STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NPDES PERMIT

issued to

Pharmacia & Upjohn Company LLC
c/o Pfizer Inc.
100 Route 206 North, M/S 611
Peapack, NJ 07977

Location Address:
41 Stiles Lane
North Haven

Facility ID: 101-038

Permit ID: CT0001341

Receiving Stream: Quinnipiac River

Permit Expires: January 10, 2010

SECTION 1: GENERAL PROVISIONS

(A) This permit is reissued in accordance with section 22a-430 of Chapter 446k, Connecticut General Statutes ("CGS"), and Regulations of Connecticut State Agencies ("RCSA") adopted thereunder, as amended, and section 402(b) of the Clean Water Act, as amended, 33 USC 1251, et. seq., and pursuant to an approval dated September 26, 1973, by the Administrator of the United States Environmental Protection Agency for the State of Connecticut to administer an N.P.D.E.S. permit program.

(B) Pharmacia & Upjohn Company LLC, ("Permittee"), shall comply with all conditions of this permit including the following sections of the RCSA which have been adopted pursuant to section 22a-430 of the CGS and are hereby incorporated into this permit. Your attention is especially drawn to the notification requirements of subsection (i)(2), (i)(3), (j)(1), (j)(6), (j)(8), (j)(9)(C), (j)(10)(C), (j)(11)(C), (D), (E), and (F), (k)(3) and (4) and (l)(2) of section 22a-430-3.

section 22a-430-3 General Conditions

(a)Definitions
(b)General
(c)Inspection and Entry
(d)Effect of a Permit
(e)Duty
(f)Proper Operation and Maintenance
(g)Sludge Disposal
(h)Duty to Mitigate
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section 22a-430-4 Procedures and Criteria

(a)Duty to Apply
(b)Duty to Reapply
(c)Application Requirements
(d)Preliminary Review
(e)Tentative Determination
(f)Draft Permits, Fact Sheets
(g)Public Notice, Notice of Hearing
(h)Public Comments
(i)Final Determination
(j)Public Hearings
(k)Submission of Plans and Specifications. Approval.
(l)Establishing Effluent Limitations and Conditions
(m)Case by Case Determinations
(n)Permit issuance or renewal
(o)Permit Transfer
(p)Permit revocation, denial or modification
(q)Variances
(r)Secondary Treatment Requirements
(s)Treatment Requirements for Metals and Cyanide
(t)Discharges to POTWs - Prohibitions

(C) Violations of any of the terms, conditions, or limitations contained in this permit may subject the permittee to enforcement action including, but not limited to, seeking penalties, injunctions and/or forfeitures pursuant to applicable sections of the CGS and RCSA.

(D) Any false statement in any information submitted pursuant to this section of the permit may be punishable as a criminal offense under section 22a-438 or 22a-131a of the CGS or in accordance with section 22a-6, under section 53a-157b of the CGS.

(E) The authorization to discharge under this permit may not be transferred without prior written approval of the Commissioner. To request such approval, the permittee and proposed transferee shall register such proposed transfer with the Commissioner, at least 30 days prior to the transferee becoming legally responsible for creating or maintaining any discharge which is the subject of the permit transfer. Failure, by the transferee, to obtain the Commissioner's approval prior to commencing such discharge(s) may subject the transferee to enforcement action for discharging without a permit pursuant to applicable sections of the CGS and RCSA.

(F) No provision of this permit and no action or inaction by the Commissioner shall be construed to constitute an assurance by the Commissioner that the actions taken by the permittee pursuant to this permit will result in compliance or prevent or abate pollution.

(G) Nothing in this permit shall relieve the permittee of other obligations under applicable federal, state and local law.

(H) An annual fee shall be paid for each year this permit is in effect as set forth in section 22a-430-7 of the Regulations of Connecticut State Agencies.

(I) This permitted discharge is consistent with the applicable goals and policies of the Connecticut Coastal Management Act (section 22a-92 of the Connecticut General Statutes).

SECTION 2: DEFINITIONS

(A) The definitions of the terms used in this permit shall be the same as the definitions contained in section 22a-423 of the CGS and section 22a-430-3(a) and 22a-430-6 of the RCSA.

(B) In addition to the above, the following definitions shall apply to this permit:

"-----" in the limits column on the monitoring table means a limit is not specified but a value must be reported on the DMR

"Annual" in the context of any sampling frequency found in Section 5, shall mean the sample must be collected in the month of March.

"Average Monthly Limit"; means the maximum allowable "Average Monthly Concentration" as defined in section 22a-430-3(a) of the RCSA when expressed as a concentration (e.g. mg/l); otherwise, it means "Average Monthly Discharge Limitation" as defined in section 22a-430-3(a) of the RCSA.

"Daily Concentration" means the concentration of a substance as measured in a daily composite sample, or, the arithmetic average of all grab sample results defining a grab sample average.

"Daily Quantity" means the quantity of waste discharged during an operating day.

"Instantaneous Limit" means the highest allowable concentration of a substance as measured by a grab sample, or the highest allowable measurement of a parameter as obtained through instantaneous monitoring.

"In stream Waste Concentration (IWC)" means the concentration of a discharge in the receiving water after mixing has occurred in the allocated zone of influence.

"Maximum Daily Limit", means the maximum allowable "Daily Concentration" (defined above) when expressed as a concentration (e.g. mg/l); otherwise, it means the maximum allowable "Daily Quantity" as defined above, unless it is expressed as a flow quantity. If expressed as a flow quantity it means "Maximum Daily Flow" as defined in section 22a-430-3(a) of the RCSA.

"NA" as a Monitoring Table abbreviation means "not applicable".

"ng" as a Monitoring Table abbreviation means "nanograms".

"NR" as a Monitoring Table abbreviation means "not required".

"Quarterly", in the context of a sampling frequency, means sampling is required in the months of March, June, September, and December.

"Range During Sampling" ("RDS"), as a sample type, means the maximum and minimum of all values recorded as a result of analyzing each grab sample of; 1) a Composite Sample, or, 2) a Grab Sample Average. For those permittees with continuous monitoring and recording pH meters, Range During Sampling means the maximum and minimum readings recorded with the continuous monitoring device during the Composite or Grab Sample Average sample collection.

"Range During Month" ("RDM"), as a sample type, means the lowest and the highest values of all of the monitoring data for the reporting month.

"Semi-Annual" in the context of a sampling frequency, means the sample must be collected in the months of March and September.

"Twice per Month" when used as a sample frequency shall mean two samples per calendar month collected no less than 12 days apart.

