Sewer Acct.#: **1011728100**

Company: **SPECGX LLC**

Address: **3600 N 2nd St**

City: **St. Louis**

State and Zip: **MO 63147**

Industry ID	File Code	File Description
35341	41	PERMIT OVERFLOW

Sewer Acct. #: 2112059600

Company: MALLINCKRODT INC

Address: 3600 N 2nd St

City: St. Louis

State and Zip: MO 63147

Ind_id	File Code	File Description
35360	60 41	ARCHIVED PERMIT PERMIT OVERFLOW

2002-2008 CORRESPONDENCE

(R) Side

ACCOUNT NUMBER: **21120596-00**

COMPANY NAME: **MALLINCKRODT INC**

CORRESPONDENCE

From: 05-26-05 Thru: 07-11-08

X	CORRESPONDENCE LOCATED IN ARCHIVE FILES

PERMIT OVERFLOW

(L) Side

ACCOUNT NUMBER: **2112059600**

COMPANY NAME: **MALLINCKRODT INC**

CORRESPONDENCE

FROM 03-18-04 THRU 12-07-04

X	CORRESPONDENCE LOCATED IN OVERFLOW ARCHIVE FILE CABINET

PERMIT OVERFLOW

ACCOUNT NUMBER: 21120596-00

COMPANY NAME: MALLINCKRODT INC
3600 North Second Street
St. Louis, MO 63147

CORRESPONDENCE

FROM 04-02-03 THRU 06-01-05

☑ CORRESPONDANCE LOCATED
IN ~~OVERFLOW FILE~~
archive cabinet
PERMIT OVERFLOW

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

July 11, 2008

Lisa Meyer, HS&E Engineer
MALLINCKRODT INC.
3600 North Second Street
St. Louis, MO 63147

Re: Discharge Permit No: 2112059600 - 2.1
For premise at: 3600 North 2nd Street, St. Louis, MO 63147

Dear Ms. Meyer:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on February 01, 2008, for the above premise, is hereby revised as per the attached revised permit, effective July 01, 2008 through May 31, 2010.

The following revisions were made to the permit:

- Addition of the new categorical Sample Point (SP) 938
- Addition of special condition II.B.6 regarding sampling at SP 938
- Addition of special conditions II.B.4 and 5 regarding sampling at SP 008, 011, and 912. These two special conditions still apply and were present in permits issued on or before June 1, 2006.

We have reissued the entire permit for your convenience. Please replace your prior permit with this letter and the revised permit. The terms of the revised permit supersede your prior permit.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals.

This revision does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8756, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer, Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit, Self-monitoring Report Forms

cc: Doug Mendoza
Jason Gill

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 2112059600 - 2.1

EFFECTIVE DATE: July 01, 2008
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC
3600 North Second Street
St. Louis, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 23
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 932, 933, 935, 936, 937, 938

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Sanitary + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 2,200

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 57,600

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Categorical Process Waste (Machine shop, painting, parts washing) + Laboratory Waste (439 Sub E NA (No Stds) & non-439 R&D) + Flow From Upstream Sample Point (From 009 (GPD unknown))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,000

WASTEWATER SOURCE AND CATEGORY: Non Contact Cooling Water + Laboratory Waste (R&D waste (including 439 from bldg 96))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 0

WASTEWATER SOURCE AND CATEGORY: Emergency Bypass (Pump station bypass to Salisbury trunk)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): 0

WASTEWATER SOURCE AND CATEGORY: Flow From Offsite (Offsite W of Broadway, Upstream SP (To 003))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 2,992,101

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Plant & Equipment Washdown + Regeneration/Reject Water + Kitchen Waste + Storm Water + Sanitary + Laboratory Waste + Non Categorical Process Waste + Categorical (SPs 905,912,915,918,920,927,930,932-33,935-38) + Non Contact Cooling Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 0

WASTEWATER SOURCE AND CATEGORY: Storm Water + Emergency Bypass (Overflow from Plant 5)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98

AVERAGE WASTEWATER FLOW (GPD): 29,100

WASTEWATER SOURCE AND CATEGORY: Sanitary + Categorical (439 Sub C PSES (CN-no, NH3 exempt) (CWF-no))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	29.4	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	84.1	Daily Max	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo

Parameter	Limit *	Limit Type **	Sampling Frequency
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Triethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 & downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 48,600

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Categorical Process Waste + Laboratory Waste (439 Sub E NA (No Stds) & non-439 R&D)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Sub G & H PSES (App A-no))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
(cis & trans) 1,3-Dichloropropene [g/Day]	137.24	Monthly Avg	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	555.98	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1,1-Trichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	22.4	Monthly Avg	Once/3 mo
1,1,2-Trichloroethane [g/Day]	88.93	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1-Dichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1-Dichloroethene [g/Day]	42.01	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2-Dichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	126.04	Monthly Avg	Once/3 mo
1,2-Dichloroethane [g/Day]	401.93	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2-Dichloropropane [g/Day]	555.98	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
1,4-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
2-Nitrophenol [g/Day]	161.75	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	45.51	Monthly Avg	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	193.96	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	54.62	Monthly Avg	Once/3 mo
4-Nitrophenol [g/Day]	113.44	Monthly Avg	Once/3 mo
4-Nitrophenol [g/Day]	403.33	Daily Max	Once/3 mo
Acenaphthene [g/Day]	13.3	Monthly Avg	Once/3 mo
Acenaphthene [g/Day]	32.91	Daily Max	Once/3 mo
Anthracene [g/Day]	13.3	Monthly Avg	Once/3 mo
Anthracene [g/Day]	32.91	Daily Max	Once/3 mo
Benzene [g/Day]	39.91	Monthly Avg	Once/3 mo
Benzene [g/Day]	93.83	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	180.66	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	66.52	Monthly Avg	Once/3 mo

Parameter	Limit *	Limit Type **	Sampling Frequency
Carbon Tetrachloride [g/Day]	266.09	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	99.43	Monthly Avg	Once/3 mo
Chlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
Chloroethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloroethane [g/Day]	77.02	Monthly Avg	Once/3 mo
Chloroform [g/Day]	227.57	Daily Max	Once/3 mo
Chloroform [g/Day]	77.72	Monthly Avg	Once/3 mo
Chloromethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloromethane [g/Day]	77.02	Monthly Avg	Once/3 mo
Di-n-butyl Phthalate [g/Day]	14	Monthly Avg	Once/3 mo
Di-n-butyl Phthalate [g/Day]	30.11	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	32.21	Monthly Avg	Once/3 mo
Diethyl Phthalate [g/Day]	79.13	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	13.3	Monthly Avg	Once/3 mo
Dimethyl Phthalate [g/Day]	32.91	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	266.09	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Fluoranthene [g/Day]	15.4	Monthly Avg	Once/3 mo
Fluoranthene [g/Day]	37.81	Daily Max	Once/3 mo
Fluorene [g/Day]	13.3	Monthly Avg	Once/3 mo
Fluorene [g/Day]	32.91	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
Hexachlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	266.09	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	99.43	Monthly Avg	Once/3 mo
Hexachloroethane [g/Day]	137.24	Monthly Avg	Once/3 mo
Hexachloroethane [g/Day]	555.98	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	119.04	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	77.02	Monthly Avg	Once/3 mo
Naphthalene [g/Day]	13.3	Monthly Avg	Once/3 mo
Naphthalene [g/Day]	32.91	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1566.4	Monthly Avg	Once/3 mo
Nitrobenzene [g/Day]	4482.84	Daily Max	Once/3 mo
Phenanthrene [g/Day]	32.91	Daily Max	Once/3 mo
Phenanthrene [g/Day]	13.3	Monthly Avg	Once/3 mo
Pyrene [g/Day]	14.0	Monthly Avg	Once/3 mo
Pyrene [g/Day]	33.61	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	114.84	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	36.41	Monthly Avg	Once/3 mo
Toluene [g/Day]	19.61	Monthly Avg	Once/3 mo
Toluene [g/Day]	51.82	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	17.51	Monthly Avg	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	46.21	Daily Max	Once/3 mo
Trichloroethene [g/Day]	18.21	Monthly Avg	Once/3 mo
Trichloroethene [g/Day]	48.32	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	120.44	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	67.92	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown (ASI process waste from bldgs 504/505)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [LB / DAY]	7,091	Daily Avg	Once/wk
N,N-Dimethyl Acetamide [LB / DAY]	5,459	Monthly Avg	Once/wk

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.10	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

Parameter	Limit *	Limit Type **	Sampling Frequency
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 22,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no,NH3 exempt) - with SP937)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Bldg. 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo

Parameter	Limit *	Limit Type **	Sampling Frequency
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 935

SAMPLING POINT LOCATION: 1/2" steel pipe on inside of concrete wall S of North stairs - Bldg 512

AVERAGE WASTEWATER FLOW (GPD): 26,000

WASTEWATER SOURCE AND CATEGORY: Categorical (Cat. 439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	29.4	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	84.1	Daily Max	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo

Parameter	Limit *	Limit Type **	Sampling Frequency
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 936

SAMPLING POINT LOCATION: Valve on 1/2" line 1' from hydrogenerator bldg 8' from S wall in SE corner of bldg 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year

Parameter	Limit *	Limit Type **	Sampling Frequency
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 937

SAMPLING POINT LOCATION: Valve on 2nd level on W side near pipe bridge N of bldg 501

AVERAGE WASTEWATER FLOW (GPD): 22,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt) - with SP937)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 938

SAMPLING POINT LOCATION: 6" floor drain in far SW corner of room in Building 5, Room 406

AVERAGE WASTEWATER FLOW (GPD): 71

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub D PSNS)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.
b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
c. Daily flows, with dates, for all measurements or estimates made within the quarter.
d. Any certification statements required pursuant to the Special Conditions in Section II.
e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by October 28, 2008.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to

continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 12559 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. Categorical Waste Discharge Prohibited

There shall be no discharge to the District of process wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes conveyed by sampling point 905. The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point 905.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. No Monitoring When Influenced by Storm Runoff

Sampling points 003, 008, 009, 010, 011, and 080 may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B.2. Reporting Upstream-Downstream Monitoring Results

No limitations are listed for "upstream" sampling point 009 and "downstream" sampling point 003. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. For reporting purposes those connections are combined and identified, in this permit, as sampling point 099. Permittee shall perform monitoring at both 009 and 003 within the same time period on the same day. Monitoring shall consist of sampling for all listed pollutants and measurements of flow sufficient to accurately determine the average daily flow at each point. Compliance, at 099, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where: DF = downstream flow rate; UF = upstream flow rate
DC = downstream concentration; UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates determined at the upstream and downstream points as well as the calculated pollutant concentrations at 099. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 SU and a temperature no greater than 60 degrees Celsius (centigrade).

B.3. Non-Standard Special Sampling and Analytical Procedures - Grab samples

At sampling points 080, 915, 918, 920, 927, 930, 932, 933, 935, 936, 937 and 938 the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from 40 CFR 439 all being volatile organic compounds.

B.4. Non-Standard Special Sampling and Analytical Procedures – SP 008 and 011

The permittee shall monitor sampling points 008 and 011 for flow and pH on a daily basis during discharges with durations greater than ninety (90) minutes. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than ninety (90) minutes except for Total Toxic Organics which shall be analyzed only once per year. For all pollutants, grab samples may be collected in lieu of the composite samples specified in General Condition I.A.3. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

B.5. Non-Standard Special Sampling and Analytical Procedures – SP 912

Discharges at sampling point 912 shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass, and the measured flow used to calculate the mass.

B.6. Non-Standard Special Sampling and Analytical Procedures – SP 938

Since the operation at Sample Point 938 is in a clean room environment, and personal protective equipment must be worn, the MSD samplers must be able to directly view, from outside the process area window, the Mallinckrodt samplers during the time of sample collection.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Sampling Not Required at Non-Toxic / Low-Flow Point

The permittee is not required to sample discharges at sampling points 001 and 002 provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly self-monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points 001 and 002 since the last report.

C.2. 439 Absence Certification & Once per Year Sampling

Based on the determination referenced above and on permittee's verification that all pollutants regulated under 40 CFR 439 Subpart B at sampling points 915, 930, 935, and 936 are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

C.3. 439 Surrogate Recommendation & Certification – SP 920 and 937

Pursuant to the provisions of 40 CFR 439(1)(I) and (4) the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling points 920 and 937 in lieu of certain other pollutants regulated under 40 CFR 439, Subpart C, PSES. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

C.4. Sampling Not Required at Connections without Sample Points

In addition to the sewer connections with sampling points identified herein, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a). Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b). All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

The permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. The permittee shall certify on each quarterly self-monitoring report that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

C.5. No Sampling at Connections Between Up & Down Sample Points

The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

C.6. Certification of No Cyanide under 439

The permittee has reported that Cyanide is not used or generated in any pharmaceutical manufacturing process subject to regulation under 40 CFR 439 at sampling points 080, 915, 920, 932, 935, 936 and 937. Therefore, pursuant to the standards in 40 CFR 439, the permittee is not subject to limitations or monitoring for Total Cyanide at these sampling points. Permittee shall include, with each quarterly self-monitoring report, a certification that Cyanide is not used or generated at sampling points 080, 915, 920, 932, 935, 936 and 937.

C.7. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

(1) For materials subject to licensing by the Nuclear Regulatory Commission:
5 curies Hydrogen-3
1 curie Carbon-14
1 curie for all other radioactive materials combined

(2) For all other materials:
1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.8. Reporting of Results Under Mass Discharge Limits

The limitations at sampling point 905 are in mass per day units as per 40 CFR 414.111. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

C.10. Non-Standard Special Certification and Reporting Requirements – SP 930, 933, and 936

For sampling points 930, 933, and 936 permittee shall ensure that required monitoring is performed only when process wastewater subject to 40 CFR 439 is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points 930, 933, and 936 are adhered to.

