Exelon Nuclear
Limerick Generating Station
P.O. Box 2300
Sanatoga, PA 19464

Exelon Nuclear

NPDES Permit

August 18, 2004

Ms. Jennifer Fields, P.E.
Chief, Permits Section
Water Management Program
Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Limerick Generating Station
Industrial Waste NPDES Permit # PA00051926

Subject: Spray Pond Dredging

Dear Ms. Fields:

Limerick Generating Station (LGS) is planning to dredge the site spray pond, a 30 million gallon volume of water covering approximately 9.6 acres. This process, depicted in Attachment 1, will utilize a flow driven vacuum device to transfer water and entrained sludge to a settling basin, where, after a nominal hold time, the solids will settle out and be contained. The settling process may be augmented with a polymeric flocculent, which would be introduced at a mixing station prior to sludge deposition in the basin, in an expected dosage range of 25-50 ppm. MSDS sheets for Cytec SD2065, and toxicity data for similar polymers are included in Attachment 2. The clarified water component will then be pumped either to the Unit 1 Cooling Tower blowdown weir, with discharge ultimately through Outfall 001 in the Schuylkill River, or back to the Spray Pond.

The following tabulation is a comprehensive list of chemicals that are added to the Spray Pond, along with the respective concentration of each:

Chemical	Purpose	Concentration as Product
Depositrol BL5307	scale / corrosion inhibitor	68.2 – 81.8 PPM
Spectrus CT1300	biocide	0.35 PPM
AZ8104	copper corrosion inhibitor	4.2 – 8.3 PPM
Aquashade	algae growth inhibitor	0.5 – 1.0 PPM

Attachment 3 provides a chemical composition summary relating to expected water quality of the clarified water component.

Through this correspondence, LGS is requesting authorization to transfer the dredging process decanted water phase from the setting basin, to either Outfall 001 via the Unit 1 Cooling Tower blowdown weir, or back to the Spray Pond.

Should you have questions regarding this matter, please contact Mr. Robert Alejnikov of my staff at (610) 718-2513. Thank you for your cooperation in this matter.

C001

Sincerely;

