



PECO ENERGY

PECO Energy Company
2301 Market Street
PO Box 8699
Philadelphia, PA 19101-8699
215 841 4000

October 19, 1995

Mr. Sohan Garg
Department of Environmental Protection
Bureau of Water Quality Management
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Dear Mr. Garg:

Subject: Limerick Generating Station NPDES Permit No. PA0051926

Pursuant to Chapter 92.7, "Reporting of New or Increased Discharges," we are requesting the subject permit be amended to allow the use of the chemical additive Betz Bio-Trol 88P in the cooling water system at Limerick Generating Station. The additive will be used as an alternative to the chlorine and bromine system currently permitted for control of condenser biofouling. Current permit discharge limits for total residual oxidants (TRO) should be applicable for the Betz product.

Usage rate of Bio-Trol 88P is estimated to be 400 lbs/day as a maximum. This will result in a maximum residual of 0.2 mg/l or less as TRO at outfall 001. As stated earlier, this is consistent with current permit conditions. The additive has been approved by the Department for use at Cromby, Delaware, Schuylkill and Eddystone Stations. Enclosed are the Material Safety Data Sheet and Aquatic Toxicity Data for the additive.

Based on this information and due to recurring problems with the current chlorine and bromine system, we would appreciate a favorable response by November 2, 1995.

A copy of this letter (including any attachments or enclosures) is being sent to the U.S. Nuclear Regulatory Commission (USNRC) in accordance with the Limerick Generating Station, Units 1 and 2, Environmental Protection Plan, Section 3.2, which stipulates that USNRC shall receive a copy of any proposed changes to the NPDES permit at the same time that the permitting agency is notified.

If you have any questions or require additional information, please contact me at (215) 841-5177.

Sincerely,

Robert M. Matty, Jr.
Engineer
Environmental Affairs

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Attachment

cc: U.S. Nuclear Regulatory Commission, Document Control Desk
(Docket Nos. 50-352 and 50-353 & License Nos. NPF-39 and NPF-85)
T. T. Martin, Administrator, USNRC, Region 1
N. S. Perry, USNRC Senior Resident Inspector, LGS

FAX# : BETZ LABS CORP R&D At: 20-OCT-1995 14:20 Page 2

BETZ MATERIAL
SAFETY DATA SHEET

EFFECTIVE DATE: 08-SEP-1995
PRINTED DATE: 08-SEP-1995

1) CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : BIO-TROL 88P

REAGENT CODE#
PRODUCT APPLICATION AREA: SOLID MICROBIAL CONTROL AGENT.

COMPANY ADDRESS:
Betz Laboratories, Inc.
4636 Somerton Road, Treose, Pa. 19053
Information phone number: (215) - 355-3300

EMERGENCY TELEPHONE (HEALTH/ACCIDENT): (800)-877-1940 (USA)

2) COMPOSITION / INFORMATION ON INGREDIENTS

Information for specific product ingredients as required by the OSHA HAZARD COMMUNICATIONS STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

HAZARDOUS INGREDIENTS:

CAS#	CHEMICAL NAME
32718-18-6	1-BROMO-3-CHLORO-5,5-DIMETHYLHYDANTOIN Oxidizer; irritant (eyes and skin)

No component is considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration at OSHA thresholds for carcinogens.

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PRODUCT NAME : BIO-TROL 88P

REAGENT CODE# :

EFFECTIVE DATE: 08-SEP-1995

3) HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

Moderately irritating. May be corrosive in contact with moist skin. Severe irritant to the eyes. Dusts cause irritation to the upper respiratory tract.

DOT hazard: Oxidizer
Emergency Response Guide #35
Odor: Slight; Appearance: White, Granules

Fire fighters should wear positive pressure self-contained breathing apparatus(full face-piece type). Proper fire-extinguishing media: Flood with water. Use of CO2 or foam may not be effective.

POTENTIAL HEALTH EFFECTS

ACUTE SKIN EFFECTS:

Primary route of exposure; Moderately irritating. May be corrosive in contact with moist skin.

ACUTE EYE EFFECTS:

Severe irritant to the eyes.

ACUTE RESPIRATORY EFFECTS:

Dusts cause irritation to the upper respiratory tract.

INGESTION EFFECTS:

May cause severe irritation or burning of the gastrointestinal tract.

TARGET ORGANS:

No evidence of potential chronic effects.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

May cause redness or itching of skin.

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4) FIRST AID MEASURES

SKIN CONTACT:

Remove clothing. Wash area with large amounts of soap solution or water for 15 min. Immediately contact physician.

EYE CONTACT:

Immediately flush eyes with water for 15 minutes. Immediately contact a physician for additional treatment.

INHALATION:

Remove victim from contaminated area. Apply necessary first aid treatment. Immediately contact a physician.

INGESTION:

Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician. Dilute contents of stomach using 3-4 glasses milk or water.

5) FIRE FIGHTING MEASURES

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

EXTINGUISHING MEDIA:

Flood with water. Use of CO2 or foam may not be effective.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

FLASH POINT:

> 200F P-M(CC)

MISCELLANEOUS:

Oxidizer

UN1479:Emergency Response Guide #35

6) ACCIDENTAL RELEASE MEASURES

PROTECTION AND SPILL CONTAINMENT:

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container.

Product releases chlorine when wet. Spill residue may be neutralized with 3% hydrogen peroxide solution.

DISPOSAL INSTRUCTIONS:

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Dispose of in approved pesticide facility or according to label instructions.

