF THE BOOTS COMPANY PLC NOTTINGHAM ENGLAND

EPA REG NUMBER 33753-5
EPA EST NUMBER 33753-EN-1

NET CONTENTS
25 Kg

OCT 15 1990

33753-5

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND
DOMESTIC ANIMALS

DANGER

Corrosive.Causes eye and skin damage. Do not get in eyes, on skin or clothing. May be fatal if swallowed. Avoid breathing dust. Wear goggles or face shield and rubber gloves when handling.

ENVIRONMENTAL HAZARDS
This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Do not contaminate water by cleaning of equipment or disposal of waste.

STORAGE AND DISPOSAL
Do not contaminate water, food, or feed by storage or disposal. Keep away from heat.

PESTICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidence.

CONTAINER DISPOSAL:
Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Triple rinse (or equivalent) then offer drum for recycling or reconditioning, or puncture. Dispose of drum and liner in a sanitary landfill, or by incineration, if allowed by State and local authorities. If burned, stay out of smoke.

OCT 15 1990

33753-5

DIRECTIONS FOR USE
IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT
IN A MANNER INCONSISTENT WITH ITS LABELLING

INDUSTRIAL RECIRCULATING WATER
COOLING TOWERS AND EVAPORATIVE
CONDENSERS

For the control of slime-forming bacteria and algae in industrial recirculation cooling towers and evaporative condensers.

METHOD AND LOCATION

MYACIDE AS PLUS may be dosed as the solid directly into the sump or basin or it may be added to the cooling water return at a suitable point. The MYACIDE AS PLUS should be added at a point where there is adequate flow or turbulance to ensure quick dissolution (e.g. the pump outlet from the tower sump).

FREQUENCY

MYACIDE AS PLUS may be slug dosed once or twice weekly as a normal routine. Where contamination is heavy, more frequent shock dosing may be required.

QUANTITY - INITIAL AND MAINTAINANCE

MYACIDE AS PLUS should be shock dosed at between 25g and 100g per cubic meter (0.21-0.84 lbs/1000 gallons) depending on the condition of the tower,the quality of the raw water input and the amount of bleed off.

WATERFLOOD

Inhibit growth of anaerobic and aerobic bacteria in all waterflood base fluids used in the recovery of oil and gas from reservoirs.

METHOD AND LOCATION

MYACIDE AS PLUS can be added as a dry product or pre-dissolved in any base fluid, or injected directly at the well head.

FREQUENCY

MYACIDE AS PLUS should be added continuously to waterflood fluids or slug dosed depending on the bottom hole tempreture and fluid chemistry.

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE AS PLUS may be added at the rate of 25-100 ppm (0.009 to 0.036 lbs. per barrel) depending on the quality of the base fluid.

1990

33753-5

PRODUCED WATER

To inhibit the growth of slime-forming or corrosion-inducing sulfate reducing bacteria in formation water produced by wells together with oil or gas.

METHOD AND LOCATION

MYACIDE AS PLUS may be used as the solid or pre-dissolved in a quantity of warm water or alcohol,then injected into the water-containing oil or gas stream at any convenient point.It should be injected in slug doses,not as a continuous feed.

FREQUENCY

Depending on severity and rapidity of contamination MYACIDE AS PLUS should be slug dosed from once a week to once a month.

QUANTITY - INITIAL AND MAINTAINANCE

Slug dose 50 - 100g/cubic meter (0.018-0.036 lbs per barrel).

FRACTURING FLUIDS

Reduces bacterial contamination and degradation of Fracturing Gels and Fluids used as well stimulants in the oil and gas industry.

METHOD AND LOCATION

MYACIDE AS PLUS may be added during pre-mixing of the fracturing fluid or (in the case of direct mix/injection systems) an aqueous solution may be added by direct injection at the head during the fracturing procedure.

FREQUENCY

MYACIDE AS PLUS should be used for each fracturing operation to ensure best results.

QUANTITY - INITIAL AND MAINTAINANCE

MYACIDE AS PLUS should be added at a rate of 50-100g per cubic meter (0.42-0.84 lbs per 1000 gallons) depending on the quality of the make up water.

INDUSTRIAL PROCESS WATER

For the effective control of bacterial and algal growth in Industrial Process Water including closed circuit machine cooling (injection molding, etc.) and stored (non-potable) water.

To reduce the biofouling of pipework, heat exchangers, condenser tubes and minimise microbially produced corrosion.

METHOD AND LOCATION

Dosing should be carried out into the sump/tank of the process water system. Shock dosing is preferred. It is not necessary to dilute MYACIDE AS PLUS concentrate prior to dosing. MYACIDE AS PLUS can also be used as an intermittent flush treatment during regular maintenance cleaning of tanks and equipment.