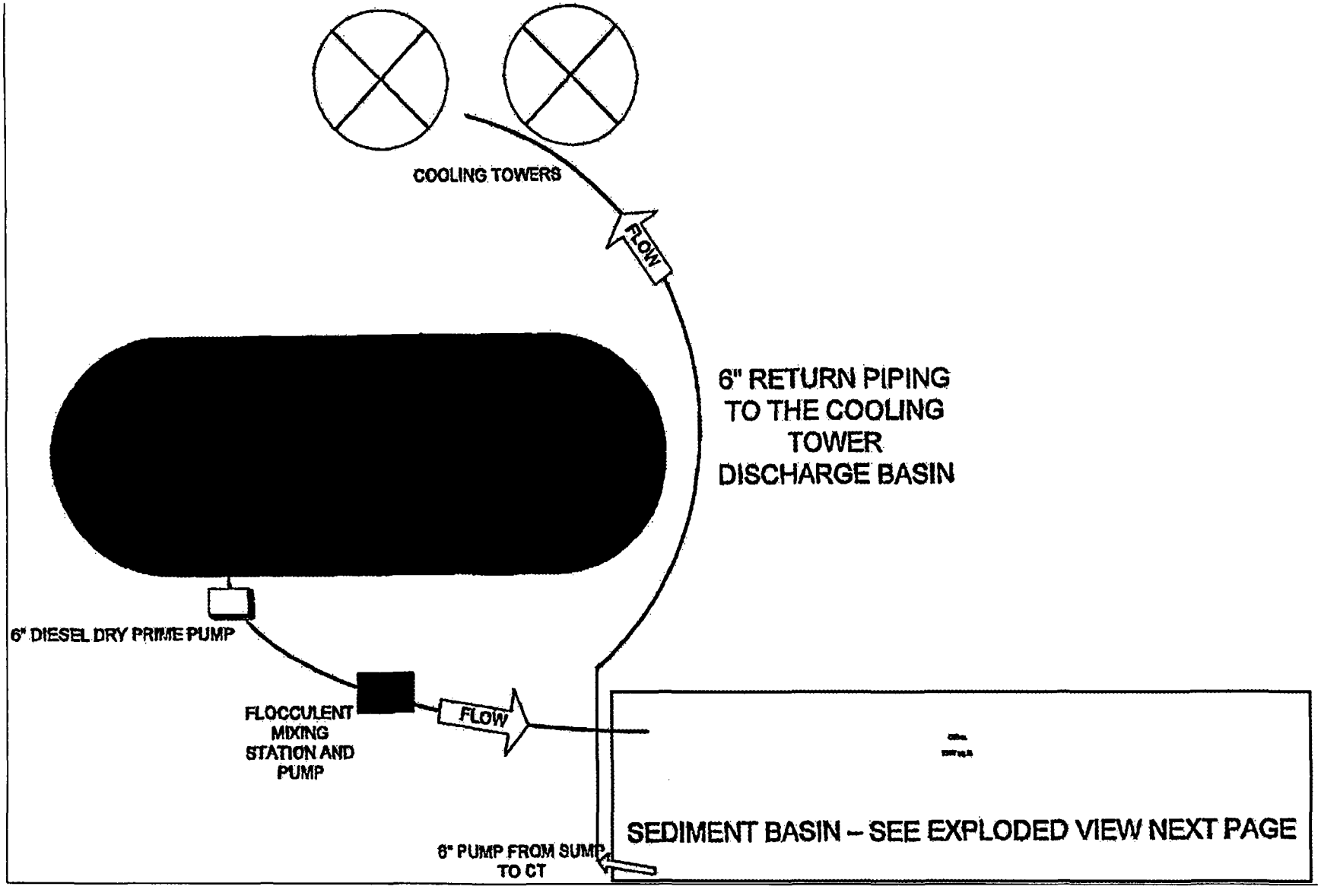
Bryan C. Hanson
Plant Manager-LGS

Attachment 1. Spray Pond Dredging Process
2. MSDS sheets for Cytec SD2065 and toxicity data for similar polymers
3. Chemical Composition Summary

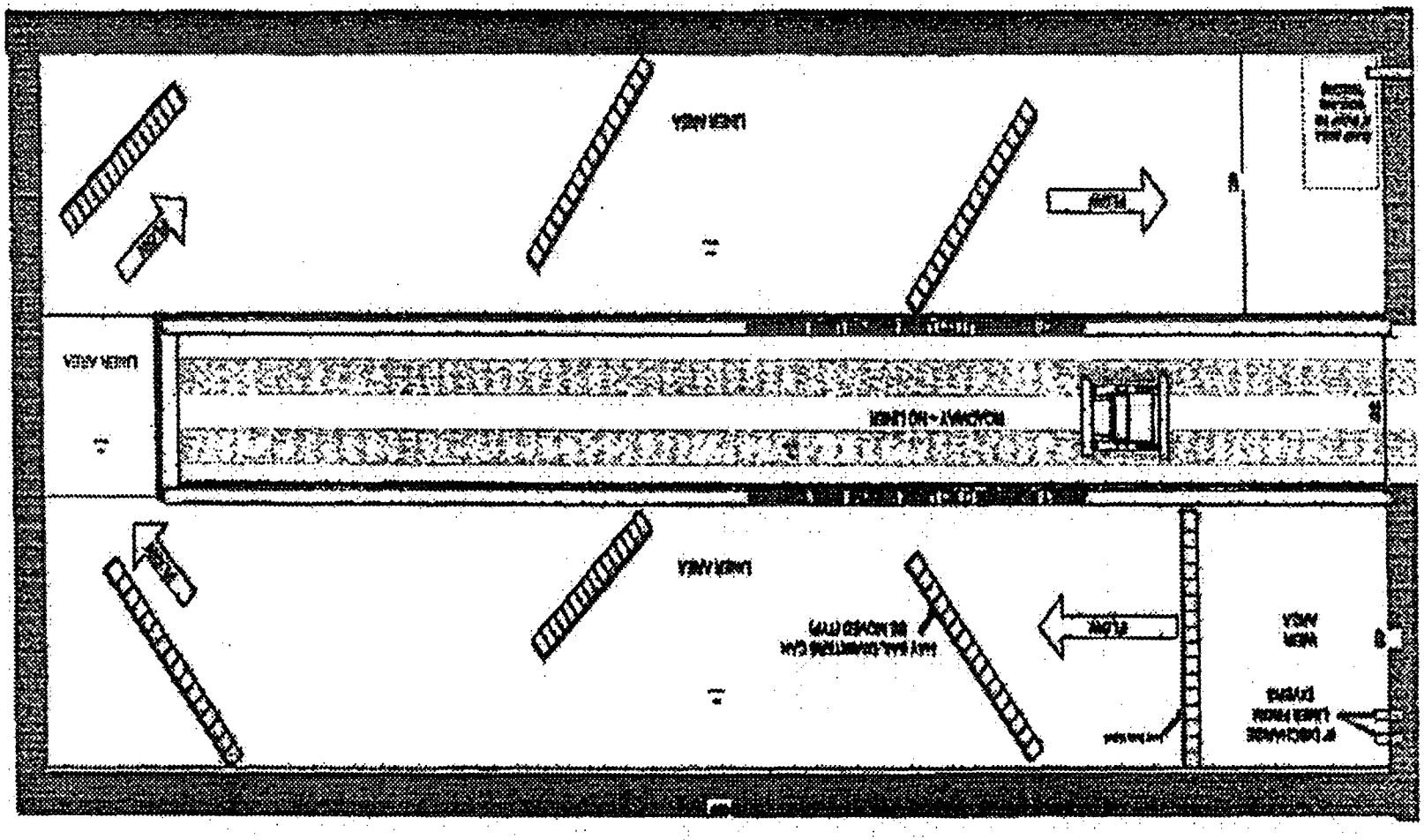
cc: USNRC Document Control Desk
S. Collins, USNRC Region 1 Administrator
S. Hansell, USNRC Resident Inspector-LGS

