



PERRY NUCLEAR POWER PLANT

10 CENTER ROAD
PERRY, OHIO 44081
(216) 259-3737

Mail Address:
PO. BOX 97
PERRY, OHIO 44081

Michael D. Lyster
VICE PRESIDENT - NUCLEAR

June 12, 1992
PY-CEI/OEPA-0155L

Ms. Kim Jackson
Ohio Environmental Protection Agency
Division of Water Pollution Control
Enforcement and Compliance Section
1800 Watermark Drive, P.O. Box 1049
Columbus, Ohio 43266-0149

Re: Perry Nuclear Power Plant
NPDES Permit No. 31B0016DD
Cooling Water Additive Trial for
Circulating Water System

Dear Ms. Jackson,

The Perry Nuclear Power Plant has enlisted Betz Industrial to determine the effectiveness of Slimicide C-78P (a solid bromine/chlorine donor) for slime and algae control in the plant circulating water system. The trial period will be three months. The chemical will be injected twice per day, for one hour duration. The discharge will be dehalogenated using the existing sodium sulfite addition system and combined with untreated service water prior to entering state waters.

During this trial period, the circulating water system chlorination system will not be used unless the trial is discontinued; however, plant service water and emergency service water will continue to receive routine chlorine treatments. Based on the success of the trial and your approval, the Slimicide will be considered for permanent use.

Attachments 1 and 2 contain the information required in accordance with Ohio EPA procedures. Our intention is to begin the trial upon receipt of your approval; we would appreciate your notifying us of the results of your evaluation as soon as possible. Please contact Louise Barton at (216) 259-3737 ext. 5512 with your results, or if you have questions.

Sincerely,

Michael D. Lyster

MDL:lkb:ss

cc: NRC Document Control Desk
NRC Project Manager
NRC Resident Inspector
NRC Region III
B. Hall - OEPA Northeast District Office

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

9206240356 920612
PDR ADOCK 05000440
S PDR

Cool
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Cooling Water Additive Information

1. The name of the additive to be used and general product information.

Additive Name - Betz Slimicide C-78P

- a. MSDS - Attachment 2
- b,c. Bromo-dichloro-dimethylhydantoin (a solid bromine/chlorine donor)
- d. Specified use - To control slime and algae in the plant circulating water system
- e. EPA Registration No. 5787-65-3876

2. The concentration of the additive to be used (mg/l).

The average concentration of the additive to be used is 0.5 mg/L.

- a. Frequency - The additive will be applied twice per day.
- b. Duration - Each application will last one hour.
- c. Method - The Slimicide will be fed manually via a Betz Brominator System.

3. The expected concentration of the additive contained in the discharge immediately prior to entering state surface waters.

- a. The expected discharge concentration is <0.05 mg/L TRO.
- b. Dehalogenation will be accomplished using the existing plant sodium sulfite addition system.

4. The average flowrate (MGD) and the outfall number of each outfall containing the additive.

The volume of blowdown entering the discharge stream will be approximately 14.4 MGD. The total discharge flowrate will be approximately 82.08 MGD. The outfall is No. 3IB00016004.

5. Name of the state surface waters that receive the discharge.

Lake Erie.

6. Toxicity information for the additive.

96-hour LC_{50} - Rainbow trout - 0.87 mg/L
96-hour LC_{50} - Fathead minnow - 2.25 mg/L
48-hour LC_{50} - Daphnia magna - 0.46 mg/L

BETZ LABORATORIES, INC.
4636 SUMMERTON ROAD, TREVOSE, PA. 19053
BETZ MATERIAL SAFETY DATA SHEET
EMERGENCY TELEPHONE (HEALTH/ACCIDENT) 800-877-1940

PRODUCT : SLIMICIDE C-78P

(PAGE 1 OF 3)

EFFECTIVE DATE 05-31-91

PRINTED: 31-May-1991

REVISIONS TO SECTIONS: 2;EDIT:APPENDIX/9

PRODUCT APPLICATION : SOLID MICROBIAL CONTROL AGENT.

-----SECTION 1-----HAZARDOUS INGREDIENTS-----

INFORMATION ON PHYSICAL HAZARDS, HEALTH HAZARDS, PEL'S AND TLV'S FOR SPECIFIC PRODUCT INGREDIENTS AS REQUIRED BY THE OSHA HAZARD COMMUNICATIONS STANDARD IS LISTED. REFER TO SECTION 4 (PAGE 2) FOR OUR ASSESSMENT OF THE POTENTIAL ACUTE AND CHRONIC HAZARDS OF THIS FORMULATION.

1-BROMO-3-CHLORO-5,5-DIMETHYLHYDANTOIN***CAS#16079-88-2;OXIDIZER;EYE AND SKIN IRRITANT;PEL/TLV:NONE; NOTE-MANUFACTURER'S RECOMMENDED LIMIT:0.2MG/M3

-----SECTION 2-----TYPICAL PHYSICAL DATA-----

| | | |
|------------------------|--------------|--------------------------------------|
| PH: 5% DISP. (APPROX.) | 4.7 | ODOR: HALOGEN |
| FL.PT.(DEG.F): | >200 P-M(CC) | SP.GR.(70F)OR DENSITY: 65 LBS/CU.FT. |
| VAPOR PRESSURE(mmHG): | NA | VAPOR DENSITY(AIR=1): NA |
| VISC cp@70F: | NA | %SOLUBILITY(WATER): 1 |
| EVAP.RATE: NA | WATER=1 | APPEARANCE: WHITE |
| PHYSICAL STATE: | GRANULES | FREEZE POINT(DEG.F): NA |

-----SECTION 3-----REACTIVITY DATA-----

STABLE. OXIDIZER. SLOWLY RELEASES HALOGEN GASES WHEN CONTAMINATED WITH MOISTURE. MAY REACT WITH ALKALIES, ACIDS, ORGANICS OR REDUCING AGENTS. DO NOT CONTAMINATE. BETZ TANK CLEAN-OUT CATEGORY 'B'.