"ug/l" means micrograms per liter.

SECTION 3: COMMISSIONER'S DECISION

(A) The Commissioner of Environmental Protection ("Commissioner"), has issued a final determination and found that continuance of the existing system to treat the discharge will protect the waters of the state from pollution. The Commissioner's decision is based on **application #200203795** for permit reissuance received on October 1, 2002 and the administrative record established in the processing of that application.

(B) The Commissioner hereby authorizes the Permittee to discharge in accordance with the provisions of this permit, the above referenced application, and all approvals issued by the Commissioner or his authorized agent for the discharges and/or activities authorized by, or associated with, this permit.

(C) The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Federal Clean Water Act or the CGS or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Federal Clean Water Act or CGS or regulations adopted thereunder which are then applicable.

SECTION 4: GENERAL EFFLUENT LIMITATIONS

(A) No discharge shall contain, or cause in the receiving stream, a visible oil sheen or floating solids; or, cause visible discoloration or foaming in the receiving stream.

(B) No discharge shall cause acute or chronic toxicity in the receiving water body beyond any zone of influence specifically allocated to that discharge in this permit.

(C) The temperature of any discharge shall not increase the temperature of the receiving stream above 85°F, or, in any case, raise the normal temperature of the receiving stream more than 4°F.

SECTION 5: SPECIFIC EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(A) The discharge shall not exceed and shall otherwise conform to the specific terms and conditions listed below. The discharge is restricted by, and shall be monitored in accordance with, the table(s) below:

Table A

Discharge Serial Number: 001-1 | **Monitoring Location: 1**

Wastewater Description: Contaminated groundwater, decontamination station wastewaters, contaminated stormwater, and excavation dewatering wastewaters, including wastewaters from extraction well PW-21;except for new wastewaters generated from the Former Production Area (Area of Concern[AOC] #28) . Such new wastewaters may be discharged once notification is made to the Commissioner that pumping of groundwater from the Former Production Area is desired. See paragraph (9)(B).

Monitoring Location Description: Final effluent outfall chamber | **Allocated Zone of Influence (ZOI): 811,750 GPH (Acute)**

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test[2]	Monitoring required with toxicity test
		Average Monthly Limit	Maximum Daily Limit	Sample/ Reporting Frequency [1]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency[1]	Sample Type or measurement to be reported		
Acute Aquatic Toxicity, Invertebrate[5]	%	NA	LC50>40	Quarterly	Daily Composite	LC50 > 13.3	NR	Grab		
Acute Aquatic Toxicity, Vertebrate[5]	%	NA	LC50>40	Quarterly	Daily Composite	LC50 > 13.3	NR	Grab		
Chronic Toxicity, Invertebrate[6]	%	NA	-----	Quarterly	Daily Composite	NA	NR	NA		
Chronic Toxicity, Vertebrate[6]	%	NA	-----	Quarterly	Daily Composite	NA	NR	NA		
Aluminum, Total	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*	+
Ammonia Nitrogen	mg/l	12.5	25.0	Monthly	Daily Composite	37.5	NR	Grab		+
Arsenic, Total	ug/l	0.14	0.28	Semi-Annual	Daily Composite	0.422	NR	Grab	*	+
Arsenic, Total	g/d	0.212	0.426	Semi-Annual	Daily Composite	NA	NR	Grab		
BOD5	mg/l	20.0	30.0	Weekly	Daily Composite	45.0	NR	Grab		+
Chlorine, Total residual (For the first year following permit issuance)	mg/l	NA	-----	Monthly	Grab Sample Average	NA	NR	NA	*	+
Chlorine, Total residual (From one year after permit issuance until this permit is no longer active)	mg/l	0.306	NA	Monthly	Grab Sample Average	NA	NR	NA	*	+
Chromium, Total	mg/l	0.10	0.20	Annual	Daily Composite	0.30	NR	Grab		
COD	mg/l	300.0	500.0	Weekly	Daily Composite	750.0	NR	Grab		+
Copper, Total	mg/l	0.06	0.12	Annually	Daily Composite	0.179	NR	Grab	*	
Copper, Total	kg/d	0.09	0.181	Annually	Daily Composite	NA	NR	NA		
Dissolved Oxygen	mg/l	NA	NA	NR	NA	-----	Weekly	Grab		
Cyanide, Total	mg/l	0.025	0.05	Weekly	Grab Sample Average	0.075	NR	Grab	*	+
Iron, Total	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA		+
Flow, Average[3]	Gpd	400,000	NA	Daily/Monthly	Daily Flow	NA	NR	NA		
Flow, Maximum[3]	Gpd	NA	525,000	Daily/Monthly	Daily Flow	NA	NR	NA		+
Lead, Total	mg/l	0.2	0.4	Monthly	Daily Composite	0.6	NR	Grab		+