bcc: R. DeGregorio – GML 5-1
B. Hanson – GML 5-1
R. Newmaster – SSB 2-4
R. Alejnikov – SSB 2-4
T. Seglin – KSA
N. Chand - SSB 3-3
D. Doran – SSB 3-3
K. Kemper – SSB 2-4
J. Toro – SSB 4-2
D. Dyckman – PABRP – SSB 2-4
L. Knapp – SSB 2-2

ATTACHMENT 1



ATTACHMENT 1
DECANTING PLAN



ATTACHMENT 2

CYTEC

MATERIAL SAFETY DATA

MSDS No: 09084
Date: 01/03/2002
Supersedes: 01/21/1999

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **SUPERFLOC® SD-2065 Flocculant**

SYNONYMS: None

CHEMICAL FAMILY: Liquid Cationic Polyacrylamide

MOLECULAR FORMULA: Mixture

MOLECULAR WGT: Mixture

CYTEC INDUSTRIES INC., FIVE GARRET MOUNTAIN PLAZA, WEST PATERSON, NEW JERSEY 07424, USA
For Product Information call 1-800/652-6013. Outside the USA and Canada call 1-973/357-3193.
EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call CHEMTREC: 1-800/424-9300. Outside the USA and Canada call 1-703/527-3887.

2. COMPOSITION/INFORMATION ON INGREDIENTS

OSHA REGULATED COMPONENTS

COMPONENT	CAS. NO.	%	TWA/CEILING	REFERENCE
Petroleum distillate hydrotreated light	064742-47-8	18.0-23.0	500 ppm 165 ppm	OSHA Supplier
Isopropanol	000067-63-0	0-0.5	400 ppm 500 ppm STEL	OSHA/ACGIH ACGIH

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE AND ODOR: Off-white, translucent liquid; hydrocarbon odor.

STATEMENTS OF HAZARD:
WARNING! CAUSES SKIN IRRITATION
MAY CAUSE EYE IRRITATION

POTENTIAL HEALTH EFFECTS

EFFECTS OF OVEREXPOSURE:
The estimated acute oral (rat) LD50, acute dermal (rabbit) LD50 and 4-hour inhalation (rat) LC50 values for this material are >5,000 mg/kg, >2,000 mg/kg and >20 mg/L, respectively.
Direct contact with this material can cause moderate skin and mild eye irritation.
Overexposure to vapors may cause irritation of the respiratory tract and eyes and may cause central nervous system effects.
Refer to Section 11 for toxicology information on the regulated components of this product.