C.11. Non-Standard Special Certification and Reporting Requirements – SP 918

Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point 918 are adhered to. Additionally, permittee shall ensure that only process wastewater subject to 40 CFR 439 Subpart B is discharged via sampling point 918.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety-six (96) percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

D.2. Reporting Changes Which Might Impact Surcharge

Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). As of May 21, 2007, the permittee's current surcharge billing values are: 368 mg/l for BOD, 905 mg/l for COD, and 199 mg/l for TSS. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT REVISION

Company Name: **MALLINCKRODT INC.**

Location: **3600 North Second Street, 63147**

Former Permit No: **2112059600-2** Original Effective Date: **02-01-2008**

Revised Permit No: ~~1048568800~~-2.1 SR Revision Effective Date: **7-1-2008**

WHAT – Briefly explain what is to be revised and then list the pages & how affected:

Addition of SP-938; addition of special conditions (see below)

Pg. # 1 **Permit no, effective date, number of discharge points**

Pg. # 31 **New SP-938 (categorical)**

Pg. # 33 **First report due date**

Pg. # 37 **SC B.3 includes 938**

Pg. # 38 **B.4 for 008 and 011 (included in permits on or before June 1, 2006)**

Pg. # 38 **B.5 for 912 (included in permits on or before June 1, 2006)**

Pg. # 38 **B.6 for 938 added**

Pg. # _____ _____

WHY – Cite regulation, policy, etc. and identify any other documents which support the revision:

Approval letter from Jason Gill, dated June 27, 2008.

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	☒	☐	
Pollutant & Limitations Documentation Sheets:	☒	☐	☐
Production Based Standards Calculation Sheets: If Yes, for SPs: _____	☐	☐	☒
Most Strict Standards Calculation Sheets: If Yes, for SPs: _____	☐	☐	☒
Combined Wastestream Calculations Sheets: If Yes, for SPs: _____	☐	☐	☒

Other: N/A

Prepared by:	S.Rehmer	Date: 7-8-2008
Permit Revised by:	S.Rehmer	Date: 7-8-2008
Reviewed by:	DMM	Date: 7-10-08

Rev 06/2008

CHANGES TO

Special Certifications & General Reports for Special Conditions not tied to specific sample points

ADDITIONS:	Special Conditions:	# _____,	# _____,	# _____,	# _____,	# _____,	# _____,	# _____
	Related SMR Certs:	# _____,	# _____,	# _____,	# _____,	# _____,	# _____,	# _____
	SMR Cert Frequency:	[none],	[none],	[none],	[none],	[none],	[none],	[none]
	Related General Rpt:	_____,	_____,	_____,	_____,	_____,	_____,	_____
	Gen Rpt Frequency:	[none],	[none],	[none],	[none],	[none],	[none],	[none]

Are the ADDITIONAL SMR certs associated with first permit sample point (_____)? YES ☐ NO ☐

DELETIONS:	Special Conditions:	# _____,	# _____,	# _____,	# _____,	# _____,	# _____,	# _____
	Related SMR Certs:	# _____,	# _____,	# _____,	# _____,	# _____,	# _____,	# _____
	Related General Rpt:	_____,	_____,	_____,	_____,	_____,	_____,	_____

Were the DELETED SMR certs removed from the first permit sample point (_____)? YES ☐ NO ☐

Check here if there are no non-SP-specific Special Certifications or General Reports: ☒

PERMIT NO: 2112059600-2.1

SAMPLING POINT REFERENCE NUMBER: 938 **TYPE:** Ord ☐ Cat ☒ Comb ☐ **NEW SP** ☒ **or CHANGE to SP** ☐

Wastewater Components: Categorical (439 D PSNS)

Flow Rate: 71 Units: GPD Basis for Flow Rate: IUQ

FOR SPs WITH CHANGES, COMPLETE ONLY WHAT HAS CHANGED:

Pollutants	Basis for General exclusion or inclusion of other ones	Basis for limitation	Monitoring frequency	Basis for monitoring frequency	Grab auth. in lieu of Comp?	Any OK?
GENERAL:						
FLOW	standard	n / a	once 3 mo	standard		
BOD			[none]	standard	☐	☐
COD			[none]	standard	☐	☐
O&G			[none]	standard		
pH			[none]	standard		
Temp			[none]	standard		
TSS			[none]	standard	☐	☐
Ord. TTO			[none]	standard		
			[none]		☐	☐
			[none]		☐	☐
PRIORITY/ CATEGORICAL:						
Acetone	categorical	439, D, PSNS	once 3 mo	categorical	☒	☐
n-Amyl Acetate	categorical	439, D, PSNS	once 3 mo	categorical	☒	☐
Ethyl Acetate	categorical	439, D, PSNS	once 3 mo	categorical	☒	☐
Isopropyl Acetate	categorical	439, D, PSNS	once 3 mo	categorical	☒	☐
Methylene Chloride	categorical	439, D, PSNS	once 3 mo	categorical	☒	☐
			[none]		☐	☐
			[none]		☐	☐
			[none]		☐	☐
			[none]		☐	☐
			[none]		☐	☐
			[none]		☐	☐
			[none]		☐	☐

Special Conditions: # D.12 (B.3), # D.12 (B.6), # ____, # ____, # ____, # ____, # ____, # ____.

Related SMR Certs: # D ___, # N/A, # ____, # ____, # ____, # ____, # ____, # ____.

SMR Cert Frequency: [none], [none], [none], [none], [none], [none], [none], [none],

Related General Rpt: ____, ____, ____, ____, ____, ____, ____, ____.

Gen Rpt Frequency: [none], [none], [none], [none], [none], [none], [none], [none],

Is SMR General Cert. A required (for all Ord/Comb SPs w/Ord. TTO that have no TOs on site; reporting freq. once/3mo)? YES ☐ NO ☒

Rev 06/2008

MSD 019053

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT MODIFICATION

Permit to be Modified:

Company Name: **MALLINCKRODT INC**

Location: **3600 North Second Street, 63147**

Permit No: **2112059600 - 2**

Original Effective Date: **06/01/2006**

Modification Effective Date: **02/01/2008**

What is to be Modified:

Briefly explain what is to be modified and then list the pages & how affected :

Removed Cyanide and Ammonia sampling requirement from SP's 080, 915, 932, and 935.

Pg. # **1** **Permit number & Effective date**

Pg. # **10** **Remove CN and NH3 from SP-080**

Pg. # **17** **Remove CN and NH3 from SP-915**

Pg. # **23** **Remove CN and NH3 from SP-932**

Pg. # **26** **Remove CN and NH3 from SP-935**

Pg. # **39** **Updated surcharge values**

Pg. #

Pg. #

Pg. #

Reasons for Modification:

Cite regulation, policy, etc. and identify any other documents which support the modification:

Previous permits, Discharge descriptions, Special Condition C.1 "Certification of No Cyanide under 439"

Prepared by: S. Rehmer SR	Date: 01-29-2008
Reviewed by: DMM	Date: 1/31-08

Permit Modified by: S. Rehmer SR	Date: 01-29-2008

Rev 07/2007

Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

January 31, 2008

Lisa Meyer
HS&E Engineer
MALLINCKRODT INC
3600 N. 2nd Street
St. Louis, MO 63147

Re: Discharge Permit No: 2112059600 - 2
For premise at: 3600 North Second Street
St. Louis, MO 63147

Dear Lisa Meyer:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on January 01, 2008, for the above premise, is hereby modified as per the attached modified permit, with an effective date of February 01, 2008.

The following modifications were made to the permit:

- Removed Cyanide and Ammonia sampling requirement from Sample Points 080, 915, 932, and 935. These are exempted or certified to be not present.
- Updated surcharge billing values for Biological Oxygen Demand, Chemical Oxygen Demand, and Total Suspended Solids.

We have reissued the entire permit for your convenience. Please replace your prior permit with this letter and the modified permit. The terms of the modified permit supersede your prior permit.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8756, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit
cc: Doug Mendoza
Jason Gill

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 2112059600 - 2

EFFECTIVE DATE: February 01, 2008
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC
3600 North Second Street
St. Louis, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 22
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 932, 933, 935, 936, 937

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Sanitary + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 2,200

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 57,600

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Categorical Process Waste(Machine shop, painting, parts washing,) + Laboratory Waste(439 Sub E NA (No Stds) & non-439 R&D) + Flow From Upstream Sample Point(From 009 (GPD unknown))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,000

WASTEWATER SOURCE AND CATEGORY: Non Contact Cooling Water + Laboratory Waste(R&D waste (including 439 from bldg 96))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste(Emergency pump station bypass to Salisbury trunk)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): 0

WASTEWATER SOURCE AND CATEGORY: Flow From Offsite(Offsite W of Broadway, Upstream SP (To 003))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 2,992,101

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Plant & Equipment Washdown + Regeneration/Reject Water + Kitchen Waste + Storm Water + Sanitary + Laboratory Waste + Non Categorical Process Waste + Categorical (SPs 905 912 915 918 920 927 930 932-33 935-37) + Non Contact Cooling Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 14,000

WASTEWATER SOURCE AND CATEGORY: Process Waste(Emer. overflow from Plant 5) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98

AVERAGE WASTEWATER FLOW (GPD): 29,100

WASTEWATER SOURCE AND CATEGORY: Sanitary + Categorical (439 Sub C PSES (CN-no, NH3 exempt) (CWF-no))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo

SAMPLING POINT REFERENCE NUMBER: 080 (cont.)

Parameter	Limit *	Limit Type **	Sampling Frequency
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Triethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 & downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 48,600

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Categorical Process Waste + Laboratory Waste(439 Sub E NA (No Stds) & non-439 R&D)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Sub G & H PSES (App A-no))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
(cis & trans) 1,3-Dichloropropene [g/Day]	137.24	Monthly Avg	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	555.98	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1,1-Trichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	22.4	Monthly Avg	Once/3 mo
1,1,2-Trichloroethane [g/Day]	88.93	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1-Dichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1-Dichloroethene [g/Day]	42.01	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2-Dichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	126.04	Monthly Avg	Once/3 mo
1,2-Dichloroethane [g/Day]	401.93	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2-Dichloropropane [g/Day]	555.98	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
1,4-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
2-Nitrophenol [g/Day]	161.75	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	45.51	Monthly Avg	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	193.96	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	54.62	Monthly Avg	Once/3 mo
4-Nitrophenol [g/Day]	113.44	Monthly Avg	Once/3 mo
4-Nitrophenol [g/Day]	403.33	Daily Max	Once/3 mo
Acenaphthene [g/Day]	13.3	Monthly Avg	Once/3 mo
Acenaphthene [g/Day]	32.91	Daily Max	Once/3 mo
Anthracene [g/Day]	13.3	Monthly Avg	Once/3 mo
Anthracene [g/Day]	32.91	Daily Max	Once/3 mo
Benzene [g/Day]	39.91	Monthly Avg	Once/3 mo
Benzene [g/Day]	93.83	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	180.66	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	66.52	Monthly Avg	Once/3 mo

SAMPLING POINT REFERENCE NUMBER: 905 (cont.)

Carbon Tetrachloride [g/Day]	266.09	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	99.43	Monthly Avg	Once/3 mo
Chlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
Chloroethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloroethane [g/Day]	77.02	Monthly Avg	Once/3 mo
Chloroform [g/Day]	227.57	Daily Max	Once/3 mo
Chloroform [g/Day]	77.72	Monthly Avg	Once/3 mo
Chloromethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloromethane [g/Day]	77.02	Monthly Avg	Once/3 mo
Di-n-butyl Phthalate [g/Day]	14	Monthly Avg	Once/3 mo
Di-n-butyl Phthalate [g/Day]	30.11	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	32.21	Monthly Avg	Once/3 mo
Diethyl Phthalate [g/Day]	79.13	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	13.3	Monthly Avg	Once/3 mo
Dimethyl Phthalate [g/Day]	32.91	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	266.09	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Fluoranthene [g/Day]	15.4	Monthly Avg	Once/3 mo
Fluoranthene [g/Day]	37.81	Daily Max	Once/3 mo
Fluorene [g/Day]	13.3	Monthly Avg	Once/3 mo
Fluorene [g/Day]	32.91	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
Hexachlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	266.09	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	99.43	Monthly Avg	Once/3 mo
Hexachloroethane [g/Day]	137.24	Monthly Avg	Once/3 mo
Hexachloroethane [g/Day]	555.98	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	119.04	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	77.02	Monthly Avg	Once/3 mo
Naphthalene [g/Day]	13.3	Monthly Avg	Once/3 mo
Naphthalene [g/Day]	32.91	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1566.4	Monthly Avg	Once/3 mo
Nitrobenzene [g/Day]	4482.84	Daily Max	Once/3 mo
Phenanthrene [g/Day]	32.91	Daily Max	Once/3 mo
Phenanthrene [g/Day]	13.3	Monthly Avg	Once/3 mo
Pyrene [g/Day]	14.0	Monthly Avg	Once/3 mo
Pyrene [g/Day]	33.61	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	114.84	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	36.41	Monthly Avg	Once/3 mo
Toluene [g/Day]	19.61	Monthly Avg	Once/3 mo
Toluene [g/Day]	51.82	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	17.51	Monthly Avg	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	46.21	Daily Max	Once/3 mo
Trichloroethene [g/Day]	18.21	Monthly Avg	Once/3 mo
Trichloroethene [g/Day]	48.32	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	120.44	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	67.92	Monthly Avg	Once/3 mo

SAMPLING POINT REFERENCE NUMBER: 905 (cont.)

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

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**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown (ASI process waste from bldgs 504/505)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [LB/DAY]	7091	Daily Avg	Once/wk
N,N-Dimethyl Acetamide (LB/DAY]	5459	Monthly Avg	Once/wk

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year

SAMPLING PT. REF. NUMBER: 915 (cont.)

Parameter	Limit *	Limit Type **	Sampling Frequency
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

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** See Section I.A.2 of the permit conditions.

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**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

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**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 22,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt) - with SP937)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Bldg. 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Triethylamine [mg/L]	255	Daily Max	Once/3 mo

SAMPLING POINT REFERENCE NUMBER: 932 (cont.)

Parameter	Limit *	Limit Type **	Sampling Frequency
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 935

SAMPLING POINT LOCATION: 1/2" steel pipe on inside of concrete wall S of North stairs - Bldg 512

AVERAGE WASTEWATER FLOW (GPD): 26,000

WASTEWATER SOURCE AND CATEGORY: Categorical (Cat. 439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year

SAMPLING POINT REFERENCE NUMBER: 935 (cont.)

Parameter	Limit *	Limit Type **	Sampling Frequency
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 936

SAMPLING POINT LOCATION: Valve on 1/2" line 1' from hydrogenerator bldg 8' from S wall in SE corner of bldg 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year

SAMPLING POINT REFERENCE NUMBER: 936 (cont.)

Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 937

SAMPLING POINT LOCATION: Valve on 2nd level on W side near pipe bridge N of bldg 501

AVERAGE WASTEWATER FLOW (GPD): 22,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt) - with SP937)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.
b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
c. Daily flows, with dates, for all measurements or estimates made within the quarter.
d. Any certification statements required pursuant to the Special Conditions in Section II.
e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by April 28, 2008.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to

continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 12559 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. Categorical Waste Discharge Prohibited

There shall be no discharge to the District of process wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes conveyed by sampling point 905. The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point 905.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. No Monitoring When Influenced by Storm Runoff

Sampling points 003, 008, 009, 010, 011, and 080 may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B.2. Reporting Upstream-Downstream Monitoring Results

No limitations are listed for "upstream" sampling point 009 and "downstream" sampling point 003. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. For reporting purposes those connections are combined and identified, in this permit, as sampling point 099. Permittee shall perform monitoring at both 009 and 003 within the same time period on the same day. Monitoring shall consist of sampling for all listed pollutants and measurements of flow sufficient to accurately determine the average daily flow at each point. Compliance, at 099, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where: DF = downstream flow rate; UF = upstream flow rate
DC = downstream concentration; UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates determined at the upstream and downstream points as well as the calculated pollutant concentrations at 099. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 SU and a temperature no greater than 60 degrees Celsius (centigrade).

B.3. Non-Standard Special Sampling (Grab) and Analytical Procedures

At sampling points 080, 915, 918, 920, 927, 930, 932, 933, 935, 936 and 937 the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from 40 CFR 439 all being volatile organic compounds.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Sampling Not Required at Non-Toxic / Low-Flow Point

The permittee is not required to sample discharges at sampling points 001 and 002 provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly self-monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points 001 and 002 since the last report.

C.2. 439 Absence Certification & Once per Year Sampling

Based on the determination referenced above and on permittee's verification that all pollutants regulated under 40 CFR 439 Subpart B at sampling points 915, 930, 935, and 936 are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

C.3. 439 Surrogate Recommendation & Certification

Pursuant to the provisions of 40 CFR 439(1)(I) and (4) the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling points 920 and 937 in lieu of certain other pollutants regulated under 40 CFR 439, Subpart C, PSES. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

C.4. Sampling Not Required at Connections without Sample Points

In addition to the sewer connections with sampling points identified herein, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a). Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b). All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

The permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly self-monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

C.5. No Sampling at Connections Between Upstream & Downstream Sample Points

The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

C.6. Certification of No Cyanide under 439

The permittee has reported that Cyanide is not used or generated in any pharmaceutical manufacturing process subject to regulation under 40 CFR 439 at sampling points 080, 915, 920, 932, 935, 936 and 937. Therefore, pursuant to the standards in 40 CFR 439, the permittee is not subject to limitations or monitoring for Total Cyanide at these sampling points. Permittee shall include, with each quarterly self-monitoring report, a certification that Cyanide is not used or generated at sampling points 080, 915, 920, 932, 935, 936 and 937.

C.7. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

(1) For materials subject to licensing by the Nuclear Regulatory Commission:
5 curies Hydrogen-3
1 curie Carbon-14
1 curie for all other radioactive materials combined
(2) For all other materials:
1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.8. Reporting of Results Under Mass Discharge Limits for SP-905

The limitations at sampling point 905 are in mass per day units as per 40 CFR 414.111. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

C.9. Non-Standard Special Certification and Reporting Requirements for SP-930, 933, and 936

For sampling points 930, 933, and 936 permittee shall ensure that required monitoring is performed only when process wastewater subject to 40 CFR 439 is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points 930, 933, and 936 are adhered to.

C.10. Non-Standard Special Certification and Reporting Requirements for SP-918

Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point 918 are adhered to. Additionally, permittee shall ensure that only process wastewater subject to 40 CFR 439 Subpart B is discharged via sampling point 918.

C.11. Non-Standard Special Certification and Reporting Requirements for SP-932

For sampling point 932, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to 40 CFR 439 are adhered to.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety-six (96) percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

D.2. Reporting Changes Which Might Impact Surcharge

Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). As of May 21, 2007, the permittee's surcharge billing values are: 368 mg/l for BOD, 905 mg/l for COD, and 199 mg/l for TSS. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT MODIFICATION

Permit to be Modified:

Company Name: **MALLINCKRODT INC**

Location: **3600 North Second Street, 63147**

Permit No: **2112059600** Original Effective Date: **6/1/2006**

Modification Effective Date: **1/1/2008**

What is to be Modified:

Briefly explain what is to be modified and then list the pages & how affected::

Sewer Use Ordinance 12559 in effect; Radioactive & TTO limits up

Pg. # **1** **Effective date**

Pg. # **4-9, 11-12** **For SP's, Limit change TTO**

Pg. # **32** **First report due date**

Pg. # **38** **SC E.18 Radioactive Discharge Reporting Requirements**

Pg. # **38** **Remove SC C.8 (essentially same as C.13)**

Pg. # **39** **Remove SC C.10 (effective 1-1-2007)**

Pg. # **39** **Modify SC C.13 to include 915, 935, & 936**

Pg. # **22** **Based on SC C.13, SP-930 freq now once / year**

Reasons for Modification:

Cite regulation, policy, etc. and identify any other documents which support the modification:

MSD Ord. 12559 adopted 12-13-2007; effective 01-01-2008; supercedes Ord. 8472.

Prepared by: S. Rehmer	Date: 12-27-2007
Reviewed by: GMM	Date: 1-3-08

Permit Modified by: S. Rehmer	Date: 12-27-2007

Rev 07/2007

Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

December 28, 2007

Lisa Meyer, HS&E Engineer
MALLINCKRODT INC
3600 N. 2nd Street
St. Louis, MO 63147

Re: Discharge Permit No: 2112059600 - 1
For premise at: 3600 N 2nd Street, 63147

Dear Ms. Meyer:

On December 13, 2007, the Metropolitan St. Louis Sewer District adopted new Sewer Use Ordinance No. 12559. This ordinance becomes effective January 1, 2008, and replaces Ordinance No. 8472. As a result, your Industrial Wastewater Discharge Permit is modified as per the attached modified permit for the above premise. We have reissued the entire permit for your convenience.

Among the changes in the new ordinance, it raises the limits for TTO, and it updates the restrictions on radioactive materials to the sewer system. The new restrictions more closely parallel State and Federal regulations.

MSD Ordinance No. 12559 limits the discharge of radioactive materials to sewers to what is allowed under your Nuclear Regulatory Commission and/or Missouri Department of Health licenses. The old ordinance restricted the aggregate discharge from all users to one curie/year for each sewage treatment plant. Please note that all radioactive material discharged to the sewer system must continue to be readily soluble or readily dispersible biological material, in water.

If, at any time, the current level of radioactive materials discharge will increase by 20 percent or more, you must notify MSD, in writing at least ten business days prior to the date of the planned increase. This requirement is contained in Article VIII, Section Six of Ordinance No. 12559.

As a condition of the District's approval, you must continue to submit a completed copy of the Radioactive Materials Discharge Report to the District on a quarterly basis. This approval does not relieve you of any requirements set forth under applicable state or federal regulations. In addition, you must continue to meet all provisions of MSD District Ordinance 12559.

Thank you for your assistance in helping us to comply with state and federal regulations. If you have any questions, please call me at 314.436.8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer, Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit
cc: Doug Mendoza
Jason Gill

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 2112059600 - 1

EFFECTIVE DATE: January 01, 2008
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC
3600 N. 2nd Street
St. Louis, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 22
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 932, 933, 935, 936, 937

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Sanitary + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 2,200

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 57,600

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Categorical Process Waste (Machine shop, painting, parts washing) + Laboratory Waste (439 Sub E NA (No Stds) & non-439 R&D) + Flow From Upstream Sample Point (From 009 (GPD unknown))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,000

WASTEWATER SOURCE AND CATEGORY: Non Contact Cooling Water + Laboratory Waste (R&D waste (including 439 from bldg 96))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency pump station bypass to Salisbury trunk)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): 0

WASTEWATER SOURCE AND CATEGORY: Flow From Offsite (Offsite W of Broadway, Upstream SP (To 003))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 2,992,101

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Plant & Equipment Washdown + Regeneration / Reject Water + Kitchen Waste + Storm Water + Sanitary + Laboratory Waste + Non Categorical Process Waste + Categorical (SPs 905 912 915 918 920 927 930 932 933 935 936 937) + Non Contact Cooling Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 14,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emerg. overflow from Plant 5) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98

AVERAGE WASTEWATER FLOW (GPD): 29,100

WASTEWATER SOURCE AND CATEGORY: Sanitary + Categorical (439 Sub C PSES (CN-no, NH3 exempt)(CWF-no))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	29.4	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	84.1	Daily Max	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.1	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo

Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Triethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 & downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 48,600

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Categorical Process Waste + Laboratory Waste (439 Sub E NA (No Stds) & non-439 R&D)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Sub G & H PSES (App A-no))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
(cis & trans) 1,3-Dichloropropene [g/Day]	137.24	Monthly Avg	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	555.98	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1,1-Trichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	22.4	Monthly Avg	Once/3 mo
1,1,2-Trichloroethane [g/Day]	88.93	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1-Dichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	15.4	Monthly Avg	Once/3 mo
1,1-Dichloroethene [g/Day]	42.01	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2-Dichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	126.04	Monthly Avg	Once/3 mo
1,2-Dichloroethane [g/Day]	401.93	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	137.24	Monthly Avg	Once/3 mo
1,2-Dichloropropane [g/Day]	555.98	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
1,4-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
2-Nitrophenol [g/Day]	161.75	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	45.51	Monthly Avg	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	193.96	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	54.62	Monthly Avg	Once/3 mo
4-Nitrophenol [g/Day]	113.44	Monthly Avg	Once/3 mo
4-Nitrophenol [g/Day]	403.33	Daily Max	Once/3 mo
Acenaphthene [g/Day]	13.3	Monthly Avg	Once/3 mo
Acenaphthene [g/Day]	32.91	Daily Max	Once/3 mo
Anthracene [g/Day]	13.3	Monthly Avg	Once/3 mo
Anthracene [g/Day]	32.91	Daily Max	Once/3 mo
Benzene [g/Day]	39.91	Monthly Avg	Once/3 mo
Benzene [g/Day]	93.83	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	180.66	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	66.52	Monthly Avg	Once/3 mo

Carbon Tetrachloride [g/Day]	266.09	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	99.43	Monthly Avg	Once/3 mo
Chlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
Chloroethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloroethane [g/Day]	77.02	Monthly Avg	Once/3 mo
Chloroform [g/Day]	227.57	Daily Max	Once/3 mo
Chloroform [g/Day]	77.72	Monthly Avg	Once/3 mo
Chloromethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloromethane [g/Day]	77.02	Monthly Avg	Once/3 mo
Di-n-butyl Phthalate [g/Day]	14	Monthly Avg	Once/3 mo
Di-n-butyl Phthalate [g/Day]	30.11	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	32.21	Monthly Avg	Once/3 mo
Diethyl Phthalate [g/Day]	79.13	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	13.3	Monthly Avg	Once/3 mo
Dimethyl Phthalate [g/Day]	32.91	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	266.09	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	99.43	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Fluoranthene [g/Day]	15.4	Monthly Avg	Once/3 mo
Fluoranthene [g/Day]	37.81	Daily Max	Once/3 mo
Fluorene [g/Day]	13.3	Monthly Avg	Once/3 mo
Fluorene [g/Day]	32.91	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	137.24	Monthly Avg	Once/3 mo
Hexachlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	266.09	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	99.43	Monthly Avg	Once/3 mo
Hexachloroethane [g/Day]	137.24	Monthly Avg	Once/3 mo
Hexachloroethane [g/Day]	555.98	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	119.04	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	77.02	Monthly Avg	Once/3 mo
Naphthalene [g/Day]	13.3	Monthly Avg	Once/3 mo
Naphthalene [g/Day]	32.91	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1566.4	Monthly Avg	Once/3 mo
Nitrobenzene [g/Day]	4482.84	Daily Max	Once/3 mo
Phenanthrene [g/Day]	32.91	Daily Max	Once/3 mo
Phenanthrene [g/Day]	13.3	Monthly Avg	Once/3 mo
Pyrene [g/Day]	14.0	Monthly Avg	Once/3 mo
Pyrene [g/Day]	33.61	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	114.84	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	36.41	Monthly Avg	Once/3 mo
Toluene [g/Day]	19.61	Monthly Avg	Once/3 mo
Toluene [g/Day]	51.82	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	17.51	Monthly Avg	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	46.21	Daily Max	Once/3 mo
Trichloroethene [g/Day]	18.21	Monthly Avg	Once/3 mo
Trichloroethene [g/Day]	48.32	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	120.44	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	67.92	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section

II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown (ASI process waste from Bldgs 504/505)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [LB/DAY]	7091	Daily Avg	Once/wk
N,N-Dimethyl Acetamide (LB/DAY]	5459	Monthly Avg	Once/wk

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.10	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

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** See Section I.A.2 of the permit conditions.

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**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 22,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no,NH3 exempt) - with SP937)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Bldg. 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/year
Acetone [mg/L]	8.2	Monthly Avg	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/year
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/year
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/year
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/year
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/year
Methylene Chloride [mg/L]	3.0	Daily Max	Once/year
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/year
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/year

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

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**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.10	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo

Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/3 mo
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub B PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 935

SAMPLING POINT LOCATION: 1/2" steel pipe on inside of concrete wall S of North stairs - Bldg 512

AVERAGE WASTEWATER FLOW (GPD): 26,000

WASTEWATER SOURCE AND CATEGORY: Categorical (Cat. 439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	29.4	Monthly Avg	Once/3 mo
Ammonia (as N) [mg/L]	84.1	Daily Max	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.10	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	33.5	Daily Max	Once/3 mo
Cyanide (Total) [mg/L]	9.4	Monthly Avg	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo

Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year
Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 936

SAMPLING POINT LOCATION: Valve on 1/2" line 1' from hydrogenerator bldg 8' from S wall in SE corner of bldg 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no, NH3 exempt))

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	Once/3 mo
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	Once/3 mo
Benzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Benzene [mg/L]	3.0	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	0.7	Monthly Avg	Once/3 mo
Chlorobenzene [mg/L]	3.0	Daily Max	Once/3 mo
Chloroform [mg/L]	0.03	Monthly Avg	Once/3 mo
Chloroform [mg/L]	0.10	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	Once/year
Diethylamine [mg/L]	255	Daily Max	Once/year
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	Once/3 mo
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	0.7	Monthly Avg	Once/3 mo
Methylene Chloride [mg/L]	3.0	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	Once/year
Triethylamine [mg/L]	255	Daily Max	Once/year

Xylene [mg/L]	0.7	Monthly Avg	Once/3 mo
Xylene [mg/L]	3.0	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Heptane [mg/L]	3.0	Daily Max	Once/3 mo
n-Hexane [mg/L]	0.7	Monthly Avg	Once/3 mo
n-Hexane [mg/L]	3.0	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 937

SAMPLING POINT LOCATION: Valve on 2nd level on W side near pipe bridge N of bldg 501

AVERAGE WASTEWATER FLOW (GPD): 22,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Sub C PSES (CN-no,NH3 exempt) - with SP937)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	Once/3 mo
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Toluene [mg/L]	0.2	Monthly Avg	Once/3 mo
Toluene [mg/L]	0.3	Daily Max	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.
b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
c. Daily flows, with dates, for all measurements or estimates made within the quarter.
d. Any certification statements required pursuant to the Special Conditions in Section II.
e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by April 28, 2008.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to

continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 12559 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. Categorical Waste Discharge Prohibited

There shall be no discharge to the District of process wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes conveyed by sampling point 905. The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point 905.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. No Monitoring When Influenced by Storm Runoff

Sampling points 003, 008, 009, 010, 011, and 080, may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B.2. Reporting Upstream-Downstream Monitoring Results

No limitations are listed for "upstream" sampling point 009 and "downstream" sampling point 003. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. For reporting purposes those connections are combined and identified, in this permit, as sampling point 099. Permittee shall perform monitoring at both 009 and 003 within the same time period on the same day. Monitoring shall consist of sampling for all listed pollutants and measurements of flow sufficient to accurately determine the average daily flow at each point. Compliance, at 099, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where: DF = downstream flow rate; UF = upstream flow rate
DC = downstream concentration; UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates determined at the upstream and downstream points as well as the calculated pollutant concentrations at 099. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 SU and a temperature no greater than 60 degrees Celsius (centigrade).