Manganese	mg/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
Mercury, Total	ug/l	2.53	5.07	Monthly	Daily Composite	7.6	NR	Grab	*	+
Mercury, Total	g/d	3.83	7.68	Monthly	Daily Composite	NA	NR	NA		
Nickel, Total	mg/l	0.33	0.66	Annually	Daily Composite	0.99	NR	NA		
Nitrogen, Total Kjeldahl	mg/l	NA	20.0	Quarterly	Daily Composite	NA	NR	NA		+
PCB's, Total	ug/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	*	
Silver, Total	mg/l	0.048	0.096	Quarterly	Daily Composite	0.144	NR	NA		+
Suspended Solids, Total	mg/l	30.0	60.0	Weekly	Daily Composite	90.0	NR	Grab		+
Zinc, Total	mg/l	0.3	0.6	Monthly	Daily Composite	0.9	NR	Grab	*	+
Acenaphthene	ug/l	0.03	0.062	Annually	Daily Composite	0.093	NR	Grab	*	
Acenaphthene	mg/d	47.0	94.2	Annually	Daily Composite	NA	NR	NA		
Acenaphthylene	mg/l	NA	ND[4]	Annually	Daily Composite	NA	NR	NA	*	
Acetone	ug/l	NA	-----	Annually	Grab Sample Average	NA	NR	NA		
Aniline	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA		+
pH, Continuous	S.U.	NA	NA	NR	NA	6-9	Continuous /Monthly	RDM		+ (RDS)
Azobenzene	mg/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	*	+
Benzene	mg/l	0.035	0.13	Monthly	Grab Sample Average	0.195	NR	Grab	*	+
Benzene	kg/d	0.07	0.216	Monthly	Grab Sample Average	NA	NR	NA		
Benzidine	ng/l	0.54	1.08	Weekly	Daily Composite	1.62	NR	Grab	*	+
Benzidene	mg/d	0.818	1.64	Weekly	Daily Composite	NA	NR	NA		
3,4-Benzofluoranthene	ug/l	5.0	NA	Annually	Daily Composite	NA	NR	NA	*	
Bis(2-Ethylhexyl)Phthalate	ug/l	5.9	11.8	Quarterly	Daily Composite	17.7	NR	Grab	*	+
Bis(2-Ethylhexyl)Phthalate	g/d	8.94	17.9	Quarterly	Daily Composite	NA	NR	NA		
Benzoic Acid	ug/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
Carbazole	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*	+
Carbon Disulfide	ug/l	37.0	74.0	Monthly	Grab Sample Average	111.0	NR	NA	*	+
2-Chloroaniline	ug/l	104.0	208.0	Monthly	Daily Composite	312.0	NR	NA		+
4-Chloroaniline	ug/l	40.4	80.8	Monthly	Daily Composite	121.2	NR	NA		+
Chlorobenzene	mg/l	0.014	0.020	Monthly	Grab sample Average	0.030	NR	Grab	*	+
Chloroethane	mg/l	NA	-----	Annually	Grab Sample Average	NA	NR	NA		
Chloroform	mg/l	0.020	0.044	Quarterly	Grab Sample Average	0.066	NR	Grab	*	+
2-Chlorophenol	mg/l	0.029	0.094	Monthly	Daily Composite	0.141	NR	Grab	*	+
Dichloran	mg/l	0.5	0.75	Monthly	Daily Composite	1.12	NR	Grab		+
Dibenzofuran	mg/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
Dichlorobenzidine	ug/l	0.077	0.154	Weekly	Daily Composite	0.231	NR	Grab	*	+
Dichlorobenzidine	g/d	0.177	0.234	Weekly	Daily Composite	NA	NR	NA		
Di-N-Butyl Phthalate	mg/l	0.025	0.054	Annually	Daily Composite	0.081	NR	Grab	*	

1,2-Dichlorobenzene	mg/l	0.5	1.0	Monthly	Grab Sample Average	1.5	NR	NA	*	+
1,3-Dichlorobenzene	mg/l	0.029	0.042	Monthly	Grab Sample Average	0.063	NR	Grab	*	+
1,4-Dichlorobenzene	mg/l	0.23	0.5	Monthly	Grab Sample Average	0.75	NR	NA	*	+
1,1-Dichloroethane	ug/l	NA	-----	Annually	Grab Sample Average	NA	NR	NA		+
1,2-Dichloroethane	mg/l	0.065	0.202	Monthly	Grab Sample Average	0.303	NR	Grab		+
2,4-Dinitrophenol	mg/l	0.068	0.118	Annually	Daily Composite	0.177	NR	Grab	*	
Dioxane	mg/l	5.0	10.0	Monthly	Grab Sample Average	15.0	NR	Grab		+
Ethylbenzene	mg/l	0.03	0.10	Semi-Annual	Grab Sample Average	0.155	NR	Grab	*	+
Formaldehyde	mg/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
Methyl Chloride	mg/l	0.082	0.182	Annually	Grab Sample Average	0.273	NR	Grab	*	
Methylene Chloride	mg/l	0.65	1.3	Monthly	Grab sample Average	1.95	NR	Grab	*	+
2-Methylphenol	mg/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
4-Methylphenol	mg/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
Naphthalene	mg/l	0.021	0.056	Annually	Daily Composite	0.084	NR	Grab	*	
4-Nitrophenol	mg/l	0.069	0.12	Monthly	Daily Composite	0.179	NR	Grab	*	+
1-Chloro-2-nitro-benzene	ug/l	NA	-----	Monthly	Daily Composite	NA	NR	NA		+
Pentachlorophenol	ug/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA	*	+
Phenanthrene	mg/l	0.049	0.098	Monthly	Daily Composite	NA	NR	NA	*	+
Phenol	mg/l	0.014	0.024	Monthly	Daily Composite	0.036	NR	Grab	*	+
Tetrachloroethylene	mg/l	0.021	0.053	Semi-Annual	Grab Sample Average	0.080	NR	Grab	*	+
Toluene	mg/l	0.024	0.076	Monthly	Grab Sample Average	0.114	NR	Grab	*	+
M-Toluidine	ug/l	NA	-----	Monthly	Daily Composite	NA	NR	NA		+
1,2-Transdichloroethylene	mg/l	0.02	0.051	Semi-Annual	Grab Sample Average	0.076	NR	Grab	*	+
2,4,6-Trichlorophenol	ug/l	6.5	13.0	Quarterly	Daily Composite	19.5	NR	Grab	*	+
Trichloroethylene	mg/l	0.02	0.051	Annually	Grab Sample Average	NA	NR	NA	*	

Table Footnotes and Remarks:

Footnotes:

[1] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[2] Minimum Level Test refers to Section 6 Paragraph (A)(3) of this permit.

[3] For this parameter the permittee shall maintain at the facility a record of the total flow for each day of discharge and shall report the Average Daily Flow and the Maximum Daily Flow for each month.

[4] ND means "non-detect".

[5] The results of the Toxicity Tests are recorded in % survival, however, the Permittee shall report pass/fail on the DMR based on criteria in Section 6(B) of this permit.

[6] The results of the Chronic Toxicity Tests are recorded in % survival, however, the Permittee shall report 'Y' on the DMR to indicate completion of a valid Chronic Toxicity Test as described in section 6(C).

Table B

Upon initiation of the discharges pursuant to section 9B of this permit, the monitoring requirements of Table A shall be met, except as modified by this Table.

Discharge Serial Number: 001-1 | **Monitoring Location: 1**

Wastewater Description: Contaminated groundwater, decontamination station wastewaters, contaminated stormwater, and excavation dewatering wastewaters including from Area of Concern #28 (Former Production Area).