4. FIRST AID MEASURES

Material is not expected to be harmful by ingestion. No specific first aid measures are required.
In case of skin contact, remove contaminated clothing without delay. Flush skin thoroughly with water. Do not reuse clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.
In case of eye contact, immediately irrigate with plenty of water for 15 minutes.
If vapor or dust of this material is inhaled, remove from exposure. Administer oxygen if there is difficulty in breathing. Obtain medical attention immediately if necessary.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: >212 F; 100 C
METHOD: Closed Cup

FLAMMABLE LIMITS
(% BY VOL): Not available

AUTOIGNITION TEMP: Not available

DECOMPOSITION TEMP: Not available

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Use water spray, carbon dioxide or dry chemical to extinguish fires. Use water to keep containers cool. Wear self-contained, positive pressure breathing apparatus and full fire-fighting protective clothing. See Section 8 (Exposure Controls/Personal Protection) for special protective clothing.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Where exposure level is not known, wear NIOSH approved positive pressure self-contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear rain suit. Spills of this product are very slippery. Spilled material should be absorbed onto an inert material and scooped up. The area should be thoroughly flushed with water and scrubbed to remove residue. If slipperiness remains, apply more dry-sweeping compound.

7. HANDLING AND STORAGE

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

To avoid product degradation and equipment corrosion, do not use iron, copper or aluminum containers or equipment.

OSHA regulations (29 CFR 106.a.14), require that the flashpoint of materials of this type be determined by the Pensky-Martens Closed Tester method. The test for this product indicates it has a flashpoint greater than 200F (93.3C). Although there was no flashpoint detected below 200F (93.3C) by the Pensky-Martens Closed Tester method, some flammable vapors were evolved during the test as evidenced by the enlargement of the test flame; therefore, caution should be exercised in storage and handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands with soap and water. Avoid skin contact. Protective clothing such as impervious gloves, apron, workpants, long sleeve work shirt, or disposable coveralls are recommended to prevent skin contact. For operations where eye or face contact can occur, wear eye protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure. Where exposures are below the Permissible Exposure Limit (PEL), no respiratory protection is required. Where exposures exceed the PEL, use respirator approved by NIOSH for the material and level of exposure. See "GUIDE TO INDUSTRIAL RESPIRATORY PROTECTION" (NIOSH).

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Off-white, translucent liquid; hydrocarbon odor.

BOILING POINT: Aqueous phase ~100 C; Oil phase ~175 C

MELTING POINT: Not available

VAPOR PRESSURE: Similar to water

SPECIFIC GRAVITY: ~1.0

VAPOR DENSITY: Similar to water

% VOLATILE (BY WT): ~50

pH: 3.0-4.0; in water

SATURATION IN AIR (% BY VOL): Not available

EVAPORATION RATE: Not available

SOLUBILITY IN WATER: Limited by viscosity

VOLATILE ORGANIC CONTENT: Not available

10. STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Avoid contact with oxidizing agents.

POLYMERIZATION: Will Not Occur
CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: carbon monoxide; carbon dioxide; ammonia; oxides of nitrogen; hydrochloric acid

11. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section 3. HAZARDS IDENTIFICATION. Toxicological information on the OSHA regulated components of this product is as follows:

Petroleum distillates, hydrotreated light (CAS# 64742-47-8) has acute oral (rat) and dermal (rabbit) LD50 values of >5 g/kg and >3.16 g/kg, respectively. Prolonged or repeated skin contact tends to remove skin oils, possibly leading to irritation and dermatitis. Direct contact may cause eye irritation. Overexposure to high vapor concentrations, >~700 ppm, are irritating to the eyes and respiratory tract and may cause headaches, dizziness, drowsiness, and other central nervous system effects, including death. Aspiration of minute amounts during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death. In a 90-day oral gavage (rats) study at 100, 500, or 1000 mg/kg, no treatment-related mortalities were observed. There were no significant changes in body weights or food consumption in any dose groups. Increased liver weights were observed in male and female rats a 500 and 1000 mg/kg. Increased kidney weights were observed only in male rats at 500 and 1000 mg/kg. Testes weights were significantly elevated in male rats at 1000 mg/kg. Kidney effects, indicative of light hydrocarbon nephropathy, occured in male rat kidneys at all dose levels. Histological findings of hepatocellular hypertrophy were seeen in the livers of male rats at 1000 mg/kg and in female rats at 500 and 1000 mg/kg. All treatment-related effects were reversible within the 4-week recovery period. Observed kidney effects (including light hydrocarbon nephropathy and increased kidney weight) are a unique response by male rats to chronic hydrocarbon exposure, which th U.S. EPA has declared "not relevant to humans". High-dose liver effects (including hepatocellular hypertrophy, or enlarged liver cells) are a direct consequence of the sustained high-fat "hydrocarbon diet". The No Observed Adverse Effect Level (NOAEL) for this study was 1000 mg/kg.