B.3. Non-Standard Special Sampling and Analytical Procedures

At sampling points 080, 915, 918, 920, 927, 930, 932, 933, 935, 936 and 937 the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from 40 CFR 439 all being volatile organic compounds.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Certification of No Cyanide under 439

The permittee has reported that Cyanide is not used or generated in any pharmaceutical manufacturing process subject to regulation under 40 CFR 439 at sampling points 080, 915, 920, 932, 935, 936 and 937. Therefore, pursuant to the standards in 40 CFR 439, the permittee is not subject to limitations or monitoring for Total Cyanide at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that Cyanide is not used or generated at sampling points 080, 915, 920, 932, 935, 936 and 937.

C.2. 439 Surrogate Recommendation & Certification

Pursuant to the provisions of 40 CFR 439(1)(I) and (4) the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling points 920 and 937 in lieu of certain other pollutants regulated under 40 CFR 439, Subpart C, PSES. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

C.3. Sampling Not Required at Non-Toxic / Low-Flow Point

The permittee is not required to sample discharges at sampling points 001 and 002 provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly self-monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points 001 and 002 since the last report.

C.4. Sampling Not Required at Connections without Sample Points

In addition to the sewer connections with sampling points identified herein, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a). Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b). All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

The permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly self-monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

C.5. No Sampling at Connections Between Up & Down Sample Points

The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate

sampling point at each connection.

C.6. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

(1) For materials subject to licensing by the Nuclear Regulatory Commission:
5 curies Hydrogen-3
1 curie Carbon-14
1 curie for all other radioactive materials combined
(2) For all other materials:
1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.7. Reporting of results Under Mass Discharge Limits

The limitations at sampling point 905 are in mass per day units as per 40 CFR 414.111. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

C.8. Non-Standard Special Certification and Reporting Requirements – 439 at SP 930, 933, 936

For sampling points 930, 933, and 936 permittee shall ensure that required monitoring is performed only when process wastewater subject to 40 CFR 439 is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points 930, 933, and 936 are adhered to.

C.9. Non-Standard Special Certification and Reporting Requirements – 439 at SP 918

Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point 918 are adhered to. Additionally, permittee shall ensure that only process wastewater subject to 40 CFR 439 Subpart B is discharged via sampling point 918.

C.10. Non-Standard Special Certification and Reporting Requirements – 439 at SP 932

For sampling point 932, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to 40 CFR 439 are adhered to.

C.11. 439 Absence Certification & Once per Year Sampling

Based on the determination referenced above and on permittee's verification that all pollutants regulated under 40 CFR 439 Subpart B at sampling points 915, 930, 935, and 936 are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety-six (96) percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

D.2. Reporting Changes Which Might Impact Surcharge

Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: 555 mg/l for BOD, 1,236 mg/l for COD, and 131 mg/l for TSS. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

March 15, 2007

Lisa Meyer
EH&S Engineer
MALLINCKRODT INC.
3600 North 2nd Street
St. Louis, MO 63147

Re: Discharge Permit No: 21120596-00
For premise at: 3600 North 2nd Street

Dear Ms. Meyer:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on June 1, 2006, for the premise identified above, is hereby modified as per the attached pages 1 and 37. This modification is authorizes the use of grab samples for samples collected at sampling points 008 and 011. This letter and the revised pages 1 and 37 should be affixed to your permit as your official record and become a part thereof.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Thank you for helping us comply with federal and state regulations. If you have any questions, please contact me at 314-436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

John R. Lodderhose, P.E.
Ass't Director Engineering-Environmental Compliance

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2006
MODIFICATION DATE: March 19, 2007
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 21
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 932, 933, 935, 936

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

John R. Lodderhose, P.E.
Ass't Director Engineering-Env. Compliance

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES:

1. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES:

1. The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. For all pollutants, grab samples may be collected in lieu of the composite samples specified in General Condition I.A.3. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

2. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

3. Sample points **003, 008, 009, 010, 011**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

4. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Metropolitan St. Louis Sewer District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

MSD

May 30, 2006

Jeff DeWald
HSE Engineer
MALLINCKRODT INC.
3600 North 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 North 2nd Street

Dear Mr. DeWald:

Enclosed is the revised Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit for the premise identified above. This permit is issued pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001. This permit has been prepared based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the previous permit. The permit was revised due to significant changes incurred through the elimination and addition of existing/new sampling points. This revision deletes sampling points 919 and 934 and adds sampling point 935. Sampling point 933 has been changed to be subject to 40 CFR 439 Subpart B, PSES. Three new special conditions have been added and other special conditions revised to reflect the elimination/addition of sampling points. The permit special conditions have been reorganized for better clarity. Finally, the permit has incorporated the minor changes identified in your May 26, 2006 facsimile to the District have been.

The previous permit, effective June 1, 2005, is voided as of the effective date of the enclosed permit.

Monitoring reports required by the conditions of this permit must be submitted quarterly for the life of the permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. Copies of the necessary report forms are enclosed.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 5 working days of receipt. Absence of a response within this time frame will be deemed acceptance, by you, of the provisions of this permit.

You may contact us at 436-8756 at any time if you have any question about your permit.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosures

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2006
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 21
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 931, 932, 933, 935

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.C.2**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 2,200

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.C.2**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 57,601

WASTEWATER SOURCE AND CATEGORY: Flow from upstream sample point + Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.B.4** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,000

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + NCCW

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Flow from offsite

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.B.4** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,634,001

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918, 920, 927, 930-933, 935)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 14,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98

AVERAGE WASTEWATER FLOW (GPD): 29,100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt) + Sanitary, CWF-No

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **080**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See **Section II** of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.9** of the permit conditions

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 and downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 48,600

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Temperature [Deg C]	60	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.4** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Subparts G & H, PSES), (Appendix A-No)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acenaphthene [g/Day]	32.91	Daily Max	Once/3 mo
Acenaphthene [g/Day]	13.3	Monthly Avg	
Anthracene [g/Day]	32.91	Daily Max	Once/3 mo
Anthracene [g/Day]	13.3	Monthly Avg	
Benzene [g/Day]	93.83	Daily Max	Once/3 mo
Benzene [g/Day]	39.91	Monthly Avg	
Bis (2-EthylHexyl) Phthalate [g/Day]	180.66	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	66.52	Monthly Avg	
Carbon Tetrachloride [g/Day]	266.09	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	99.43	Monthly Avg	
Chlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	99.43	Monthly Avg	
Chloroethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloroethane [g/Day]	77.02	Monthly Avg	
Chloroform [g/Day]	227.57	Daily Max	Once/3 mo
Chloroform [g/Day]	77.72	Monthly Avg	
Chloromethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloromethane [g/Day]	77.02	Monthly Avg	
Di-n-butyl Phthalate [g/Day]	30.11	Daily Max	Once/3 mo
Di-n-butyl Phthalate [g/Day]	14.0	Monthly Avg	
1,2-Dichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	137.24	Monthly Avg	
1,3-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,4-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,1-Dichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	15.4	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichloroethane [g/Day]	401.93	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	126.04	Monthly Avg	
1,1-Dichloroethene [g/Day]	42.01	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	15.4	Monthly Avg	
Trans-1,2-Dichloroethene [g/Day]	46.21	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	17.51	Monthly Avg	
1,2-Dichloropropane [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	137.24	Monthly Avg	
(cis & trans) 1,3-Dichloropropene [g/Day]	555.98	Daily Max	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	137.24	Monthly Avg	
Diethyl Phthalate [g/Day]	79.13	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	32.21	Monthly Avg	
Dimethyl Phthalate [g/Day]	32.91	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	13.3	Monthly Avg	
4,6-Dinitro-2-Methylphenol [g/Day]	193.96	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	54.62	Monthly Avg	
Ethylbenzene [g/Day]	266.09	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	99.43	Monthly Avg	
Fluoranthene [g/Day]	37.81	Daily Max	Once/3 mo
Fluoranthene [g/Day]	15.4	Monthly Avg	
Fluorene [g/Day]	32.91	Daily Max	Once/3 mo
Fluorene [g/Day]	13.3	Monthly Avg	
Hexachlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	137.24	Monthly Avg	
Hexachlorobutadiene [g/Day]	266.09	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	99.43	Monthly Avg	
Hexachloroethane [g/Day]	555.98	Daily Max	Once/3 mo
Hexachloroethane [g/Day]	137.24	Monthly Avg	
Methylene Chloride [g/Day]	119.04	Dailly Max	Once/3 mo
Methylene Chloride [g/Day]	77.02	Monthly Avg	
Naphthalene [g/Day]	32.91	Daily Max	Once/3 mo
Naphthalene [g/Day]	13.3	Monthly Avg	
Nitrobenzene [g/Day]	4482.84	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1566.4	Monthly Avg	
2-Nitrophenol [g/Day]	161.75	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	45.51	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
4-Nitrophenol [g/Day]	403.33	Daily Max	Once/3 mo
4-Nitrophenol [g/Day]	113.44	Monthly Avg	
Phenanthrene [g/Day]	32.91	Daily Max	Once/3 mo
Phenanthrene [g/Day]	13.3	Monthly Avg	
Pyrene [g/Day]	33.61	Daily Max	Once/3 mo
Pyrene [g/Day]	14.0	Monthly Avg	
Tetrachloroethene [g/Day]	114.84	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	36.41	Monthly Avg	
Toluene [g/Day]	51.82	Daily Max	Once/3 mo
Toluene [g/Day]	19.61	Monthly Avg	
1,2,4-Trichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	137.24	Monthly Avg	
1,1,1-Trichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	15.4	Monthly Avg	
1,1,2-Trichloroethane [g/Day]	88.93	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	22.4	Monthly Avg	
Trichloroethene [g/Day]	48.32	Daily Max	Once/3 mo
Trichloroethene [g/Day]	18.21	Monthly Avg	
Vinyl Chloride [g/Day]	120.44	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	67.92	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Process Waste from Buildings 504 & 505

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	7091	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	5459	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Section **II.B.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Sections **II.B.10** and **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 4,520

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.B.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Building 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/year
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/year
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/year
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/year
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/year
Methylene Chloride [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 931

SAMPLING POINT LOCATION: Valve on 1" line 4' from Hydrogenator wall and 8' from S wall in SE corner of Building 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **931**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See permit section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **932**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Sections **II.B.10** and **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 935

SAMPLING POINT LOCATION: 1/2" steel pipe on inside of concrete wall S of North stairs - Bldg 512

AVERAGE WASTEWATER FLOW (GPD): 26,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **935**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.

b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.

c. Daily flows, with dates, for all measurements or estimates made within the quarter.

d. Any certification statements required pursuant to the Special Conditions in Section II.

e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by July 28, 2006.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES:

1. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES:

1. The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

2. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

3. Sample points **003, 008, 009, 010, 011**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

4. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where:

DF= downstream flow rate UF = upstream flow rate
DC = downstream concentration UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

5. Monitoring at sampling point **927** shall include the following:

a. Samples collected from sampling point **927** (Tank 308) shall be representative of the contents within Tank 308;

b. Permittee shall collect samples from sampling point **927** while Tank 308 is discharging.

6. At sampling points **080, 915, 918, 920, 927, 930-933,** and **935,** the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

7. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a),** pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

8. Pursuant to **40 CFR 403.15,** the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

9. Based on current discharge conditions at sampling point **080,** permittee is only required to self-monitor sampling point **080** when wastewater subject to **40 CFR 439** is being discharged. If no discharge of categorical wastewater occurs during a reporting quarter, permittee shall indicate on the quarterly self-monitoring report that no discharge occurred. Quarterly monitoring of sampling point **080** will not be required if no categorical wastewater was discharged. If no discharge occurs, permittee shall submit, with the quarterly self-monitoring report, a summary of operations for facilities that discharge via sampling point **080** to verify no categorical wastewater discharges occurred. The summary shall be constructed such that it is not confidential. If discharge conditions change at sampling point **080,** such that sampling of non-pharmaceutical wastewater is feasible, the permittee shall notify the District.

10. Prior to discharging categorical wastewater subject to **40 CFR 439** via sampling points **915** and **932,** permittee shall characterize every wastewater batch. Per general permit requirements, permittee must maintain the characterization records for at least three (3) years.

C. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111.** For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee is not required to sample discharges at sampling points **001** or **002** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001** or **002** since the last report.

3. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.B.4**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

4. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 920, 931, 932,** and **935**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 920, 931, 932,** and **935**.

5. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by

radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

6. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

7. For sampling points **930**, **931**, and **933**, permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **930**, **931**, and **933** are adhered to.

8. For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

9. Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

10. Pursuant to the provisions of **40 CFR 439(1)(l)** and **(4)** the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling point **920** in lieu of certain other pollutants regulated under **40 CFR 439 Subpart C, PSES**. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

11. Based on the determination referenced above and on permittee's verification that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

12. The permittee has determined that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are neither used nor generated in pharmaceutical manufacturing operations at the permitted facility. The permittee must maintain the documentation for this determination in the facility permit records. An updated determination, based on a review of raw materials and an assessment of process chemistry, products and by-products resulting from each manufacturing process, shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any of the regulated pollutants.