Monitoring Location Description: Final effluent outfall chamber

PARAMETER	UNITS	FLOW/TIME BASED MONITORING				INSTANTANEOUS MONITORING			Minimum Level Test[2]	Monitoring required with toxicity testing
		Average Monthly Limit	Maximum Daily Limit	Sample/Reporting Frequency [1]	Sample Type or Measurement to be reported	Instantaneous limit or required range	Sample// Reporting Frequency[1]	Sample Type or measurement to be reported		
Dioxane	mg/l	5.0	10.0	Weekly	Grab Sample Average	15.0	NR	Grab		+
Pentachlorophenol	ug/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	*	+
Carbazole	mg/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	*	+
Dichloran	mg/l	0.5	0.75	Weekly	Daily Composite	1.12	NR	Grab		+
Aniline	mg/l	0.562	1.12	Monthly	Daily Composite	1.69	NR	NA		+
2-Methylphenol	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA		+
4-Methylphenol	mg/l	NA	-----	Quarterly	Daily Composite	NA	NR	NA		+
4-Nitroanaline	mg/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
Nitrobenzene	mg/l	NA	-----	Annually	Daily Composite	NA	NR	NA		
Pyrene	ug/l	NA	-----	Monthly	Daily Composite	NA	NR	NA	*	+
Zinc, Total	mg/l	0.3	0.6	Weekly	Daily Composite	0.9	NR	NA	*	+

Table Footnotes and Remarks:

[1] The first entry in this column is the 'Sample Frequency'. If this entry is not followed by a 'Reporting Frequency' and the 'Sample Frequency' is more frequent than monthly then the 'Reporting Frequency' is monthly. If the 'Sample frequency' is specified as monthly, or less frequent, then the 'Reporting Frequency' is the same as the 'Sample Frequency'

[2] Minimum Level Test refers to Section 6 Paragraph (A)(3) of this permit.

(1) All samples shall be comprised of only the wastewater described in these tables. Samples shall be collected prior to combination with receiving waters or wastewater of any other type, and after all approved treatment units, if applicable. All samples collected shall be representative of the discharge during standard operating conditions.

(2) In cases where limits and sample type are specified but sampling is not required by this permit, the limits specified shall apply to all samples which may be collected and analyzed by the Department of Environmental Protection personnel, the permittee, or other parties.

(3) The limits imposed on the discharges listed in this permit take effect on the issuance date of this permit, hence any sample taken after this date which, upon analysis, shows an exceedance of permit limits will be considered non-compliance.

The monitoring requirements begin on the date of issuance of this permit if the issuance date is on or before the 12th day of a month. For permits issued on or after the 13th day of a month, monitoring requirements begin the 1st day of the following month.

SECTION 6: SAMPLE COLLECTION, HANDLING and ANALYTICAL TECHNIQUES

(A) Chemical Analysis

(1) Chemical analyses to determine compliance with effluent limits and conditions established in this permit shall be performed using the methods approved pursuant to the Code of Federal Regulations, Part 136 of title 40 (40 CFR 136) unless an alternative method has been approved in writing pursuant to 40 CFR 136.4 or as provided in section 22a-430-3(j)(7) of the RCSA. Chemicals which do not have methods of analysis defined in 40 CFR 136 shall be analyzed in accordance with methods specified in this permit.

(2) All metals analyses identified in this permit shall refer to analyses for Total Recoverable Metal as defined in 40 CFR 136 unless otherwise specified.

(3) The Minimum Levels specified below represent the concentrations at which quantification must be achieved and verified during the chemical analyses for the parameters identified in Section 5 Table A and B. Analyses for these parameters must include check standards within ten percent of the specified Minimum Level or calibration points equal to or less than the specified Minimum Level.

Parameter	Minimum Level
Aluminum, Total	10.0 ug/l
Arsenic, Total	5.0 ug/l
Acenaphthene	10.0 ug/l
Acenaphthylene	10.0 ug/l
Azobenzene	5.0 ug/l
Benzene	5.0 ug/l
Benzidine	5.0 ug/l
3,4-Benzofluoranthene	5.0 ug/l
Bis (2-ethylhexyl) phthalate	5.0 ug/l
Carbon disulfide	5.0 ug/l
Carbazole	5.0 ug/l

Chloroform	10.0 ug/l
Chlorobenzene	5.0 ug/l
Chlorine, Total Residual	50.0 ug/l
Copper, Total	5.0 ug/l
Cyanide, Total	10.0 ug/l
2-Chlorophenol	10.0 ug/l
1,2-Dichhlorobenzene	5.0 ug/l
1,3-Dichlorobenzene	5.0 ug/l
1,4 Dichlorobenzene	5.0 ug/l
Dichlorobenzidine	5.0 ug/l
Di-n-butyl phthalate	10.0 ug/l
2,4-Dinitrophenol	50.0 ug/l
Ethylbenzene	10.0 ug/l
Mercury	0.2 ug/l
Methyl Chloride	50.0 ug/l
Methylene Chloride	5.0 ug/l
Napthalene	10.0 ug/l
4- Nitrophenol	50.0 ug/l
Pentachlorophenol	20.0 ug/l
Polychlorinated Biphenyls (PCBs)	16.5 ug/l
Phenanthrene	10.0 ug/l
Phenol	10.0 ug/
Pyrene	10.0 ug/l
Tetrachloroethylene	10.0 ug/l
Toluene	5.0 ug/l
1,2-Transdichloroethylene	10.0 ug/l
2,4,6-Trichlorophenol	10.0 ug/l
Trichloroethylene	10.0 ug/l
Zinc, Total	10.0 ug/l

(4) The value of each parameter for which monitoring is required under this permit shall be reported to the maximum level of accuracy and precision possible consistent with the requirements of this section of the permit.

(5) Effluent analyses for which quantification was verified during the analysis at or below the minimum levels specified in this section and which indicate that a parameter was not detected shall be reported as "less than x" where 'x' is the numerical value equivalent to the analytical method detection limit for that analysis.

(6) Results of effluent analyses which indicate that a parameter was not present at a concentration greater than or equal to the Minimum Level specified in section 6(A)(3) for that analysis shall be considered equivalent to zero (0.0) for purposes of determining compliance with effluent limitations or conditions specified in this permit.

(7) The analytical method used to determine the concentration of polychlorinated biphenyls (PCBs) congeners shall be EPA Method 680.

(B) Toxicity Testing

(1) Samples for monitoring of Aquatic Toxicity shall be collected and handled as prescribed in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" ((EPA/821/R-02-012).

(a) Composite samples shall be chilled as they are collected. Grab samples shall be chilled immediately following collection. Samples shall be held between 0-6 degrees Centigrade until Aquatic Toxicity testing is initiated.

(b) Effluent samples shall not be; dechlorinated, filtered, or, modified in any way, prior to testing for Aquatic Toxicity unless specifically approved in writing by the Commissioner for monitoring at this facility.