Isopropanol has acute oral (rat) and dermal (rabbit) LD50 values of 5.0 g/kg and 12.8 g/kg, respectively. The 4-hour inhalation LC50 (rat) for isopropanol is >16,000 ppm (40.86 mg/L). Acute overexposure to isopropanol vapor may cause mild irritation of the eyes and respiratory tract. Chronic overexposure to isopropanol vapors may cause central nervous system depression, headaches, dizziness, nausea, and staggered gait. Liquid isopropanol is a severe eye irritant.

California Proposition 65 Warning (applicable in California only) - This product contains (a) chemical(s) known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

No aquatic LC50, BOD, or COD data available.

OCTANOL/H_2O PARTITION COEF.: Not available

13. DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the Cytec product, as supplied. If the material has been altered or contaminated, or it has exceeded its recommended shelf life, the guidance may be inapplicable. Hazardous waste classification under federal regulations (40 CFR Part 261 et seq) is dependent upon whether a material is a RCRA "listed hazardous waste" or has any of the four RCRA "hazardous waste characteristics." Refer to 40 CFR Part 261.33 to determine if a given material to be disposed of is a RCRA "listed hazardous waste"; information contained in Section 15 of this MSDS is not intended to indicate if the product is a "listed hazardous waste." RCRA Hazardous Waste Characteristics: There are four characteristics defined in 40 CFR Section 261.21-61.24: Ignitability, Corrosivity, Reactivity, and Toxicity. To determine Ignitability, see Section 5 of this MSDS (flash point). For Corrosivity, see Sections 9 and 14 (pH and DOT corrosivity). For Reactivity, see Section 10 (incompatible materials). For Toxicity, see Section 2 (composition). Federal regulations are subject to change. State and local requirements, which may differ from or be more stringent than the federal regulations, may also apply to the classification of the material if it is to be disposed. Cytec encourages the recycle, recovery and reuse of materials, where permitted, as an alternate to disposal as a waste. Cytec recommends that organic materials classified as RCRA hazardous wastes be disposed of by thermal treatment or incineration at EPA approved facilities. Cytec has provided the foregoing for information only; the person generating the waste is responsible for determining the waste classification and disposal method.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

	D.O.T. SHIPPING INFORMATION	IMO SHIPPING INFORMATION
SHIPPING NAME:	NOT APPLICABLE/NOT REGULATED	NOT APPLICABLE/NOT REGULATED
HAZARD CLASS/ PACKING GROUP:	Not Applicable	Not Applicable
UN NUMBER:	Not Applicable	Not Applicable
IMDG PAGE:	Not Applicable	Not Applicable
D.O.T. HAZARDOUS SUBSTANCES:	(PRODUCT REPORTABLE QUANTITY) Not Applicable	Not Applicable
TRANSPORT LABEL REQUIRED:	None Required	None Required

	ICAO/IATA	TRANSPORT CANADA
SHIPPING NAME:	NOT APPLICABLE/NOT REGULATED	NOT APPLICABLE/NOT REGULATED
HAZARD CLASS:	Not Applicable	Not Applicable
SUBSIDIARY CLASS:	Not Applicable	Not Applicable

UN / ID NUMBER:	Not Applicable	Not Applicable
PACKING GROUP:	Not Applicable	Not Applicable
TRANSPORT LABEL REQUIRED:	None Required	None Required
PACKING INSTR:	PASSENGER Not Applicable CARGO Not Applicable	Not Applicable
MAX NET QTY:	PASSENGER Not Applicable CARGO Not Applicable	Not Applicable

ADDITIONAL TRANSPORT INFORMATION

TECHNICAL NAME (N.O.S.): Not Applicable

15. REGULATORY INFORMATION

INVENTORY INFORMATION

US TSCA: All components of this product are included on the TSCA Inventory in compliance with the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq.
This product contains a chemical substance that is subject to export notification under Section 12 (b) of the Toxic Substances Control Act, 15 U. S. C. 2601 et. seq. (This requirement applies to exports from the United States only.)

CANADA DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.