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REAGENT CODE# :

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7) HANDLING AND STORAGE**HANDLING:**

Oxidizer. Avoid all contact with reducing agents, oils, greases, organics and acids.

STORAGE:

Keep containers closed when not in use. Keep dry. Do not store at high temperature or near oxidizables or combustibles.

8) EXPOSURE CONTROLS/PERSONAL PROTECTION**EXPOSURE LIMITS****CHEMICAL NAME**

1-BROMO-3-CHLORO-5,5-DIMETHYLHYDANTOIN

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

MISC: Note- manufacturer's recommended exposure limit: 0.2 mg/m3.

ENGINEERING CONTROLS:

Adequate ventilation to maintain air contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Use protective equipment in accordance with 29CFR 1910 Subpart I

RESPIRATORY PROTECTION:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. Use air-purifying respirators within use limitations associated with the equipment or else use supplied air-respirators. If air-purifying respirator use is appropriate, use respirator with acid gas cartridges & dust/mist prefilters.

SKIN PROTECTION:

Gauntlet-type rubber gloves, chemical resistant apron. Wash off after each use. Replace as necessary.

EYE PROTECTION:

Airtight chemical goggles.

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9) PHYSICAL AND CHEMICAL PROPERTIES

Density	NO DATA	Vapor Pressure (mmHG)	< 1.0
Freeze Point (F)	NA	Vapor Density (air=1)	< 1.00
Viscosity (cps 70F)	NA	% Solubility (water)	0.2

Odor	Slight
Appearance	White
Physical State	Granules
Flash Point (F)	> 200 P-M(CC)
pH 5% Disp. (approx.)	4.7
Evaporation Rate (Ether=1)	< 1.00

NA = not applicable ND = not determined

10) STABILITY AND REACTIVITY**STABILITY:**

Stable

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Slowly releases halogen gases when contaminated with moisture. May react with alkalis, acids, organics or reducing agents.

DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

BETZ INTERNAL PUMPOUT/CLEANOUT CATEGORIES:

"B"

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11) TOXICOLOGICAL INFORMATION

Oral LD50 RAT: 578 mg/kg
NOTE - 600 mg/kg per alt. source; dehalogenated byproduct rat oral LD50: >4,000 mg/kg

Dermal LD50 RABBIT: >2,000 mg/kg
NOTE - Alternate source concurs

Inhalation LC50 RAT: 1.88 mg/L/4hr
NOTE - >3.2 mg/L/4hr at 100 ppm (no deaths) per alternate source

Skin Irritation Score RABBIT: 6.1
NOTE - 6.98 per alternate source; reversible; dehalogenated byproduct score: 0.8

Eye Irritation Score RABBIT: 103
NOTE - 14 day-irreversible-max.at day 3; dehalogenated byproduct score: 12.8-reversible

90 Day Feed Study RAT: NO DATA
NOTE - Dehalogenated byproduct 90-day oral LD50: >2,000 mg/kg/day

Skin Sensitization G.PIG: POSITIVE
NOTE - Buehler Test; Dehalogenated byproduct was negative in Buehler Test

Ames Assay BACTERIA: NEGATIVE
NOTE - +/- metabolic activation; Dehalogenated byproduct: negative

Non-Ames Mutagenicity YEAST: NEGATIVE
NOTE - Dehalogenated byproduct negative for: Mouse Lymphoma, SCE, Cell Transformation

Teratology RAT: NO DATA
NOTE - Dehalogenated byproduct study had lerata (secondary) at maternal toxic doses

Reproductive Toxicity RAT: 4,500 mg/kg/day
NOTE - Dehalogenated byproduct study had no adverse reproductive toxicity

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12) ECOLOGICAL INFORMATION

AQUATIC TOXICOLOGY

Rainbow Trout 96 Hour Static Acute Bioassay

LC50: .84 mg/L

Fathead Minnow 96 Hour Static Acute Bioassay

LC50: 2.19 mg/L

Daphnia magna 48 Hour Static Acute Bioassay

LC50: .45 mg/L

Sheepshead Minnow 96 Hour Static Acute Bioassay

LC50: 19.5 mg/L

BIODEGRADATION

COD (mg/gm): 938

TOC (mg/gm): 255

BOD-5 (mg/gm): 6

BOD-28 (mg/gm): 11

13) DISPOSAL CONSIDERATIONS

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :
D001=Ignitable.

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14) TRANSPORT INFORMATION

DOT HAZARD: Oxidizer

UN / NA NUMBER: UN1479

DOT EMERGENCY RESPONSE GUIDE #: 35

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15) REGULATORY INFORMATION

TSCA:

This is an EPA registered biocide and is exempt from TSCA inventory requirements.

CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

No regulated constituent present at OSHA thresholds

FIFRA REGISTRATION NUMBER:

3876-150

SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Fire

SARA SECTION 302 CHEMICALS:

No regulated constituent present at OSHA thresholds

SARA SECTION 313 CHEMICALS:

No regulated constituent present at OSHA thresholds

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65) CHEMICALS PRESENT:

No regulated constituent present at OSHA thresholds

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16) OTHER INFORMATION

NFPA/HMIS

CODE TRANSLATION

Health	2	Moderate Hazard
Fire	1	Slight Hazard
Reactivity	1	Slight Hazard
Special	OXY	DOT or NFPA Oxidizer
(1) Protective Equipment	C	Goggles, Gloves, Apron

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

CHANGE LOG

EFFECTIVE

DATE REVISIONS TO SECTION: SUPERCEDES

MSDS status: 22-AUG-95 REVISED FORMAT