(c) Chemical analyses of the parameters identified in Section 5 Table A and B shall be conducted on an aliquot of the same sample tested for Aquatic Toxicity prior to salinity adjustment.

(i) At a minimum, pH, specific conductance, salinity, total alkalinity, total hardness, and total residual chlorine shall be measured in the effluent sample and, during Aquatic Toxicity tests, in the highest concentration of test solution and in the dilution (control) water at the beginning of the test and at test termination. Dissolved oxygen, pH, temperature and salinity shall be measured in the control and all test concentrations at the beginning of the test, daily thereafter, and at test termination. If chlorine is not detected at the highest effluent concentration at test initiation, then it need not be measured at test termination.

(ii) For tests with saltwater organisms that require salinity adjustment of the effluent, chemical analyses shall be conducted on an aliquot of the effluent sample collected for Aquatic Toxicity testing and on an aliquot of the effluent following salinity adjustment. The salinity adjusted effluent shall be analyzed for BOD, COD, TSS, Total Residual Chlorine, cyanide, 1 chloro-2-nitrobenzene, ammonia, TKN, nitrate, nitrite and iron. Both sets of results shall be reported on the Aquatic Toxicity Monitoring Report (ATMR).

(d) Tests for Aquatic Toxicity shall be initiated within 24 hours of sample collection.

(2) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Acute Aquatic Toxicity (invertebrate) on Table A above shall be conducted for 48-hours utilizing juvenile Mysidopsis bahia (1-5 days old with no more than 24-hours range in age).

(3) Monitoring for Aquatic Toxicity to determine compliance with the permit limit on Acute Aquatic Toxicity (vertebrate) in Table A shall be conducted for 48-hours utilizing larval Cyprinodon variegatus (1-14 days old with no more than 24-hours range in age).

(4) Tests for Acute Aquatic Toxicity shall be conducted as prescribed for static non-renewal acute tests in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/821/R-02-012), except as specified below.

(a) Definitive (multi-concentration) testing, with LC50 as the endpoint, shall be conducted to determine compliance with limits on Acute Aquatic Toxicity and monitoring conditions and shall incorporate, at a minimum, the following effluent concentrations:
(i) 100%, 80%, 40%, 20%, 10%, and 5%.

(b) Aquatic toxicity tests with saltwater organisms shall be conducted at a salinity of 20 parts per

thousand, plus or minus 2 parts per thousand.

(c) Mysidopsis bahia may be fed during the test.

(d) Sodium lauryl sulfate or sodium dodecyl sulfate shall be used as the reference toxicant.

(f) Synthetic seawater for use as dilution water or controls shall be prepared with deionized water and artificial sea salts as described in EPA/821/R-02-012.

(g) Salinity adjustment that may be required in tests with saltwater organisms shall be met with the addition of artificial sea salts.

(5) Compliance with limits on Acute Aquatic Toxicity shall be determined as follows:

(a) For limits expressed as a minimum LC50 value,compliance shall be demonstrated when the results of a valid definitive Aquatic Toxicity test indicates that the LC50 value for the test is greater than the Acute Aquatic Toxicity Limit.

(C) Toxicity Testing – Chronic Toxicity Monitoring Condition

(1) The permittee shall monitor Chronic Toxicity of discharge DSN 001-1 in accordance with the following specifications:

(a) Chronic toxicity testing of the discharge shall be performed QUARTERLY during March, June, September, and December and performed concurrent with the Acute Toxicity test described above.

(b) Multiple concentration, static renewal chronic toxicity tests shall be performed on the discharge in accordance with the test methodology prescribed in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms" (EPA 821-R-02-014) as referenced in 40 CFR 136 for Cyprinodon variegatus larval survival and growth and Mysidopsis bahia survival, growth, and fecundity; except as modified in the testing protocol appearing in Tables YY and ZZ.

(i) The concentration series used shall be 5%,10%,20%,40%,80% and 100% effluent.
(ii) The effluent sample (DSN 001-1) shall not be dechlorinated, filtered, or altered in any way except as maybe necessary for salinity adjustment.
(iii) Salinity adjustment that may be required in tests with saltwater organisms shall be performed with the addition of artificial sea salts.
(iv) The salinity adjusted effluent sample shall be analyzed for BOD, COD, TSS, TRC, cyanide, ammonia, nitrate, nitrite, TKN, iron, and 1 -chloro 2-nitrobenzene.
(v) Laboratory control water shall be adjusted to a salinity of 20 parts per thousand plus or minus 2 parts per thousand and used as dilution water in the test.
(vi) Each sample of effluent shall be analyzed for parameters specified in Table A or B of Section 5.

(2) If the laboratory control fails to meet test acceptability criteria for either of the test organisms at

the end of the 7-day chronic test, then the test is considered invalid and the test must be repeated.

(3) Within 60 days of the conclusion of the chronic toxicity test, the permittee shall submit to the the Bureau of Water Management a summary of the test results which includes at a minimum percent survival in each replicate test chamber and all supporting chemical/physical measurements performed in association with the toxicity test. Endpoints to be reported are 48hour LC50 (acute endpoint), 7 Day LC50(survival) 7 Day EC50 (growth), LOEC(growth), NOEC(growth) and IC25.