EEC EINECS: All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or the "No Longer Polymer" list, or are polymers of which the components are in EINECS, in compliance with Council Directive 67/548/EEC and its amendments.

OTHER ENVIRONMENTAL INFORMATION The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 372), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311, etc.) See Section 13 for information on waste classification and waste disposal of this product.

COMPONENT	CAS. NO.	%	TPQ(lbs)	RQ(lbs)	S313	TSCA 12B
Isopropanol	000067-63-0	0-0.5	NONE	NONE	NO	YES

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA				
ACUTE (Y)	CHRONIC (N)	FIRE (N)	REACTIVE (N)	PRESSURE (N)

16. OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association)

Fire
1
Health 2 0 Reactivity
—
Special

FIRE: Materials that must be preheated before ignition can occur.
HEALTH: Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
REACTIVITY: Materials that in themselves are normally stable, even under fire exposure conditions.

REASON FOR ISSUE:

Revised Sections 2, 4, 6, 7, 11, 15

ATTACHMENT 2

RE: Aquatic Toxicity Analysis – Groundwater Treatment Project

Butterfield

Environmental Corporation

3 Obery Street
Plymouth, MA 02360

508-830-0410
FAX 830-0018

Following please find our report on potential aquatic toxicity of the Cytec polymeric flocculants (Superfloc C-1592RS) proposed for use in CY's upcoming Groundwater Treatment project, as requested.

As you know, many variables contribute to "whole effluent" toxicity of a wastestream. As this is a straightforward clarification and dewatering application, the analysis is relatively simple and considers the following factors:

- Nature and mechanism of the product's toxicity on aquatic species
- Nature of the receiving ecosystem (CY's existing discharge canal)
- Design of the treatment process .
- Chemical dosage to treatment process
- Water discharge flow rate
- Residual effluent concentration from treatment process
- Pathway(s) to the receiving environment

This report predicts zero discharge of polymer solids – hence a net toxicity of zero – to the surrounding environment, based on the behavior of the products in application and the proposed design of the treatment process.

1. Aquatic Toxicity of C-1592RS Cationic Flocculant

C-1592RS was selected for use in the Project based on treatability testing performed on prepared samples made up from representative soil and groundwater samples collected in the construction area (for full test report, see Appendix 'A' – CT Yankee Wastewater Treatment Testing, dated June 16, 2004, attached). The product is a relatively low cationic charge (10 mole percent), high molecular weight, liquid emulsion polyacrylamide (EPAM). Other products tested (anionic, non-ionic and higher charge cationic products), did not meet performance specifications required for the project.

The aquatic toxicity level of Superfloc C-1592RS tested in "EPA Protocol Waters" is reported as follows:

Product	96-Hour LC50	
	Rainbow Trout	Bluegill Sunfish
C-1592RS	1 - 4 mg/L	3 - 13 mg/L*

* Based on testing with similar products. All values reported in mg/L on "as-sold" basis. All tests performed in "EPA Protocol" waters.

The toxicity of cationic polymers is mitigated in the environment by the presence of inert solids and soluble organics; hence these reported toxicity levels are not due to soluble toxins in the product but rather by the test conditions. In waters where there are no solids or dissolved organics to which polymer can attach, the polymer molecules adsorb to aquatic species -- such as a fish's gills, which are negatively charged to absorb oxygen -- and cause suffocation. This is illustrated by the fact that aquatic toxicity of anionic and non-ionic EPAM's ranges from 75 mg/L to >1000 mg/L for freshwater species (48-hr and 96-hr LC50's), compared to 0.5 - 4 mg/L for most high-charge cationic products.

Numerous studies document the extremely high efficiency of polymer adsorption by suspended solids in the environment. Since toxicity testing uses EPA Protocol water, which is free from solids or naturally occurring, dissolved organics, even low levels of a cationic compound are reported as "toxic". Except in the case of an extreme overdose, 100% of polymer solids attach to inert solids and organics in the natural environment and are not available at toxic levels for aquatic life. (It should be noted as well that, although testing is reported on a neat product basis, the actual concentration of polymer solids in the neat emulsion is less than 40% by weight.)

An additional toxicity buffer is provided in salt-water environments. Aquatic toxicity of cationic polymers is significantly lower for marine organisms than for freshwater species.