13. Sampling points **915, 920, 931**, and **932** require monthly monitoring from the effective date of this permit through December 31, 2006. Effective January 1, 2007, sampling points **915, 920, 931**, and **932** revert back to the quarterly self-monitoring requirement.

D. SPECIAL BILLING REQUIREMENTS:

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **555 mg/l** for **BOD**, **1,236 mg/l** for **COD**, and **131 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

MSD

April 19, 2006

Joseph Koch
EHS/RSO Manager
MALLINCKRODT INC.
P.O. Box 5840
St. Louis, MO 63134

RE: Discharge Permit No: 07101002-00
For premise at: 675 McDonnell Boulevard
Hazelwood, MO 63042

Dear Mr. Koch:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on June 1, 2002, for the premise identified above, is hereby modified as per the attached pages 1, 2, 3, 4, 11, and 12. This modification removes sampling point 901 and related special conditions II.A.1, II.A.2, II.A.3, and II.B.1. Page 12 has been removed due to the elimination of 4 permit special conditions. Additionally, the wastewater source and category description for sampling point 001 has been updated and Standard Industrial Classifications (SICs) 2834, 3841, and 3845 removed. This letter and the revised pages 1, 2, 3, 4, 11, and 12 should be affixed to your permit as your official record and become a part thereof. These changes were pursuant to recent correspondence and the District's March 15, 2006 facility inspection.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 07101002-00

EFFECTIVE DATE: June 01, 2002
MODIFICATION DATE: May 01, 2006
EXPIRATION DATE: May 31, 2007

ISSUED TO: MALLINCKRODT INC.
675 MCDONNELL BOULEVARD
HAZELWOOD, MO 63042

SIC NUMBER(S): 2835

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: ONE
SAMPLING PT. REF NUMBER(S): 001

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH in grass, 18 'W of driveway, 150' SW of spillway

AVERAGE WASTEWATER FLOW (GPD): 74,221

WASTEWATER SOURCE AND CATEGORY: Sanitary + Process Waste + NCCW + Plant & Equipment Washdown + Boiler Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 901

SAMPLING POINT LOCATION: Valve on discharge line from wastewater tank 403T

AVERAGE WASTEWATER FLOW (GPD): 90

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSNS; Cn-No)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Ammonia (as N) [mg/L]	84.1	Daily Max	Once/3 mo
Ammonia (as N) [mg/L]	29.4	Monthly Avg	
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	0.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **901**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8	Monthly Avg	
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	[illegible]	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

THIS PAGE VOID

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. Special Certification and Reporting Requirements:

1. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

B. Special Billing Reporting Requirements:

1. Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **seventy-three (73) percent** of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

PMT FILE (R)

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

MSD

DOCUMENTATION FORM for MODIFICATION

GDb: X
P:\ X
PIMS: X
File: X

Permit to be Modified:

Company Name: MALLINCKRODT INC.

Location: 675 MCDONNELL BLVD. HAZELWOOD, MO 63042

Permit No: 07101002-00 Effective Date: 05-01-06

What is to be Modified:

Briefly explain what is to be modified and then list the pages affected.

REMOVE SP 901 & RELATED SPECIAL CONDITIONS REMOVED.

Pg. # 1 REMOVE SP 901 AND SICs 2834, 3841, & 3845. ADD MODIFICATION DATE.

Pg. # 2 REVISE FLOW FIGURE. REMOVE "LAB WASTE" & "CATEGORICAL (901)". ADD PROCESS WASTE.

Pg. #3-4 ADD "THIS PAGE VOID" TO SP 901.

Pg. #11-12 REMOVE II.A.1 & 2 & 3. REMOVE II.B.1. REMOVE PAGE 12; NO LONGER NEEDED.

Reasons for Modification:

Cite regulation, policy, etc. and identify any other documents which support the modification.

SEE ATTACHED DOCUMENT.

Prepared by: FG	Date: 04-18-06
Reviewed by: DMR	Date: 4-19-06

Permit Modified by: FG	Date: 04-18-06
Entire Permit Reissued?	NO
Only these pages modified:	1, 2-4, & 11-12

Rev 12/01

22. SAMPLE POINTS *3/16/06 INSP. REPORT

						DJ(y/n)
SP #	001	Fed.Reg.	N/A	Components:	Sanitary + boiler blowdn + NCCW + p&e washdn + process labs & pilot plant	No
SP #		Fed.Reg.		Components:		N/A
SP #		Fed.Reg.		Components:		N/A
SP #		Fed.Reg.		Components:		N/A
SP #		Fed.Reg.		Components:		N/A

23. ANY UNSAMPLED DISCHARGES? (list each lateral separately) Yes☐ No☒

Dummy SP #		Components:	
Dummy SP #		Components:	

24. WERE ALL SAMPLE POINTS OPENED AND INSPECTED? Yes☒ No☐
A. If any SPs cannot be located or opened, explain: _____
B. If any SP descript's need to be changed, explain: _____

25. REVIEW THE SAMPLE POINT MAP! Last map revision date: 3/8/04
A. Is the map correct and accurate in all its details? Yes☐ No☒
B. If no, what changes are needed? Delete SP901

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.
The company recently identified that they no longer perform operations relative to pharmaceutical products. The processes now performed are of imaging materials specific to diagnostic contrast media. The CIU classification is now removed, but the process volumes identified are still of sufficient quantity to warrant a discharge permit.

Bldg 10 - Offices & cafeteria
20 - Offices & R&D labs
30 - Offices
50 - R&D labs, pilot plant

*PIMS; 901 KEPT ACTIVE PURSUANT TO SIU REQUEST. FG

Q.13 Napthalene is not present; it was previously identified as a component in the paint thinner.

From: Doug Mendoza
To: Fabian Grabski
Date: 5/16/2006 9:47:09 AM
Subject: MALLINCKRODT INC [2112059600] & Nitrification at Bissell Point

Fabian,

Got the results from the lab, and nitrification has been verified to occur in the trickling filters. So the shutdown of the activated sludge will not impact Mallinckrodt. The 40 CFR 439 ammonia limit will still be "not applicable" because we have nitrification at their receiving treatment plant.

Samples were taken on 5/9/06 and analyzed as follows:

Primary effluent: BOD = 67 mg/l, CBOD = 70 mg/l
Trickling filter effluent: BOD = 30 mg/l , CBOD = 22 mg/l (27% less than BOD)

Primary effluent: Kjeldahl nitrogen (TKN) = 22.96 mg/l, Nitrate-Nitrite = 0.68 mg/l
Trickling filter effluent: Kjeldahl nitrogen (TKN) = 14.57 mg/l, Nitrate-Nitrite = 4.42 mg/l (ammonia decreased, nitrogens increased)

So go ahead with the permit modification for the other items. In the cover letter, please also tell them that we are shutting down our activated sludge process on or about June 1, 2006. But because nitrification has been verified to occur in the trickling filters, the pharmaceutical ammonia limit will continue to be "not applicable".

Doug

From: JOHN LODDERHOSE
To: DMMEND
Date: 6/10/99 3:23pm
Subject: PHARMACEUTICAL RULE AMMONIA LIMIT & NITRIFICATION -Reply

It appears that there is partial nitrification at the Bissell Point treatment point. Lab analysis of the influent and effluent indicate that there is a 67.5% and a 56.5% reduction of Kjeldahl and ammonia nitrogen, respectively. There is also a 706% increase in nitrite/nitrate. Don Torretti called EPA about the bioassays needed to confirm the presence of nitrifying bacteria and they indicated that a BOD test with nitrogen inhibitors (CBOD) could be compared to a standard BOD test to verify the presence of nitrifying bacteria. The Bissell Point plant routinely analyzes for BOD and CBOD and the results indicate that the CBOD is typically 61% less than the BOD which confirms the presence of nitrifying bacteria. Therefore, I think we have met the requirements of the regulations for nitrification and the industries should be granted relief from the ammonia standard.

Please draft a letter to Mallinckrodt & Rhodia advising them of this information and inform them that we have the right to impose the pretreatment limits for ammonia in the future if it is determine necessary because of concerns for the hypoxia in the Gulf of Mexico.

CC: BARAIN, ROZEMA

From: BERNARD RAINS
To: JRLODD@HMPTN.BP,
Date: 6/10/99 4:04pm
Subject: PHARMACEUTICAL RULE AMMONIA LIMIT & NITRIFICATION -Reply -Reply

Hypoxia statement okay but better to say "should nitrogen limits be placed on the District's discharges".

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

December 18, 2006

Lisa Meyer
EH&S Engineer
MALLINCKRODT INC.
3600 North 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 North 2nd Street

Dear Ms. Meyer:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on June 1, 2006, for the premise identified above, is hereby modified pursuant to the attached pages 1, 8, 23, 24, 29A, 29B, 37, 38, 39, and 40. This modification replaces sampling point 931 with sampling point 936 and amends related special conditions. This letter and the revised pages 1, 8, 23, 24, 29A, 29B, 37, 38, 39, and 40 should be affixed to your permit as your official record and become a part thereof. These changes were identified pursuant to your December 1, 2006 letter to the District and the District's December 13, 2006 facility visit.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosures

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2006
MODIFICATION DATE: December 22, 2006
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 21
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 932, 933, 935, 936

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,634,001

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918, 920, 927, 930, 932-933, 935-936)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 931

SAMPLING POINT LOCATION: Valve on 1" line 4' from Hydrogenator wall and 8' from S wall in SE corner of Building 260

AVERAGE WASTEWATER FLOW (GPD): .000

WASTEWATER SOURCE AND CATEGORY: Categorical (40 CFR 439 Subpart C PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	[illegible]	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	.2	Monthly Avg	
Chlorobenzene [mg/L]	[illegible]	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	[illegible]	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	[illegible]	Monthly Avg	
Isobutyraldehyde [mg/L]	20.[illegible]	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **931**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, they must be reported.

**** See permit section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 936

SAMPLING POINT LOCATION: Valve on 1/2" line 1' from Hydrogenerator building 8' from S wall in SE corner of building 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **936**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

Where:

DF= downstream flow rate UF = upstream flow rate
DC = downstream concentration UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

5. Monitoring at sampling point **927** shall include the following:

a. Samples collected from sampling point **927** (Tank 308) shall be representative of the contents within Tank 308;

b. Permittee shall collect samples from sampling point **927** while Tank 308 is discharging.

6. At sampling points **080, 915, 918, 920, 927, 930, 932, 933, 935,** and **936** the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

7. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

8. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

9. Based on current discharge conditions at sampling point **080**, permittee is only required to self-monitor sampling point **080** when wastewater subject to **40 CFR 439** is being discharged. If no discharge of categorical wastewater occurs during a reporting quarter, permittee shall indicate on the quarterly self-monitoring report that no discharge occurred. Quarterly monitoring of sampling point **080** will not be required if no categorical wastewater was discharged. If no discharge occurs, permittee shall submit, with the quarterly self-monitoring report, a summary of operations for facilities that discharge via sampling point **080** to verify no categorical wastewater discharges occurred. The summary shall be constructed such that it is not confidential. If discharge conditions change at sampling point **080**, such that sampling of non-pharmaceutical wastewater is feasible, the permittee shall notify the District.

10. Prior to discharging categorical wastewater subject to **40 CFR 439** via sampling points **915** and **932**, permittee shall characterize every wastewater batch. Per general permit requirements, permittee must maintain the characterization records for at least three (3) years.

C. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value

determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee is not required to sample discharges at sampling points **001** or **002** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001** or **002** since the last report.

3. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.B.4**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

4. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 920, 932, 935**, and **936**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 920, 932, 935**, and **936**.

5. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

6. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

7. For sampling points **930**, **933**, and **936** permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **930**, **933**, and **936** are adhered to.

8. For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

9. Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

10. Pursuant to the provisions of **40 CFR 439(1)(l)** and **(4)** the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling point **920** in lieu of certain other pollutants regulated under **40 CFR 439 Subpart C, PSES**. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

11. Based on the determination referenced above and on permittee's verification that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

12. The permittee has determined that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are neither used nor generated in pharmaceutical manufacturing operations at the permitted facility. The permittee must maintain the documentation for this determination in the facility permit records. An updated determination, based on a review of raw materials and an assessment of process chemistry, products and by-products resulting from each manufacturing process, shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors

could result in a change in the status of any of the regulated pollutants.

13. Sampling points **915**, **920**, and **932** require monthly monitoring from the effective date of this permit through December 31, 2006. Effective January 1, 2007, sampling points **915**, **920**, and **932** revert back to the quarterly self-monitoring requirement.

D. SPECIAL BILLING REQUIREMENTS:

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **555 mg/l** for **BOD**, **1,236 mg/l** for **COD**, and **131 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

(PERMIT FILE)
METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for MODIFICATION

GDb: X
P:\ X
ECIMS: X
File: X

Permit to be Modified:

Company Name: MALLINCKRODT INC.

Location: 3600 NORTH 2nd STREET ST. LOUIS, MO 63147

Permit No: 2112059 6-00 Effective Date: 12-22-06

What is to be Modified:

Briefly explain what is to be modified and then list the pages affected.

REMOVE SP 931 & ADD SP 936. AMEND RELATED SPECIAL CONDITIONS.

Pg. # 1 ADD MODIFICATION DATE. REMOVE SP 931 & ADD SP 936.

Pg. # 8 ADD MODIFICATION DATE. REMOVE SP 931 & ADD SP 936.

Pg. # 23-24 REMOVE SP 931; ADD "THIS PAGE VOID".

Pg. # 29A-29B ADD PAGES 29A & 29B. ADD SP 936.

Pg. # 37-40 AFFECTED SPECIAL CONDITIONS; REPLACE SP 931 w/ SP 936.

Pg. #

Pg. #

Reasons for Modification:

Cite regulation, policy, etc. and identify any other documents which support the modification.

SEE JASON GILL'S 12/13/06 SITE VISIT WRITE UP & ATTACHED E-MAIL.

Prepared by: FG	Date: 12/14/06
Reviewed by: DMM	Date: 12-15-06

Permit Modified by: FG	Date: 12/14/06
Entire Permit Reissued?	NO
Only these pages modified:	1, 8, 23-24, 29A-B, & 37-40

Rev 12/01

Fabian Grabski

12/14/06 call w/ Lisa Meyers:
Flow @ SP 936 = 15,000 GPD
FG

From: Doug Mendoza
Sent: Thursday, December 14, 2006 7:15 AM
To: Jason Gill
Cc: Fabian Grabski
Subject: RE: Mallinckrodt (21120596-00) site visit for permit mod.