TABLE YY: Testing Protocol DSN 001-1 7-day chronic tests.	
Testing procedure	Chronic: EPA 821-R-02-014, except as modified below.
Test type	Static with daily renewal.
Salinity	20 or – 2 ppt; Effluent (DSN 001-1) water, and lab control water.
Temperature	26°C ± 1
Light	Ambient laboratory illumination.
Photoperiod	16-h light, 8-h dark.
Test chamber type	Glass or plastic (250 – 400 mLs capacity).
Test solution volume	150 mL per replicate.
Test solution renewal	Daily.
Age of test organism	7 days old.
No. of test organisms	5 per replicate test chamber minimum (40 per concentration).
Replicates	8-per concentration , 8- control water.
Source of food	Newly hatched (less than 24-h old) brine shrimp nauplii. Concentrate brine shrimp nauplii with a ≤ 150 um sieve mesh and rinse with seawater.
Feeding regime	About 150 brine shrimp nauplii per mysid once per day (about one drop). Feed after test solution renewal.
Cleaning test chambers	Siphon excess food prior to test solution renewal.
Aeration	None, unless DO falls below 4.0 mg/l, then gently aerate all chambers.
Control/Dilution water	Laboratory control.
Effluent	Composite sample collected at DSN 001-1. Collected day 0, day 2, and day 4 or 5.
Test duration	Chronic: 7 days.
Endpoint	Acute: Survival. Chronic: Survival, growth and egg development.
Test acceptability criteria	Chronic: 80% survival (averaged) in controls after 7 days. A minimum average dry weight of 0.2 mg per surviving mysid and 50% of the females with eggs in controls is required.
Mortality observations	Each test chamber is examined for mortality at 24-h intervals. Dead individuals are removed and if any individuals are missing (via cannibalism) they are noted.
Physical- chemical measurements of solutions in test chambers	DO, temperature, salinity and pH of the effluent and control test solutions are measured at the beginning, at 24-h intervals and at test termination. These parameters are measured prior to and after test solution renewals. Because of possible harm or stress to the test organisms with meter probes, these parameters are not measured in the test chambers while conducting the test; instead DO and pH measurements are made in separate surrogate chambers without test organisms, prepared from effluent and control water. The surrogate chambers are maintained similar to test chambers (i.e., daily solution renewals). At the end of the chronic test, after the number of live individuals has been determined, measure DO, temperature, salinity and pH in all effluent and control test chambers.
Physical-chemical measurements of composite effluent sample and control grab sample.	The following parameters are measured in each composite sample of DSN 001-1; Table 5(A), 5(B), and salinity. In addition the salinity adjusted effluent must be analyzed for pH, BOD, COD, TSS, TKN cyanide, 1 chloro,2-nitrobenzene, total residual chlorine, ammonia as N, nitrate and nitrite nitrogen, total iron.
Reference toxicant	Sodium dodecyl sulfate or sodium lauryl sulfate with an acute endpoint (48 hours).

TABLE ZZ: Testing Protocol DSN 001-1 Sheepshead minnow and 7-day chronic tests.	
Testing procedure	Chronic: EPA 821-R-02-14, except as modified below.
Test type	Static with daily renewal.
Salinity	20 + or – 2 ppt; Effluent (DSNs 001) water, and lab control water.
Temperature	26°C ± 1
Light	Ambient laboratory illumination.
Photoperiod	16-h light, 8-h dark.
Test chamber type	Glass or plastic (1000 mLs capacity).
Test solution volume	750 mL per replicate.
Test solution renewal	Daily.
Age of test organism	≤ 24 hours.
No. of test organisms	10 per replicate test chamber.
Replicates	4 –per concentration, 4- lab control water.
Source of food	Newly hatched (less than 24-h old) brine shrimp nauplii. Concentrate brine shrimp nauplii with a ≤ 150 um sieve mesh and rinse with seawater.
Feeding regime	Feed once a day concentrated brine shrimp at a rate per replicate of 0.1 mL (2 drops) on days 0-2 and 0.15 mL (3 drops) on days 3 – 6. Feed after test solution renewal.
Cleaning test chambers	Siphon excess food prior to test solution renewal.
Aeration	None, unless DO falls below 4.0 mg/l, then gently aerate all chambers
Control/Dilution water	Laboratory control
Effluent	Composite samples collected at DSN 001-1. Three separate composite collections. Collected day 0, day 2, and day 4 or 5.
Test duration	Chronic: 7 days.
Endpoint	Acute: Survival. Chronic: Survival, growth.
Test acceptability criteria	Acute: 90% survival (averaged) in controls at 48 hrs. Chronic: 80% survival (averaged) in controls after 7 days. A minimum average dry weight of 0.6 mg per serving organism in controls is required.
Mortality observations	Each test chamber is examined for mortality at 24-h intervals. Dead individuals are removed and they are noted.
Physical- chemical measurements of solutions in test chambers	DO, temperature, salinity and pH of the effluent and control test solutions are measured prior to and after test solution renewals.
Physical-chemical measurements of composite effluent sample and control grab sample.	The following parameters are measured in each composite sample of DSN 001-1; Table 5(A), 5(B), and salinity. In addition the salinity adjusted effluent must be analyzed for pH, BOD, COD, TSS, TKN, cyanide, 1 chloro,2-nitrobenzene total residual chlorine, ammonia as N, nitrate and nitrite nitrogen, and total iron.
Reference toxicant	Sodium dodecyl sulfate or sodium lauryl sulfate with an acute endpoint (48hrs).

SECTION 7: REPORTING REQUIREMENTS

(A) The results of chemical analyses and any aquatic toxicity test required above shall be entered on the Discharge Monitoring Report (DMR), provided by this office, and reported to the Bureau of Water Management (Attn: DMR Processing) at the following address. The report shall also include a detailed explanation of any violations of the limitations specified. The DMR shall be received at this address by the last day of the month following the month in which samples are collected.

Bureau of Water Management (Attn: DMR Processing)
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

(B) Complete and accurate aquatic toxicity test data, including percent survival of test organisms in each replicate test chamber, 95% confidence intervals for definitive test protocols, Acute and Chronic Endpoints (48hour LC50 (acute endpoint), 7 Day LC50(survival) 7 Day EC50 (growth), LOEC(growth), NOEC(growth) and IC25), and all supporting chemical/physical measurements performed in association with any aquatic toxicity test, including measured daily flow and hours of operation for the days of sample collection, shall be entered on the Aquatic Toxicity Monitoring Report form (ATMR) and sent to the Bureau of Water Management at the following address within 60 days of test completion:

Bureau of Water Management (Attn: Aquatic Toxicity)
Connecticut Department of Environmental Protection
79 Elm St.
Hartford, Ct 06106-5127

(C) If this permit requires monitoring of a discharge on a calendar basis (e.g. Monthly, quarterly, etc.), but a discharge has not occurred within the frequency of sampling specified in the permit, the Permittee must submit the DMR and ATMR, as scheduled, indicating "NO DISCHARGE". For those permittees whose required monitoring is discharge dependent (e.g. per batch), the minimum reporting frequency is monthly. Therefore, if there is no discharge during a calendar month for a batch discharge, a DMR must be submitted indicating such by the end of the following month.

SECTION 8: RECORDING AND REPORTING OF VIOLATIONS, ADDITIONAL TESTING REQUIREMENTS

(A) If any sample analysis indicates that an Acute Aquatic Toxicity effluent limitation in Section 5 of this permit has been exceeded, or that the test was invalid, another sample of the effluent shall be collected and tested for Aquatic Toxicity and associated chemical parameters, as described above in Section 5 and Section 6, and the results reported to the Bureau of Water Management (Attn: DMR Processing), at the address listed above, within 30 days of the exceedance or invalid test. Results of all tests, whether valid or invalid, shall be reported.