FREQUENCY

In open systems shock dosing should be carried out on a once weekly to once monthly basis depending on the degree of contamination. In closed circuit systems less frequent dosing (once or twice monthly) would be sufficient.

QUANTITY – INITIAL AND MAINTENANCE

Dosing should be carried out to give an initial concentration of 50 ppm. (50 g/cubic meter or 0.42 lbs/1000 gallons). When the above treatment has been successful, dosing can be lowered to a minimum of 10 ppm. MYACIDE AS PLUS (10 g/cubic meter or 0.08 lbs/1000 gallons). For intermittent treatment of industrial process waters during routine maintenance MYACIDE AS PLUS should be used at 100 ppm. (100 g/cubic meter or 0.84 lb/1000 gallons) and a contact time of at least one hour.

WATER BOTTOMS IN OIL OR TRANSPORTATION TANKS

For effective control of bacterial contamination in water bottoms in crude and refined hydrocarbon storage systems Above and below ground storage tanks and large marine systems are all suitable for treatment.

METHOD AND LOCATION

MYACIDE AS PLUS may be pre-dissolved in warm water to give up to a 20% concentrate. This concentrate can be injected directly into the water bottom or may be sprayed over the surface of the hydrocarbon phase and allowed to percolate through.

Using a carrier solvent addition of MYACIDE AS PLUS into the hydrocarbon phase will provide long term water concentrations by a diffusion process.

FREQUENCY

Direct addition to the water phase should be carried out every 30 – 60 days. Using a carrier solvent for addition to the hydrocarbon phase will provide longer term water concentrations depending on frequency of hydrocarbon movement, draining of water bottom and other factors.

QUANTITY – INITIAL AND MAINTENANCE

MYACIDE AS PLUS should be dosed at a rate which will achieve concentrations of 50 – 100 ppm. In the aqueous phase. When using a carrier solvent, higher initial concentrations may be used to allow diffusion into the aqueous phase.

PIPELINE MAINTENANCE

To control aerobic and anaerobic bacteria, particularly sulfate reducing bacteria, growth in oil and gas related production piping and transportation systems.

METHOD AND LOCATION
MYACIDE AS PLUS may be pre-dissolved in warm water or in a carrier solvent to give up to a 20% concentrate. This concentrate can be injected directly into the pipeline or may be added to the hydrocarbon phase. Using carrier solvent addition of MYACIDE AS PLUS directly into the hydrocarbon phase will produce long term water phase concentrations by a diffusion process.

FREQUENCY
Carrier additions will vary with the degree of contamination and volume of fluids through the pipeline. Slug treatments are recommended and can vary from daily to monthly control growth.

QUANTITY - INITIAL AND MAINTENANCE
MYACIDE AS PLUS should be dosed at a rate which will achieve concentrations of 25-200 ppm in the aqueous phase. When using a carrier solvent, higher initial concentrations may be used to allow diffusion into the aqueous phase. Dose will depend on the volume of oil or crude and the expected water fraction.

DRILLING FLUIDS AND WORKOVER AND COMPLETION FLUIDS

For use in oil and gas well drilling muds, and brines, inhibiting growth of cellulolytic, slime forming or sulfate reducing bacteria.

METHOD AND LOCATION
MYACIDE AS PLUS may be used as the solid or pre-dissolved in a quantity of warm water, then dosed directly into the mud or brine.

FREQUENCY
A single slug dose once to three times each 24hrs. Dosing may be less frequent where the contamination is low.

QUANTITY - INITIAL AND MAINTENANCE
Each slug dose should be 0.018 to 0.036 pounds per barrel total mud volume.

WELL SQUEEZE FLUIDS

For the effective control of aerobic and anaerobic bacteria in squeeze fluids and downhole well bore areas.

METHOD AND LOCATION

MYACIDE AS PLUS may be added during pre-mixing of the well squeeze fluid or (in the case of direct mix injection systems) an aqueous solution may be added by direct injection at the well head during the well squeeze procedure.

FRQUENCY

MYACIDE AS PLUS should be used for each well squeeze operation to ensure best results.

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE AS PLUS should be added at a rate of 25-200 g. per cubic meter (0.21-1.68 lbs./1000 gallons) depending on the quality of the makeup water.

METALWORKING FLUIDS

MYACIDE AS PLUS is recommended for use in soluble oils, semi-synthetic, and synthetic fluids. It should be added directly to the sump (with agitation) or pre-dissolved in water and added as a solution. A dose of 250ppm is recommended for initial treatment, higher levels up to 1000 ppm, but no greater for fouled systems. After addition of MYACIDE AS PLUS, the system should be circulated for about one hour before shut-down.