Jason - No, a verbal OK is not acceptable. However, the permit doesn't take long to modify. Once that is done, we will notify Mallinckrodt, and they can get it faxed or pick up the modification.

Fabian - as you mentioned to me, you'll have to call Mallinckrodt to get the volume info. When you call, please also let them know their options to get the modified permit once you have completed it.

Doug

From: Jason Gill
Sent: Wednesday, December 13, 2006 2:31 PM
To: Doug Mendoza
Subject: Mallinckrodt (21120596-00) site visit for permit mod.

Doug,

Joe Pavlich and I made a site visit to Mallinckrodt today, 12/13/06. First, Joe, Lisa Meyer, and I walked out to SP001 to paint the correct MH green and the incorrect MH black.

Then we went to Bldg. 260 to verify changes that would eliminate SP931 and add new SP936. The new pipe work has been confirmed as completed. It is literally 4 inches from the previous sample point. The new description is: Valve on 1/2" line 1' from Hydrogenator bldg., 8' from S wall in SE corner of bldg. 260.

The engineers of the plant building who were present today requested approval ASAP so that they could start the new campaign. Would a verbal "OK" with a phone call to Lisa Meyer be acceptable?

Jason

Metropolitan St. Louis Sewer District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

May 30, 2006

Jeff DeWald
HSE Engineer
MALLINCKRODT INC.
3600 North 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 North 2nd Street

Dear Mr. DeWald:

Enclosed is the revised Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit for the premise identified above. This permit is issued pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001. This permit has been prepared based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the previous permit. The permit was revised due to significant changes incurred through the elimination and addition of existing/new sampling points. This revision deletes sampling points 919 and 934 and adds sampling point 935. Sampling point 933 has been changed to be subject to 40 CFR 439 Subpart B, PSES. Three new special conditions have been added and other special conditions revised to reflect the elimination/addition of sampling points. The permit special conditions have been reorganized for better clarity. Finally, the permit has incorporated the minor changes identified in your May 26, 2006 facsimile to the District have been.

The previous permit, effective June 1, 2005, is voided as of the effective date of the enclosed permit.

Monitoring reports required by the conditions of this permit must be submitted quarterly for the life of the permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. Copies of the necessary report forms are enclosed.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 5 working days of receipt. Absence of a response within this time frame will be deemed acceptance, by you, of the provisions of this permit.

You may contact us at 436-8756 at any time if you have any question about your permit.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosures

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2006
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 21
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 931, 932, 933, 935

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.C.2**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 2,200

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.C.2**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 57,601

WASTEWATER SOURCE AND CATEGORY: Flow from upstream sample point + Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.B.4** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,000

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + NCCW

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Flow from offsite

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.B.4** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,634,001

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918, 920, 927, 930-933, 935)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 14,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98

AVERAGE WASTEWATER FLOW (GPD): 29,100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt) + Sanitary, CWF-No

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **080**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See **Section II** of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.9** of the permit conditions

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 and downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 48,600

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Temperature [Deg C]	60	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.4** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Subparts G & H, PSES), (Appendix A-No)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acenaphthene [g/Day]	32.91	Daily Max	Once/3 mo
Acenaphthene [g/Day]	13.3	Monthly Avg	
Anthracene [g/Day]	32.91	Daily Max	Once/3 mo
Anthracene [g/Day]	13.3	Monthly Avg	
Benzene [g/Day]	93.83	Daily Max	Once/3 mo
Benzene [g/Day]	39.91	Monthly Avg	
Bis (2-EthylHexyl) Phthalate [g/Day]	180.66	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	66.52	Monthly Avg	
Carbon Tetrachloride [g/Day]	266.09	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	99.43	Monthly Avg	
Chlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	99.43	Monthly Avg	
Chloroethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloroethane [g/Day]	77.02	Monthly Avg	
Chloroform [g/Day]	227.57	Daily Max	Once/3 mo
Chloroform [g/Day]	77.72	Monthly Avg	
Chloromethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloromethane [g/Day]	77.02	Monthly Avg	
Di-n-butyl Phthalate [g/Day]	30.11	Daily Max	Once/3 mo
Di-n-butyl Phthalate [g/Day]	14.0	Monthly Avg	
1,2-Dichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	137.24	Monthly Avg	
1,3-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,4-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,1-Dichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	15.4	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichloroethane [g/Day]	401.93	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	126.04	Monthly Avg	
1,1-Dichloroethene [g/Day]	42.01	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	15.4	Monthly Avg	
Trans-1,2-Dichloroethene [g/Day]	46.21	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	17.51	Monthly Avg	
1,2-Dichloropropane [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	137.24	Monthly Avg	
(cis & trans) 1,3-Dichloropropene [g/Day]	555.98	Daily Max	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	137.24	Monthly Avg	
Diethyl Phthalate [g/Day]	79.13	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	32.21	Monthly Avg	
Dimethyl Phthalate [g/Day]	32.91	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	13.3	Monthly Avg	
4,6-Dinitro-2-Methylphenol [g/Day]	193.96	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	54.62	Monthly Avg	
Ethylbenzene [g/Day]	266.09	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	99.43	Monthly Avg	
Fluoranthene [g/Day]	37.81	Daily Max	Once/3 mo
Fluoranthene [g/Day]	15.4	Monthly Avg	
Fluorene [g/Day]	32.91	Daily Max	Once/3 mo
Fluorene [g/Day]	13.3	Monthly Avg	
Hexachlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	137.24	Monthly Avg	
Hexachlorobutadiene [g/Day]	266.09	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	99.43	Monthly Avg	
Hexachloroethane [g/Day]	555.98	Daily Max	Once/3 mo
Hexachloroethane [g/Day]	137.24	Monthly Avg	
Methylene Chloride [g/Day]	119.04	Dailly Max	Once/3 mo
Methylene Chloride [g/Day]	77.02	Monthly Avg	
Naphthalene [g/Day]	32.91	Daily Max	Once/3 mo
Naphthalene [g/Day]	13.3	Monthly Avg	
Nitrobenzene [g/Day]	4482.84	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1566.4	Monthly Avg	
2-Nitrophenol [g/Day]	161.75	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	45.51	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
4-Nitrophenol [g/Day]	403.33	Daily Max	Once/3 mo
4-Nitrophenol [g/Day]	113.44	Monthly Avg	
Phenanthrene [g/Day]	32.91	Daily Max	Once/3 mo
Phenanthrene [g/Day]	13.3	Monthly Avg	
Pyrene [g/Day]	33.61	Daily Max	Once/3 mo
Pyrene [g/Day]	14.0	Monthly Avg	
Tetrachloroethene [g/Day]	114.84	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	36.41	Monthly Avg	
Toluene [g/Day]	51.82	Daily Max	Once/3 mo
Toluene [g/Day]	19.61	Monthly Avg	
1,2,4-Trichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	137.24	Monthly Avg	
1,1,1-Trichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	15.4	Monthly Avg	
1,1,2-Trichloroethane [g/Day]	88.93	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	22.4	Monthly Avg	
Trichloroethene [g/Day]	48.32	Daily Max	Once/3 mo
Trichloroethene [g/Day]	18.21	Monthly Avg	
Vinyl Chloride [g/Day]	120.44	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	67.92	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Process Waste from Buildings 504 & 505

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	7091	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	5459	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Section **II.B.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Sections **II.B.10** and **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 4,520

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.B.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Building 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/year
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/year
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/year
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/year
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/year
Methylene Chloride [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 931

SAMPLING POINT LOCATION: Valve on 1" line 4' from Hydrogenator wall and 8' from S wall in SE corner of Building 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **931**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See permit section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **932**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Sections **II.B.10** and **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 935

SAMPLING POINT LOCATION: 1/2" steel pipe on inside of concrete wall S of North stairs - Bldg 512

AVERAGE WASTEWATER FLOW (GPD): 26,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **935**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.

b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.

c. Daily flows, with dates, for all measurements or estimates made within the quarter.

d. Any certification statements required pursuant to the Special Conditions in Section II.

e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by July 28, 2006.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES:

1. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES:

1. The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

2. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

3. Sample points **003, 008, 009, 010, 011**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

4. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where:

DF= downstream flow rate UF = upstream flow rate
DC = downstream concentration UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

5. Monitoring at sampling point **927** shall include the following:

a. Samples collected from sampling point **927** (Tank 308) shall be representative of the contents within Tank 308;

b. Permittee shall collect samples from sampling point **927** while Tank 308 is discharging.

6. At sampling points **080, 915, 918, 920, 927, 930-933,** and **935,** the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

7. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a),** pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

8. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

9. Based on current discharge conditions at sampling point **080**, permittee is only required to self-monitor sampling point **080** when wastewater subject to **40 CFR 439** is being discharged. If no discharge of categorical wastewater occurs during a reporting quarter, permittee shall indicate on the quarterly self-monitoring report that no discharge occurred. Quarterly monitoring of sampling point **080** will not be required if no categorical wastewater was discharged. If no discharge occurs, permittee shall submit, with the quarterly self-monitoring report, a summary of operations for facilities that discharge via sampling point **080** to verify no categorical wastewater discharges occurred. The summary shall be constructed such that it is not confidential. If discharge conditions change at sampling point **080**, such that sampling of non-pharmaceutical wastewater is feasible, the permittee shall notify the District.

10. Prior to discharging categorical wastewater subject to **40 CFR 439** via sampling points **915** and **932**, permittee shall characterize every wastewater batch. Per general permit requirements, permittee must maintain the characterization records for at least three (3) years.

C. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee is not required to sample discharges at sampling points **001** or **002** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001** or **002** since the last report.

3. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.B.4**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

4. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 920, 931, 932**, and **935**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 920, 931, 932,** and **935**.

5. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by

radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

6. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

7. For sampling points **930**, **931**, and **933**, permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **930**, **931**, and **933** are adhered to.

8. For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

9. Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

10. Pursuant to the provisions of **40 CFR 439(1)(I)** and **(4)** the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling point **920** in lieu of certain other pollutants regulated under **40 CFR 439 Subpart C, PSES**. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

11. Based on the determination referenced above and on permittee's verification that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

12. The permittee has determined that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are neither used nor generated in pharmaceutical manufacturing operations at the permitted facility. The permittee must maintain the documentation for this determination in the facility permit records. An updated determination, based on a review of raw materials and an assessment of process chemistry, products and by-products resulting from each manufacturing process, shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any of the regulated pollutants.

13. Sampling points **915, 920, 931,** and **932** require monthly monitoring from the effective date of this permit through December 31, 2006. Effective January 1, 2007, sampling points **915, 920, 931,** and **932** revert back to the quarterly self-monitoring requirement.

D. SPECIAL BILLING REQUIREMENTS:

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **555 mg/l** for **BOD**, **1,236 mg/l** for **COD**, and **131 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

Metropolitan St. Louis Sewer District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

May 16, 2006

Jeff DeWald
HSE Engineer
MALLINCKRODT INC.
3600 North 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 North 2nd Street

Dear Mr. DeWald:

Enclosed is a draft copy of the revised Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit proposed for the premise identified above. The permit is being revised due to significant changes incurred through the elimination and addition of existing/new sampling points. This revision deletes sampling points 919 and 934 and adds sampling point 935. Sampling point 933 has been changed to be subject to 40 CFR 439 Subpart B, PSES. Three new special conditions have been added and other special conditions revised to reflect the elimination/addition of sampling points. Finally, the permit special conditions have been reorganized for better clarity.

This draft has been prepared pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001 and is based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 10 working days of receipt. Absence of a response within this time frame will be deemed as acceptance of the draft permit and we will proceed to issue the final permit.

Please note that the Bissell Point Wastewater Treatment Plant's activated sludge process will be terminated around June 1, 2006. An internal study has verified that nitrification continues to occur at the plant's trickling filters. Accordingly, the pharmaceutical ammonia limits will continue to be "not applicable".

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2006
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 21
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 931, 932, 933, 935

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 84[illegible], the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

DRAFT

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
****			

DRAFT

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.C.2**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 2,200

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD] ****	***	Daily Avg	***

DRAFT

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.C.2**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 57,601

WASTEWATER SOURCE AND CATEGORY: Flow from upstream sample point + Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

DRAFT

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.B.4** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,000

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + NCCW

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

DRAFT

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Flow from offsite

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.B.4** of the permit conditions.

DRAFT

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,634,001

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918, 920, 927, 930-933, 935)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	[illegible]	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DRAFT

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 14,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98

AVERAGE WASTEWATER FLOW (GPD): 29,100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt) + Sanitary, CWF-No

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Acetone [mg/L]	20	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **080**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	[illegible]	Daily Max	Once/3 mo
Toluene [mg/L]	[illegible]	Monthly Avg	
Triethylamine [mg/L]	265	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See **Section II** of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.10** of the permit conditions

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 and downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 48,600

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Temperature [Deg C]	60	Instant	*****
Total Suspended Solids [mg/L]	***	Daily Avg	*****
Total Toxic Organics [mg/L]	[illegible]	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B.4** of the permit conditions.