(B) If any two consecutive test results or any three test results in a twelve month period indicates that an Acute Aquatic Toxicity Limit has been exceeded, the permittee shall immediately take all reasonable steps to eliminate toxicity wherever possible and shall submit a report to Bureau of Water Management (Attn: Aquatic Toxicity) for the review and approval of the Commissioner in accordance with section 22a-430-3(j)(10)(c) of the RCSA describing proposed steps to eliminate the toxic impact of the discharge on the receiving water body. Such a report shall include a proposed time schedule to accomplish toxicity reduction and the permittee shall comply with any schedule approved by the Commissioner.

(C) The permittee shall notify the Bureau of Water Management, Permitting and Enforcement Division, within 72 hours and in writing within thirty days of the discharge of any substance listed in the application but not listed in the permit if the concentration or quantity of that substance exceeds two times the level listed in the application.

(D) Any test in which the survival of test organisms is less than ninety (90) percent (48 hour), or eighty (80) percent (7 day), in the control test chambers or failure to achieve test conditions as specified in section 6(B) or (C) of this permit or Section 22a-430-3(j)(7)(A) of the Regulations of Connecticut State Agencies, such as maintenance of appropriate environmental controls, shall constitute an invalid test and will require immediate retesting. Failure to submit valid test results constitutes a permit violation.

SECTION 9: COMPLIANCE SCHEDULE

(A) On or before six months after issuance of this permit, the permittee shall submit a report for the review and written approval of the Commissioner, detailing the levels of Total Residual Chlorine in the discharge that is regulated by this permit. The report shall also detail what treatment, if any, is required to meet the Average Monthly Limit of .306 mg/l and propose a schedule for implementation of the selected treatment alternative. Such schedule shall ensure compliance with the Total Residual Chlorine limit set for one year after permit issuance.

(B) The permittee shall notify the Commissioner in writing two months prior to discharging new wastewaters from groundwater remedial measures implemented in the Former Production Area (AOC#28). This notification excludes the discharge from extraction well PW-21 that is already a part of the present discharge. Such notification shall include the latest projections of quality and quantity of the discharge and compare the findings to the projections incorporated as an attachment (author; Golder Associates) to correspondence dated June 22, 2004 and updated on September 30, 2004.

(C) The Permittee shall perform the approved actions, in paragraph (A) of this section, in accordance with the approved schedule. Within fifteen days after completing such actions, the Permittee shall certify to the Commissioner in writing that the actions have been completed as approved.

(D) The Permittee shall use best efforts to submit to the Commissioner all documents required by this section of the permit in a complete and approvable form. If the Commissioner notified the Permittee that any document or other action is deficient, and does not approve it with conditions or modifications, it is deemed disapproved, and the Permittee shall correct the deficiencies and resubmit it within the time specified by the Commissioner or, if no time is specified by the Commissioner, within thirty days of the Commissioner's notice of deficiencies. In approving any document or other action under this Compliance Schedule, the Commissioner may approve the document or other action as submitted or performed or with such conditions or modifications as the Commissioner deems necessary to carry out the purposes of this section of the permit. Nothing in this paragraph shall excuse noncompliance or delay.

(E) Dates. The date of submission to the Commissioner of any document required by this section of the permit shall be the date such document is received by the Commissioner. The date of any notice by the Commissioner under this section of the permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the Commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" as used in this section of the permit means calendar day. Any document or action which is required by this section only of the permit, to be submitted, or performed, by a date which falls on, Saturday, Sunday, or, a Connecticut or federal holiday, shall be submitted or performed on or before the next day which is not a Saturday, Sunday, or Connecticut or federal holiday.

(F) Notification of noncompliance. In the event that the Permittee becomes aware that it did not or may not comply, or did not or may not comply on time, with any requirement of this section of the permit or of any document required hereunder, the Permittee shall immediately notify the Commissioner and shall take all reasonable steps to ensure that any noncompliance or delay is avoided or, if unavoidable, is minimized to the greatest extent possible. In so notifying the Commissioner, the Permittee shall state in writing the reasons for the noncompliance or delay and propose, for the review and written approval of the Commissioner, dates by which compliance will be achieved, and the Permittee shall comply with any dates that may be approved in writing by the Commissioner. Notification by the Permittee shall not excuse noncompliance or delay, and the Commissioner's approval of any compliance dates proposed shall not excuse noncompliance or delay unless specifically so stated by the Commissioner in writing.

(G) Notice to Commissioner of changes. Within fifteen days of the date the Permittee becomes aware of a change in any information submitted to the Commissioner under this section of the permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the Commissioner.

(H) Submission of documents. Any document, other than a discharge monitoring report, required to be submitted to the Commissioner under this section of the permit shall, unless otherwise specified in writing by the Commissioner, be directed to:

Gary L. Leavitt
Department of Environmental Protection
Bureau of Water Management
79 Elm Street
Hartford, CT 06106-5127

This permit is hereby issued on the 11th day of January, 2005.

Gina McCarthy
Commissioner

GM/GLL

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DATA TRACKING AND TECHNICAL FACT SHEET

Permittee: Pharmacia & Upjohn Company ***PAMS Company ID: 25301***

PERMIT, ADDRESS, AND FACILITY DATA

PERMIT #: CT 0001341 ***APPLICATION #: 200203795*** ***FACILITY ID. 101-038***

Mailing Address:	***Location Address:***
Street: *c/o Pfizer, Inc.* *100 Route 206 North, M/S 611*	***Street:*** *41 Stiles Lane*
City: *Peapack* ***ST:*** *NJ* ***Zip:*** *07977*	***City:*** *North Haven* ***ST:*** *CT* ***Zip:*** *06473*
Contact Name: *Russ Downey*	***DMR Contact*** *Russ Downey*
Phone No.: *(908) 901-6079*	***Phone No.:*** *(908) 901-6079*

PERMIT INFORMATION

DURATION ***5 YEAR X*** ***10 YEAR __*** *30 YEAR*

TYPE ***New _*** ***Reissuance X*** ***Modification***

CATEGORIZATION ***POINT (X)*** ***NON-POINT ( )*** ***GIS # 2855***

NPDES (X) ***PRETREAT ()*** ***GROUND WATER(UIC) ( )*** ***GROUND WATER (OTHER) ( )***

NPDES MAJOR(MA) X
NPDES SIGNIFICANT MINOR or PRETREAT SIU (SI)
NPDES or PRETREATMENT MINOR (MI)