IN DILUTED FLUIDS

A concentration of 250 to 1000 ppm of MYACIDE AS PLUS in the fluid is sufficient to control gross microbial growth. For example, add 0.5 lb of MYACIDE AS PLUS to 1000 lb of fluid to obtain a dose level of 500 ppm in the fluid.

MAINTENANCE DOSAGE

Add 100-200 ppm of MYACIDE AS PLUS to maintain control of the system.

IN CONCENTRATES

MYACIDE AS PLUS may be incorporated in metalworking fluid concentrate by the manufacturer. However, the manufacturer should determine the storage stability of MYACIDE AS PLUS in the concentrate to ensure that incompatability will not affect its efficacy. The amount to be incorporated will depend on the dilution factor recommended for the concentration.

INJECTION FLUIDS

For the control of contamination and corrosion from bacterial sources in fluids/waste fluids that are disposed of through injection into an approved well following approved guidelines.

METHOD AND LOCATION

MYACIDE AS PLUS can be added as a dry product or pre-dissolved in each volume of fluid prior to injection.

FREQUENCY

MYACIDE AS PLUS should be added at a rate of 50 - 100 ppm (0.018 to 0.036 lbs per barrel) based on the water percent of the injection fluid.

ENHANCED OIL RECOVERY (EOR) FLUIDS

For the effective control of bacterial growth and eliminating degradation of EOR gels and fluids used in the oil and gas industry.

METHOD AND LOCATION

MYACIDE AS PLUS can be added during mixing as a dry product or pre-dissolved or added by injection during the EOR procedure.

FREQUENCY

MYACIDE AS PLUS should be added throughout the EOR operation.

QUANTITY - INITIAL AND MAINTENANCE

MYACIDE AS PLUS should be added at the rate of 50 - 100 ppm (0.018 to 0.036 lbs. per barrel) depending on the quality of the make up water.

ADHESIVES

For the control of microbial contamination, add 0.1–0.5 lb. of Myacide AS Plus per 100 lb. total formulation weight. The addition is best accomplished by pre–dissolving the Myacide AS Plus in any water to be incorporated into the formulation.

STARCH, PIGMENT AND EXTENDER SLURRIES

To inhibit the growth of spoilage bacteria during the manufacture, storage and distribution of water based suspension concentrates.

METHOD AND LOCATION

MYACIDE AS PLUS may be dosed at or close to the end of the manufacturing process as the solid or pre-dissolved in a quantity of the process water. If the manufacturing process involves a heating stage, the MYACIDE AS PLUS should be added after this stage when the product has cooled to below 40°C.

QUANTITY

MYACIDE AS PLUS should be dosed at 100 to 500 ppm based on the final formulation volume (100 to 500g/cubic metre or 0.84 to 4.2lbs/1000 gallons).

PAINTS, LATEX AND ANTIFOAM EMULSION SYSTEMS

To provide in-can preservation and prevent bacterial spoilage during shelf-life storage of acrylic, styrene-acrylic, polyvinyl acetate and other latex emulsion concentrates and latex emulsion based paints. Also for the preservation of silicone and other antifoam emulsion systems.

METHOD AND LOCATION

MYACIDE AS PLUS may be added at any convenient point during the manufacturing process. Ideally it should be added as a final step just prior to packing of the product into bulk or sales packs.

If a heating stage is involved in the manufacture, add MYACIDE AS PLUS after this stage when the product has cooled to below 40°C.

QUANTITY

MYACIDE AS PLUS should be dosed at 100 to 500 ppm based on the final formulation volume (100 to 500g/cubic metre or 0.84 to 4.2lbs/1000 gallons).

WATER BASED PRINTING INKS AND FOUNT SOLUTIONS

To inhibit the growth of spoilage bacteria during the storage and use of water based printing inks and fount solutions.

METHOD AND LOCATION

For In-Can preservation MYACIDE AS PLUS should be added at any convenient point during the manufacturing process. Ideally it should be added as a final step after any heating stage and when the product has cooled to below 40°C.

For the control of bacterial spoilage during the use of fount solutions, MYACIDE AS PLUS should be shock dosed at a suitable point in the fount reservoir where there is adequate flow or turbulance to ensure quick dissolution. MYACIDE AS PLUS may be shock dosed once or twice weekly as a normal routine. Where conditions indicate, more frequent shock dosing may be required.

QUANTITY

In-Can preservation - MYACIDE AS PLUS should be dosed at 100 to 500 ppm based on the final formulation volume (100 to 500g /cubic metre or 0.84 to 4.2lbs/1000 gallons).

Fount Solutions - MYACIDE AS PLUS should be shock dosed at between 25 and 100 ppm (25 to 100g/cubic metre ; 0.21 to 0.84lbs/1000 gallons) depending on the contamination levels in the fount reservoir.