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Subparts G & H, PSES), (Appendix A-No)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acenaphthene [g/Day]	32.91	Daily Max	Once/3 mo
Acenaphthene [g/Day]	13.3	Monthly Avg	
Anthracene [g/Day]	32.91	Daily Max	Once/3 mo
Anthracene [g/Day]	13.3	Monthly Avg	
Benzene [g/Day]	93.83	Daily Max	Once/3 mo
Benzene [g/Day]	39.91	Monthly Avg	
Bis (2-EthylHexyl) Phthalate [g/Day]	180.66	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	66.52	Monthly Avg	
Carbon Tetrachloride [g/Day]	266.09	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	99.43	Monthly Avg	
Chlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	99.43	Monthly Avg	
Chloroethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloroethane [g/Day]	77.02	Monthly Avg	
Chloroform [g/Day]	227.57	Daily Max	Once/3 mo
Chloroform [g/Day]	77.72	Monthly Avg	
Chloromethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloromethane [g/Day]	77.02	Monthly Avg	
Di-n-butyl Phthalate [g/Day]	30.11	Daily Max	Once/3 mo
Di-n-butyl Phthalate [g/Day]	14.0	Monthly Avg	
1,2-Dichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	137.24	Monthly Avg	
1,3-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,4-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,1-Dichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	15.4	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichloroethane [g/Day]	401.93	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	126.04	Monthly Avg	
1,1-Dichloroethene [g/Day]	42.01	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	15.4	Monthly Avg	
Trans-1,2-Dichloroethene [g/Day]	46.21	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	17.51	Monthly Avg	
1,2-Dichloropropane [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	137.24	Monthly Avg	
(cis & trans) 1,3-Dichloropropene [g/Day]	555.98	Daily Max	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	137.24	Monthly Avg	
Diethyl Phthalate [g/Day]	79.13	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	32.21	Monthly Avg	
Dimethyl Phthalate [g/Day]	32.91	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	13.3	Monthly Avg	
4,6-Dinitro-2-Methylphenol [g/Day]	193.96	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	54.62	Monthly Avg	
Ethylbenzene [g/Day]	266.09	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	99.43	Monthly Avg	
Fluoranthene [g/Day]	[illegible]	Daily Max	Once/3 mo
Fluoranthene [g/Day]	15.4	Monthly Avg	
Fluorene [g/Day]	32.91	Daily Max	Once/3 mo
Fluorene [g/Day]	13.3	Monthly Avg	
Hexachlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	137.24	Monthly Avg	
Hexachlorobutadiene [g/Day]	266.09	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	99.43	Monthly Avg	
Hexachloroethane [g/Day]	555.98	Daily Max	Once/3 mo
Hexachloroethane [g/Day]	137.24	Monthly Avg	
Methylene Chloride [g/Day]	119.04	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	77.02	Monthly Avg	
Naphthalene [g/Day]	32.91	Daily Max	Once/3 mo
Naphthalene [g/Day]	13.3	Monthly Avg	
Nitrobenzene [g/Day]	4482.84	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1566.4	Monthly Avg	
2-Nitrophenol [g/Day]	161.75	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	45.51	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
4-Nitrophenol [g/Day]	403.33	Daily Max	Once/3 mo
4-Nitrophenol [g/Day]	113.44	Monthly Avg	
Phenanthrene [g/Day]	32.91	Daily Max	Once/3 mo
Phenanthrene [g/Day]	13.3	Monthly Avg	
Pyrene [g/Day]	33.61	Daily Max	Once/3 mo
Pyrene [g/Day]	14.0	Monthly Avg	
Tetrachloroethene [g/Day]	114.84	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	36.41	Monthly Avg	
Toluene [g/Day]	51.82	Daily Max	Once/3 mo
Toluene [g/Day]	19.61	Monthly Avg	
1,2,4-Trichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	137.24	Monthly Avg	
1,1,1-Trichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	15.4	Monthly Avg	
1,1,2-Trichloroethane [g/Day]	88.93	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	22.4	Monthly Avg	
Trichloroethene [g/Day]	48.32	Daily Max	Once/3 mo
Trichloroethene [g/Day]	18.1	Monthly Avg	
Vinyl Chloride [g/Day]	120.4	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	57.9	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Process Waste from Buildings 504 & 505

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: lbs/day]***	7091	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	5459	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analysis.

**** See Section **II.B.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	[illegible]	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Sections **II.B.10** and **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3[illegible]	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	[illegible]	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 4,520

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3[illegible]	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	[illegible]	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical stand[illegible] See Section II of the permit conditions for explanation of any adjustments to the published limits made p[illegible]suant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.B.5** of the permit conditions.

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Building 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/year
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/year
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/year
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/year
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3[illegible]	Daily Max	Once/year
Methylene Chloride [mg/L]	[illegible]	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 931

SAMPLING POINT LOCATION: Valve on 1" line 4' from Hydrogenator wall and 8' from S wall in SE corner of Building 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **931**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See permit section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	[illegible]	Monthly Avg	
Chloroform [mg/L]	[illegible]	Daily Max	Once/3 mo
Chloroform [mg/L]	.0[illegible]	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **932**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Sections **II.B.10** and **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3[illegible]	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	[illegible]	Monthly Avg	
	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 935

SAMPLING POINT LOCATION: 1/2" steel pipe on inside of concrete wall S of North stairs - Bldg 512

AVERAGE WASTEWATER FLOW (GPD): 26,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	[illegible]	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **935**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

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3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.

b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.

c. Daily flows, with dates, for all measurements or estimates made within the quarter.

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d. Any certification statements required pursuant to the Special Conditions in Section II.

e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by July 28, 2006.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

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3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:

a. Any discharge from a new process or facility or a new source.

b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.

c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.

d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.

e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.

f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.

g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

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D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article V Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

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I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analysis of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

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3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES:

1. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES:

1. The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes.** The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

2. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

3. Sample points **003, 008, 009, 010, 011**, and **080,** may, at times, contain stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

4. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where:

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DF= downstream flow rate UF = upstream flow rate
DC = downstream concentration UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

5. Monitoring at sampling point **927** shall include the following:

a. Samples collected from sampling point **927** (Tank 308) shall be representative of the contents within Tank 308;

b. Permittee shall collect samples from sampling point **927** while Tank 308 is discharging.

6. At sampling points **080, 915, 918, 920, 927, 930-933,** and **935,** the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

7. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

8. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

9. Based on current discharge conditions at sampling point **080** permittee is only required to self-monitor sampling point **080** when wastewater subject to **40 CFR 439** is being discharged. If no discharge of categorical wastewater occurs during a reporting quarter, permittee shall indicate on the quarterly self-monitoring report that no discharge occurred. Quarterly monitoring of sampling point **080** will not be required if no categorical wastewater was discharged. If no discharge occurs, permittee shall submit, with the quarterly self-monitoring report, a summary of operations for facilities that discharge via sampling point **080** to verify no categorical wastewater discharges occurred. The summary shall be constructed such that it is not confidential. If discharge conditions change at sampling point **080**, such that sampling of non-pharmaceutical wastewater is feasible, the permittee shall notify the District.

10. Prior to discharging categorical wastewater subject to **40 CFR 439** via sampling points **915** and **932**, permittee shall characterize <u>every</u> wastewater batch. Per general permit requirements, permittee must maintain the characterization records for at least three (3) years.

C. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

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In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee is not required to sample discharges at sampling points **001** or **002** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001** or **002** since the last report.

3. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.B.4**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections.

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

4. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 920, 931, 932,** and **935**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 920, 931, 932,** and **935**.

5. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by

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radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

6. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

7. For sampling points **919**, **930**, **931**, and **933**, permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **919**, **930**, **931**, and **933** are adhered to.

8. For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

9. Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

10. Pursuant to the provisions of **40 CFR 439(1)(l)** and **(4)** the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling point **920** in lieu of certain other pollutants regulated under **40 CFR 439 Subpart C, PSES**. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

11. Based on the determination referenced above and on permittee's verification that all pollutants regulated under **40 CFR 439 Subpart C** at sampling point **930**, are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

12. The permittee has determined that all pollutants regulated under **40 CFR 439 Subpart C** at sampling point **930**, are neither used nor generated in pharmaceutical manufacturing operations at the permitted facility. The permittee must maintain the documentation for this determination in the facility permit records. An updated determination, based on a review of raw materials and an assessment of process chemistry, products and by-products resulting from each manufacturing process, shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any of the regulated pollutants.

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13. Sampling points **915, 920, 931,** and **932** require monthly monitoring from the effective date of this permit through December 31, 2006. Effective January 1, 2007, sampling points **915, 920, 931,** and **932** revert back to the quarterly self-monitoring requirement.

D. SPECIAL BILLING REQUIREMENTS:

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **555 mg/l** for **BOD, 1,236 mg/l** for **COD**, and **131 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT FACT SHEET

Check one:

FIRST TIME PERMIT	
RENEWAL	
REVISION	X

Prepared by: Fabian Grabski	Date: 04.17.06
Reviewed by: DMM	Date: 5-9-06

PERMIT NO: 21120596-00 EFFECTIVE DATE: 06.01.06 EXPIRATION DATE: 05-31-10

MODIFICATION DATES: (1)_____, (2)_____, (3)_____, (4)_____

COMPANY NAME: MALLINCKRODT INC.

PREMISE ADDRESS: 3600 NORTH 2nd STREET ST. LOUIS, MO 63147

RELATED ACCOUNT NUMBERS: N/A

SIC NUMBERS: 2816, 2819, 2833, 2834, 2835, 2869

TYPE OF OPERATION: REACTION, SEPARATION, DRYING, & PACKAGING OF ORGANICS / PHARMACEUTICALS

TOTAL NUMBER OF SAMPLING POINTS: 21 or; NO SAMPLE POINT —

NUMBER OF: ORDINANCE 10 CATEGORICAL 10 COMBINED 1

CATEGORICAL INDUSTRY ? YES ✓ NO ___

If Yes, 40 CFR 414 Subpart G & H PSES ✓ PSNS —

40 CFR 439 Subpart B & C PSES ✓ PSNS ___

EXTRA STRENGTH SURCHARGE ? YES ✓ NO ___ If Yes, BOD 555 COD 1236 TSS 131 (9/24/04)

RETURN FACTOR ? YES ✓ NO ___ If Yes, Acct # 00118821 RF 0.96 (1/28/02)

SPECIAL CONDITIONS REQUIRED ? YES ✓ NO ___

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
Pollutant & Limitations Documentation Sheets:	✓		
Permit Preparation Checklist:	✓		
Production Based Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Most Strict Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Combined Wastestream Calculations Sheets:			✓
If Yes, for Sampling Points:			
Other:			

COMMENTS (Include notations of any significant changes from last permit):

935 ADDED. 919 & 934 REMOVED. 933; CHANGED SUB C TO SUB B. 935 ADDED.
NON-STD SPECIAL II.B.10 ADDED (080). NON-STD SPECIAL CONDITION II.B.11 ADDED (915 & 922)
NON-STD SPECIAL CONDITION II.C.15 ADDED (915, 920, 931, 932).
SPECIAL CONDITIONS REORGANIZED FOR CLARITY.

✓

PERMIT NO: 2112059 6-00

SAMPLING POINT REFERENCE NUMBER: 001 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SANITARY

Flow Rate: 1,000 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A — N/A; PREVIOUSLY REMOVED.

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.3 , ~~#~~ , ~~#~~ , ~~#~~ , ~~#~~ , ~~#~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 002 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SANITARY

Flow Rate: 2,200 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A; PREVIOUSLY REMOVED.

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.3 , ~~#~~ , ~~#~~ , ~~#~~ , ~~#~~ , ~~#~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 2112059 6-00

SAMPLING POINT REFERENCE NUMBER: 003 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: LAB WASTE + SAN + NON-CAT PROCESS + FLOW FROM UPSTREAM SP

Flow Rate: 57,601 GPD Basis for Flow Rate: WQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: STANDARD PERMIT POLLUTANTS

Basis for Limitations: MSD ORD. #8472

Basis for Monitoring Frequencies: 1/3 MOS, VOLUME

Special Conditions: # D.11, # D.10, #____, #____, #____, #____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 006 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: LAB WASTE + NCCW

Flow Rate: 32,000 GPD Basis for Flow Rate: WQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: STANDARD PERMIT POLLUTANTS

Basis for Limitations: MSD ORD. #8472

Basis for Monitoring Frequencies: 1/3 MOS, VOLUME

Special Conditions: #____, #____, #____, #____, #____, #____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 010 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: Boiler Blowdown + Kitchen Waste + Lab Waste + NCCW + P/E Washdown + Reg/Rej Water + Sanitary + Stormwater + Non Cat Proc Waste + Cat (from SPs 080, 905, 915, 918, 920, 927, 930-933, 935)

Flow Rate: 1,634,000 GPD Basis for Flow Rate: LUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: Cr, Cu, Ni, Zn; "kp" of DATA SHOWS PRESENCE

Basis for Pollutants: STANDARD PERMIT POLLUTANTS

Basis for Limitations: MSD ORD #8472

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME of DISCHARGE COMPONENTS

Special Conditions: # D.10, #___, #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: WASTEWATER COMPONENTS UPDATED.

SAMPLING POINT REFERENCE NUMBER: 011 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PROCESS WASTE (EMERGENCY BY-PASS)

Flow Rate: 14,000 GPD Basis for Flow Rate: LUQ

General Pollutants: BOD * COD * O&GT * pH * Temp * TSS * Ord TTO *

Other: N/A *APPLICABLE DURING BY-PASS EVENTS

Priority/Categorical Pollutants: N/A

Basis for Pollutants: STANDARD PERMIT POLLUTANTS

Basis for Limitations: MSD ORD #8472

Basis for Monitoring Frequencies: * (SEE ABOVE)

Special Conditions: # D.10, # D. NON-STD #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

MSD 019288

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 080 ✓ **TYPE:** Ord. __ Cat __ Comb ✓

Wastewater Components: CAT (439 SUB C, PSES; CN-NO, NH_2 EXEMPT) + SANITARY

Flow Rate: 29,000 GPD Basis for Flow Rate: 1UQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 MOS; CATEGORICAL WASTE.

Special Conditions: # D.10, # D.1 (MOD), # E.15 (MOD), # D. NON STD (NEW), ~~#~~, ~~#~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 099 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: LAB WASTE + SANITARY + NON-CAT PROCESS WASTE

Flow Rate: 48,600 GPD Basis for Flow Rate: 1UQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: STANDARD PERMIT POLLUTANTS

Basis for Limitations: MSD ORD. #8472

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME & DISCHARGE COMPONENTS

Special Conditions: # D.11, ~~#~~, ~~#~~, ~~#~~, ~~#~~, ~~#~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 905 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (414 SUB G & H, PSES; APPENDIX A-No)

Flow Rate: 185,000 GPD Basis for Flow Rate: 1UQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: OCPSF POLLUTANTS

Basis for Pollutants: 40 CFR 414 SUB G & H, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME of CATEGORICAL WASTE

Special Conditions: # B.1 (MOD), # E.19, ~~#~~ __, ~~#~~ __, ~~#~~ __, ~~#~~ __

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 912 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PROCESS WASTE FROM BUILDINGS 504 & 505

Flow Rate: 185,000 GPD Basis for Flow Rate: 1UQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: DMAC

Basis for Pollutants: PRODUCTION NATURE.

Basis for Limitations: MSD DERIVED.

Basis for Monitoring Frequencies:

Special Conditions: # D. NON-STD, ~~#~~ __, ~~#~~ __, ~~#~~ __, ~~#~~ __, ~~#~~ __

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain: ~~NEW SP936 ADDED TO SHARE SP912 LOCATION.~~

PERMIT NO: 2112059 6-00

SAMPLING POINT REFERENCE NUMBER: 915 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; UN-NO, NH3 EXEMPT)

Flow Rate: 2,700 GPD Basis for Flow Rate: GPD

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: "

Basis for Monitoring Frequencies: 1/MONTH (2006). 1/3 MOS 2007 ON.