PRETREAT SIGNIFICANT INDUS USER(SIU)
PRETREAT CATEGORICAL (CIU)
Note: If it's a CIU then check off SIU

POLLUTION PREVENTION MANDATE _ ***ENVIRONMENTAL EQUITY ISSUE***

COMPLIANCE SCHEDULE ***YES X*** ***NO***

POLLUTION PREVENTION __ ***TREATMENT REQUIREMENT __*** ***WATER CONSERVATION***

WATER QUALITY REQUIREMENT __ ***REMEDIATION __*** ***OTHER X***

IS THE PERMITTEE SUBJECT TO A PENDING ENFORCEMENT ACTION? ---X--- NO ------ YES

OWNERSHIP CODE

Private X__ Federal __ State __ Municipal (town only) _ Other public

DEP STAFF ENGINEER___Gary Leavitt

PERMIT FEES

Discharge Code	*DSN Number*	*Annual Fee*
1090000	*001*	*$4087.50*
1080000	*001*	*$2662.50*

FOR NPDES DISCHARGES

Drainage basin Code: 5200 *Present/Future Water Quality Standard:SC/SB*

NATURE OF BUSINESS GENERATING DISCHARGE

Former specialty chemical manufacturer performing site remediation.

PROCESS AND TREATMENT DESCRIPTION (by DSN)

DSN-001-1: Groundwater remediation wastewaters, stormwater from sludge piles, and other related discharges are treated as follows: Equalization, biological treatment, clarification, sand filtration, and UV oxidation using hydrogen peroxide.

RESOURCES USED TO DRAFT PERMIT

__ *Federal Effluent Limitation Guideline_40CFR_____*
name of category

__ *Performance Standards*

_ *Federal Development Document*
name of category

_ *Treatability Manual*

X *Department File Information*

X *Connecticut Water Quality Standards*

X *Coastal Management Consistency Review Form*

_ *Other - Explain*

BASIS FOR LIMITATIONS, STANDARDS OR CONDITIONS

_ *Best Available Technology (BAT)*

_ *Best Practicable Technology (BPT)*

_ *Best Conventional Technology (BCT)*

X *Best Professional Judgement (See Other Comments)*

Secondary Treatment

X *Case by Case Determination (See Other Comments)*

_ *Section 22a-430-4(s) of the Regulations of Connecticut State Agencies*

X *In order to meet in-stream water quality (See General Comments)*
_ *Anti-degradation policy*

GENERAL COMMENTS

The need for inclusion of water quality based discharge limitations in this permit was evaluated consistent with Connecticut Water Quality Standards and criteria, pursuant to 40 CFR 122.44(d). Each parameter was evaluated for consistency with the available aquatic life criteria (acute and chronic) and human health (fish consumption only) criteria, considering the zone of influence allocated to the facility where appropriate. The statistical procedures outlined in the EPA Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) were employed to calculate the need for such limits. Comparison of monitoring data and its inherent variability with the calculated water quality based limits indicates a statistical probability of exceeding some limits. Therefore, water quality based limits were included in the permit.

Some pollutants were removed from the permit because monitoring data, as well as projections of future wastewater quality, indicates these constituents are not present or present at very low levels. Others were reviewed and found to need limit or monitoring frequency changes due to past monitoring and/ or projections of effluent quality off the treatment system as new waste streams are added. Where the limits were raised they are still much lower than WQC. New compounds not previously identified as present in the discharge were evaluated based on a projected 90% treatment efficiency. These compounds are expected to originate from the former production area once remediation of that area commences.

A chronic toxicity monitoring requirement was added to the permit to confirm the absence of reasonable potential for the discharge to cause chronic toxicity to aquatic life in the Quinnipiac River outside of the allocated Zone of Influence. The limit on acute toxicity, which incorporates a safety factor to also protect against chronic effects, remains in effect but the frequency of monitoring has been reduced based on past performance statistics for the discharge indicating routine non-detect of acute toxicity in the discharge

The following is a list of the changes made.

- *4,6 Dinitrocresol was removed from the permit. Monitoring data indicates it is not present in the wastewater.*
- *Cadmium was removed from the permit because monitoring data indicates it is not present and future discharges did not add enough to change this decision.*
- *1,2 Dichlorobenzene limit set in the old permit may be exceeded based on projected flows from new areas. A review of the water quality criteria (WQC) for this constituent indicates the limit could be as high as 17.4 mg/l, hence, a technology-based limit on this constituent is appropriate. Based on the projection of .203 mg/l in the waste stream best professional judgement was used to set the average and maximum limits at 0.5 and 1.0 respectively. Since the circumstances, on which the previous permit was based, have changed, this change in limits will not constitute backsliding as defined in section 22a-430-4(l) (A) (xxiii).*
- *1,4 Dichlorobenzene limits set in the old permit could be exceeded based on the addition of new flows therefore the same logic was applied as above. WQL would be 2.6 mg/l. The projection is .114 mg/l. Therefore the limit was set at .228 and .5 mg/l respectively. Since the circumstances, on which the previous permit was based, have changed, this change in limits will not constitute backsliding as defined in section 22a-430-4(l) (A) (xxiii).*
- *Methylene Chloride is projected to exceed the past permit limit based on new flows. The same logic was applied as the last two constituents based on the fact that the WQL is very high. The projection is .327 mg/l and the limits were set at .65mg/l and 1.3 mg/l average and maximum. Since the circumstances, on which the previous permit was based, have changed, this change in limits will not constitute backsliding as defined in section 22a-430-4(l) (A) (xxiii).*
- *Iron and Aluminum were added as monitoring only due to their use as treatment chemical.*
- *There is a concern that Chlorine has shown up as a byproduct of treatment of chlorinated compounds. Levels, if test results are accurate, have been around the WQ limit range, hence, there is a monitoring requirement in the first year of the permit with WQ based limits to begin one year from issuance. The permit has a compliance step to study the issue.*
- *BOD, COD, and TSS monitoring has been reduced to once per week from three times per week. Data shows these constituents are at low levels and the regulations only require weekly testing.*
- *Nickel and Silver limits were reduced to reflect WQ based limits. Monitoring data shows that both new limits are being achieved now.*
- *Manganese was added as a monitoring only parameter to gather data on this constituent.*
- *TKN was reduced from a maximum of 80 mg/l to 20 mg/l to reflect WQ limits.*
- *Aniline, Carbazole, Chloroethane, Formaldehyde, and M-toluidine parameters have been added as monitoring only parameters based on WQ based limits and the amount of each constituent shown or projected in the waste stream.*

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