THERMAL DECOMPOSITION (DESTRUCTIVE FIRES) YIELDS ELEMENTAL OXIDES.

BETZ MATERIAL SAFETY DATA SHEET (PAGE 2 OF 3)

PRODUCT: SLIMICIDE C-78P

-----SECTION 4-----HEALTH HAZARD 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 UPPER RESPIRATORY TRACT

CHRONIC EFFECTS OF OVEREXPOSURE***

NO EVIDENCE OF POTENTIAL CHRONIC EFFECTS.

MEDICAL CONDITIONS AGGRAVATED ***

NOT KNOWN

SYMPTOMS OF EXPOSURE ***

MAY CAUSE REDNESS OR ITCHING OF SKIN.

PRECAUTIONARY STATEMENT BASED ON TESTING RESULTS ***

MAY BE TOXIC IF ORALLY INGESTED.

-----SECTION 5-----FIRST AID INSTRUCTIONS-----

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 EXPOSURE***

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

-----SECTION 6-----SPILL,DISPOSAL AND FIRE INSTRUCTIONS-----

SPILL INSTRUCTIONS***

VENTILATE AREA,USE SPECIFIED PROTECTIVE EQUIPMENT.SPILLED MATERIAL
WHICH CAN NOT BE RECOVERED FOR RE-USE,SHOULD BE PLACED IN A WASTE
DISPOSAL CONTAINER AND DISPOSED OF IN AN APPROVED PESTICIDE
LANDFILL.SEE PRODUCT LABEL STORAGE AND DISPOSAL INSTRUCTIONS.
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 NPDES PERMIT
PRODUCT(S) -DISPOSE OF IN APPROVED PESTICIDE FACILITY OR ACCORDING TO LABEL
INSTRUCTIONS

FIRE EXTINGUISHING INSTRUCTIONS***

FIREFIGHTERS 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.

BETZ MATERIAL SAFETY DATA SHEET (PAGE 3 OF 3)

PRODUCT: SLIMICIDE C-78P

-----SECTION 7-----SPECIAL PROTECTIVE EQUIPMENT-----
 USE PROTECTIVE EQUIPMENT IN ACCORDANCE WITH 29CFR SECTION 1910.132-134. USE
 RESPIRATORS WITHIN USE LIMITATIONS OR ELSE USE SUPPLIED AIR RESPIRATORS.
 VENTILATION PROTECTION***

ADEQUATE VENTILATION TO MAINTAIN AIR CONTAMINANTS BELOW EXPOSURE LIMITS
 RECOMMENDED RESPIRATORY PROTECTION***

IF VENTILATION IS INADEQUATE OR SIGNIFICANT PRODUCT EXPOSURE IS LIKELY,
 USE RESPIRATOR WITH ACID GASSES CARTRIDGES AND DUST/MIST PREFILTERS
 RECOMMENDED SKIN PROTECTION***

GAUNTLET-TYPE RUBBER GLOVES, CHEMICAL RESISTANT APRON
 WASH OFF AFTER EACH USE. REPLACE AS NECESSARY

RECOMMENDED EYE PROTECTION***
 AIRTIGHT CHEMICAL GOGGLES

-----SECTION 8-----STORAGE AND HANDLING PRECAUTIONS-----
 STORAGE INSTRUCTIONS***

KEEP DRUMS & PAILS CLOSED WHEN NOT IN USE.
 KEEP DRY. DO NOT STORE AT HIGH TEMPERATURE OR NEAR OXIDIZABLES OR
 COMBUSTIBLES

HANDLING INSTRUCTIONS***

OXIDIZER. AVOID ALL CONTACT WITH REDUCING AGENTS, OILS, GREASES,
 ORGANICS AND ACIDS.

 THIS MSDS WAS WRITTEN TO COMPLY WITH THE OSHA HAZARD COMMUNICATION STANDARD

APPENDIX: REGULATORY INFORMATION

THE CONTENT OF THIS APPENDIX REPRESENTS INFORMATION KNOWN TO BETZ ON THE
 EFFECTIVE DATE OF THIS MSDS. THIS INFORMATION IS BELIEVED TO BE ACCURATE.
 ANY CHANGES IN REGULATIONS WILL RESULT IN UPDATED VERSIONS OF THIS DOCUMENT.

...TSCA: THIS IS AN EPA REGISTERED BIOCIDES AND IS EXEMPT FROM TSCA INVENTORY
 REQUIREMENTS

...FIFRA(40CFR): EPA REG. NO. 5785-65-3876

...REPORTABLE QUANTITY(RQ) FOR UNDILUTED PRODUCT:
 NOT APPLICABLE

...RCRA: IF THIS PRODUCT IS DISCARDED AS A WASTE, THE RCRA HAZARDOUS WASTE
 IDENTIFICATION NUMBER IS: NOT APPLICABLE

...DOT HAZARD/UN# /ER GUIDE# IS: OXIDIZER UN1479 /#35

...CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) MATERIALS: NONE

...SARA SECTION 302 CHEMICALS: NONE

...SARA SECTION 313 CHEMICALS: NONE

...SARA SECTION 312 HAZARD CLASS: IMMEDIATE(ACUTE), FIRE AND REACTIVE

...MICHIGAN CRITICAL MATERIALS: NONE

NFFA/RMIS : HEALTH - 2 ; FIRE - 1 ; REACTIVITY - 1 ; SPECIAL - OXY ; PE - C