ATTACHMENT 2

ALL VALUES AE IN MG/LITER (AS SOLD BASES)
(TESTS PERFORMED IN "EPA PROTOCOL" WATER UNLESS OTHERWISE SPECIFIED)

	96 HR LC50			48 HR LC50	
PRODUCT	RAINBOW TROUT	BLUEGILL SUNFISH	FATHEAD MINNOW	DAPHNIA MAGNA	CERIODAPHNIA DUBIA
MAGNIFLOC 985N	750	>1000	>1000	>1000	600
MAGNIFLOC 990N	>100	>100			
CATIONIC EMULSION PAMS:					
MAGNIFLOC 1555C	5.0 35 (RIVER)	6.7 14 (RIVER)			
MAGNIFLOC 1561C	2.7, 2.1 60 (RIVER)	17, 7.7 46 (RIVER)			
MAGNIFLOC 1563C	1.14	4.5			
MAGNIFLOC 1590C	13.4 28.7 (WITH ADDITION OF 5 PPM HUMIC ACID)				
MAGNIFLOC 1591C	1-4* * ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.	3-13*			
MAGNIFLOC 1592C	1-4* * ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.	3-13*			
MAGNIFLOC 1594C	1-4* * ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.	3-13*			
MAGNIFLOC 1596C	0.94 5.0 (TAP)	2.5		0.12	
MAGNIFLOC 1596CSP	0.5-1* * ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.	1-4*		0.1-0.2*	

ATTACHMENT 2

ALL VALUES AE IN MG/LITER (AS SOLD BASES)
(TESTS PERFORMED IN "EPA PROTOCOL" WATER UNLESS OTHERWISE SPECIFIED)

	96 HR LC50			48 HR LC50	
PRODUCT	RAINBOW TROUT	BLUEGILL SUNFISH	FATHEAD MINNOW	DAPHNIA MAGNA	CERIODAPHNIA DUBIA
MAGNIFLOC 1598C	0.5-1*	1-4*			
	* ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.				
MAGNIFLOC 4518C	0.5-1*	1-4*			
	* ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.				
ANIONIC EMULSION PAMS:					
1260 SERIES			32	0.15	
MAGNIFLOC 1820A	53.2	84.4	240 (TAP)	0.33, 5.0 (TAP)	
MAGNIFLOC 1839A	75.2	89.5			
MAGNIFLOC 1849A	75.2	89.5			
MAGNIFLOC 1881A	50-120*	50-100*			
	* ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.				
MAGNIFLOC 1883A	120				
MAGNIFLOC 1885A	50-120*	50-100*			
	* ESTIMATE BASED ON TESTS WITH SIMILAR PRODUCTS.				
MAGNIFLOC 1893A	120				
NONIONIC EMULSION PAMS:					
MAGNIFLOC 100CSP	>100	>100			
MAGNIFLOC 1986N	>100	>100			

ATTACHMENT 3

TEST PARAMETER	REPORTED UNITS	SPRAY POND GRAB SAMPLE
pH		7.6
Specific Conductance	at 25°C, µmhos	880
Alkalinity, "P"	as CaCO3, ppm	0
Alkalinity, "M"	as CaCO3, ppm	114
Sulfur, Total	as SO4, ppm	151
Chloride	as Cl, ppm	99
Hardness, Total	as CaCO3, ppm	257
Calcium Hardness, Total	as CaCO3, ppm	162
Magnesium Hardness, Total	as CaCO3, ppm	95
Copper, Total	as Cu, ppm	<0.05
Copper, Soluble	as Cu, ppm	<0.05
Iron, Total	as Fe, ppm	0.09
Iron, Soluble	as Fe, ppm	<0.05
Sodium	as Na, ppm	66
Zinc, Total	as Zn, ppm	<0.01
Zinc, Soluble	as Zn, ppm	<0.01
Manganese, Total	as Mn, ppm	0.14
Manganese, Soluble	as Mn, ppm	<0.01
Phosphate, Total	as PO4, ppm	0.8
Phosphate, Total Inorganic	as PO4, ppm	0.7
Phosphate, Ortho-	as PO4, ppm	0.6
Phosphate, Soluble Ortho-	as PO4, ppm	0.5
Silica, Total	as SiO2, ppm	13.1
Solids, Total Suspended	mg/l	38-100
Sulfide	as S, ppm	N/A
Phosphate, Soluble Total	as PO4, ppm	0.6
Phosphate, Soluble Total	Inorganic, as PO4	0.6