Special Conditions: # D.1 (MOD), # E.15 (MOD), # D. NON STD (NEW), # E. NON STD (NEW), # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: 2 NEW NON-STD SPECIAL CONDITIONS ADDED.

SAMPLING POINT REFERENCE NUMBER: 918 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB B, PSES)

Flow Rate: 1,000 GPD Basis for Flow Rate: 1UQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL SHORT LIST (5)

Basis for Pollutants: 40 CFR 439 SUB B, PSES

Basis for Limitations: "

Basis for Monitoring Frequencies: 1/3 MOS; CATEGORICAL WASTE

Special Conditions: # D.1 (MOD), # E. NON-STD, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain: _____

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 920 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; CN-NO, NH3 EXEMPT)

Flow Rate: 4,520 GPD Basis for Flow Rate: ILQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: TOLUENE, TETRAHYDROFURAN ~

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: "

Basis for Monitoring Frequencies: 1/MONTH (2006). 1/3 MOS 2007 ON.

Special Conditions: # D.1 (MOD), # E.15 (MOD), # E.24, # E. NON STD (NEW), #, #

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: FLOW: 1720 → 4520 GPD. NEW NON-STD SPECIAL CONDITION NEEDED.

[redacted].

SAMPLING POINT REFERENCE NUMBER: 927 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB B, PSES)

Flow Rate: 2,700 GPD Basis for Flow Rate: ILQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL SHORT LIST (5)

Basis for Pollutants: 40 CFR 439 SUB B, PSES

Basis for Limitations: "

Basis for Monitoring Frequencies: 1/3 MOS; CATEGORICAL WASTE

Special Conditions: # D.1 MOD, # D. NON-STD, #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 930 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CMT (439 SUB B, PSES)

Flow Rate: 650 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL SHORT LIST (5)

Basis for Pollutants: 40 CFR 439 SUB B, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/YR; BMR

Special Conditions: # D.1 MOD, # E. NON-STD, # E.22, # E.23, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 931 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CMT (439 SUB C, PSES; CN-no, NH3 EXEMPT)

Flow Rate: 15,000 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/MONTH (2006). 1/3 MOS 2007 ON.

Special Conditions: # E. NON-STD (NEW), # D.1 (MOD), # E.15 (MOD), # E. NON-STD, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES ✓ NO __

Explain: 1 NEW NON-STD SPECIAL CONDITION ADDED.

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 932 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; CN-NO, NH3 EXEMPT)

Flow Rate: 100 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/MONTH (2006). 1/3 MOS 2007 ON.

Special Conditions: # D.1 (MOD), # E.15 (MOD), # E. NON-STD, # D. NON-STD (NEW), # E. NON-STD (NEW), #

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: 2 NEW NON-STD SPECIAL CONDITIONS ADDED.

SAMPLING POINT REFERENCE NUMBER: 933 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB B, PSES)

Flow Rate: 100 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL SHORT LIST (5)

Basis for Pollutants: 40 CFR 439 SUB B, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 MOS; SUBPART C BMR.

Special Conditions: # D.1 MOD, # NON-STD, #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES ✓ NO __

Explain: RECLASSIFIED FROM SUBPART C TO SUBPART B.

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 935 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT(439 SUB C, PSES; CN-No, NH3 EXEMPT)

Flow Rate: 26,000 GPD Basis for Flow Rate: JASON GILL

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 MOS; CATEGORICAL WASTE.

Special Conditions: # D.1 (MOD) # E.15 (MOD) # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: NEW SP.

SAMPLING POINT REFERENCE NUMBER: _____ **TYPE:** Ord. __ Cat __ Comb __

Wastewater Components: _____

Flow Rate: _____ GPD Basis for Flow Rate: _____

General Pollutants: BOD __ COD __ O&GT __ pH __ Temp __ TSS __ Ord TTO __

Other: _____

Priority/Categorical Pollutants: _____

Basis for Pollutants: _____

Basis for Limitations: _____

Basis for Monitoring Frequencies: _____

Special Conditions: # _____, # _____, # _____, # _____, # _____, # _____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO __

Explain: _____

PERMIT PREPARATION CHECKLIST - PART 1
(Fact Sheet Attachment 2)

Company Name: MALLINCKRODT INC. Permit No.: 21120596-00

Effective Date: 06-01-06 Prepared by: ETG Date: 04-17-06

REVIEW THE PRETREATMENT DATABASE (ECIMS), INDUSTRY FILE AND PERMIT APPLICATION.

ANSWER THE FOLLOWING QUESTIONS AND UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ✓ No ___
   If no, add: ___ delete: ___

2. Is user in surcharge? Yes ✓ No ___
   If yes, date last certified: 9/24/04
   If yes, Special Condition F.2 applies.

3. Does user's premise have more than one MSD account? Yes ___ No ✓
   If yes, were all account numbers correctly listed (including occupant #s)? Yes ___ No ___
   If no, have account numbers been corrected in database before proceeding? Yes ___ No ___

4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ✓ No ___
   If yes, list acct no., RF and date last updated:
   Acct 00118821 RF 0.96 Updated 01/28/02
   ~~Acct ___ RF ___ Updated ___~~
   If yes, Special Condition F.1 applies.

5. Does user discharge water from a source not included in the MSD Billing system? Yes ___ No ✓
   If yes, Special Condition F.3 applies.

6. Have you established agreement among permit application, water consumption records and ECIMS on component flows at each SP, total SP flows and total premise flow? Yes ✓ No ___
   If no, explain ___

7. Has user been granted any variances from ordinance limitations? Yes ___ No ✓
   If yes, Parameter(s) ___ at SP(s) ___
   If yes, Special Condition C.4 applies.

8. Does user discharge any radioactive materials? Yes ✓ No ___
   If yes, Special Condition E.18 applies.

9. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ___ No ✓
   If no, explain: UNKNOWN NUMBER OF CONNECTIONS
   If no, is documentation sufficient to use Special Condition E.5, E.6, E.7 or E.8? Yes ✓ No ___
   If no, is compliance schedule necessary to obtain documentation? Yes ___ No ___
   If yes, Special Condition G.1 is necessary. MODIFIED

10. Does premise require use of "upstream/downstream" sampling? Yes ✓ No ___
    If yes, Upstream SP # 009 & Downstream SP # 003
    If yes, Special Conditions D.11 and E.9 apply.

11. Are there any inactive connections to MSD sewers? Yes ___ No ✓
    If yes, does Special Condition E10. apply? Yes ___ No ___

12. Have you verified, in ECIMS, the SP location descriptions are complete and adequate? Yes ✓ No ___

13. Have you verified, in ECIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ✓ No ___

14. Are any SPs Dry Justified? Yes ___ No ✓
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition E.3 applies.

15. Do any SPs convey stormwater in addition to regulated wastewater? Yes ✓ No ___
If yes, list points: ~~003~~, 008-011, 080 and note on P&LD sheets.
If yes, Special Condition D.10 applies.

16. Does user have any discharges subject to NPDES permitting regulations? Yes ___ No ✓
If yes, list points: _____
If yes, Special Condition E.14 applies.

17. Are there some SPs where user discharges only non-process wastewater? Yes ✓ No ___
If yes, does Special Condition E.3 apply? Yes ✓ No ___
If yes, list points 001 & 002 ~ and note on P&LD sheets.

18. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ✓ No ___
If yes, list points SEE BELOW ~ and note on P&LD sheets.
If yes, Special Condition D.1 applies. D.1 (MOD)

19. Are there SPs with less than a quarterly self-monitoring frequency for all parameters? Yes ___ No ✓
If yes, Special Condition E.4 applies.

20. Can user be given a waiver from monitoring local limits TTO at any ordinance SPs? Yes ___ No ✓
If yes, list points _____ and explain on P&LD sheets.

21. Does user have a history of compliance problems at this or a previous location ? Yes ___ No ✓
If yes, is a compliance schedule required? Yes ___ No ___
If yes, Special Condition G.1 applies.
Is supporting documentation attached? Yes ___ No ___

22. Is user required to monitor for Total Phenols at an ordinance SP? Yes ___ No ✓
If yes, does Special Condition D.3 apply? Yes ___ No ___

23. Are special billing conditions, other than the standard Special Conditions, needed? Yes ___ No ✓
If yes, describe: _____

24. Are any Special Conditions, other than the standard special conditions, required? Yes ✓ No ___
If yes, explain: SEE ATTACHED MEMO.
Is supporting documentation attached? Yes ___ No ___

25. Is user classified as a Categorical Industrial User (CIU)? Yes ✓ No ___
If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit:

#F.2 #F.1 #E.18 #E.5(MOD) #D.11 003 009 099 #E.9 #D.10 003 008 009 010 011 080 #E.3 001 002 #D.1(MOD) 080 915 918 920 927 930 931 932 933 935

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#D.12 — #D.12 — #D.12 080 #D.12 912 #D.12 927 #D.12 008 011 #D.12 915 932

#E.21 932 #E.21 918 #E.21 919 930 931 933 #E.21 915 920 931 932

D.12 = NON-STD
E.21 = " "

SUPPORTING MEMORANDUM

FROM : FABIAN GRABSKI

TO : PERMIT PREPARATION CHECK LIST

RE : MALLINCKRODT, INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

PERMIT : 21120596-00

DATE : 04-17-06

The following presents 12 non-standard special conditions for use in Mallinckrodt's draft permit:

D. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

D.Non-Standard

The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

D.Non-Standard

Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

D.Non-Standard

Monitoring at sampling point **927** shall include the following:

a. Samples collected from sampling point **927** (Tank 308) shall be representative of the contents within Tank 308;

b. Permittee shall collect samples from sampling point **927** while Tank 308 is discharging.

D.Non-Standard

Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia <u>will not</u> be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

D.Non-Standard

Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

D.Non-Standard

Prior to discharging categorical wastewater subject to **40 CFR 439** via sampling points **915** and **932**, permittee shall characterize <u>every</u> wastewater batch. Per general permit requirements, permittee must maintain the characterization records for at least three (3) years.

D.Non-Standard
Based on current discharge conditions at sampling point **080**, permittee is only required to self-monitor sampling point **080** when wastewater subject to **40 CFR 439** is being discharged. If no discharge of categorical wastewater occurs during a reporting quarter, permittee shall indicate on the quarterly self-monitoring report that no discharge occurred. Quarterly monitoring of sampling point **080** will not be required if no categorical wastewater was discharged. If no discharge occurs, permittee shall submit, with the quarterly self-monitoring report, a summary of operations for facilities that discharge via sampling point **080** to verify no categorical wastewater discharges occurred. The summary shall be constructed such that it is not confidential. If discharge conditions change at sampling point **080**, such that sampling of non-pharmaceutical wastewater is feasible, the permittee shall notify the District.

E. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

E.Non-Standard
Sampling points **915**, **920**, **931**, and **932** require monthly monitoring from the effective date of this permit through December 31, 2006. Effective January 1, 2007, sampling points **915**, **920**, **931**, and **932** revert back to the quarterly self-monitoring requirement.

E.Non-Standard
For sampling points **919**, **930**, **931**, and **933**, permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **919**, **930**, **931**, and **933** are adhered to.

E.Non-Standard
For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

E.Non-Standard
Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

E.Non-Standard
Pursuant to the provisions of **40 CFR 439(1)(I)** and **(4)** the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling point **920** in lieu of certain other pollutants regulated under **40 CFR 439 Subpart C, PSES**. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

PERMIT PREPARATION CHECKLIST - PART 2
(Fact Sheet Attachment 2)

C.3 N/A; NO OVERLAPPING POLLUTANT. RG

26. Do any SPs have both Ordinance & Categorical limits? Yes ✓ No ___
If yes, which sampling point(s): 080
If yes, Special Condition C.3 is applicable. Is worksheet attached? Yes ___ No ✓

27. Is the Combined Wastestream Formula (CWF) required? Yes ___ No ✓
If yes, which SP(s): ___
If yes, date last calculated: ___
If yes, Special Condition C.2 is applicable. Is CWF worksheet attached?. Yes ___ No ___

28. Are categorical limitations based on production rates? Yes ___ No ✓
If yes, which SP(s): ___
If yes, date last calculated: ___
If yes, does Special Condition C.1__, E1__ or E2__ apply?

29. Are categorical limitations mass limits? Yes ✓ No ___
If yes, which SP(s): 905
If yes, Special Condition E.19 is applicable.

30. Does user discharge only non-categorical wastewater at all SPs? Yes ✓ No ___
If yes, which categorical operations are performed: ___
If yes, does Special Condition B.1 ✓, B.2__ or B.3__ apply? B.1 MODIFIED. Yes ✓ No ___

31. Are there process discharges, from a categorical operation, for which standards have not been promulgated? Yes ___ No ✓
If yes, for which existing source categorical standard: ___
If yes, which SP(s): ___
If yes, is Special Condition E.20 applicable? Yes ___ No ___

32. Is user a job shop electroplater with >10,000 gpd subject to 40 CFR 413? Yes ___ No ✓
If yes, Special Condition D.2 is applicable.

33. Is user a new source soap and detergent manufacturer subject to 40 CFR 417? Yes ___ No ✓
If yes, is user subject to Subparts O__, P__, Q__ or R__? Yes ___ No ___
If yes, for Subpart O, Special Condition B.4 is applicable.
If yes, for Subpart P, Special Condition B.5 is applicable.
If yes, for Subpart Q, Special Condition B.6 is applicable.
If yes, for Subpart R, Special Condition B.7 is applicable.

34. Is user a leather tanner/finisher subject to 40 CFR 425? Yes ___ No ✓
If yes, is user subject to subpart C (Appendix B)? Yes ___ No ___
If yes, Special Condition D.7 is applicable.
If no, Special Condition D.6 is applicable.

35. Is user a Centralized Waste Treater subject to 40 CFR 437? Yes ___ No ✓
If yes, does user receive any waste that contains cyanide at a concentration greater than 136 mg/l? Yes ___ No ___
If yes, Special Condition 437a is applicable.
If yes, does it performs operations subject to Subpart(s) A__, B__ or C__? Yes ___ No ___
If subject to multiple Subparts, has user requested and been approved for application of Subpart D standards? Yes ___ No ___
If yes, Special Condition 437b is applicable.
If no, Special Condition 437c is applicable.

36. Is user a pharmaceutical manufacturer subject to 40 CFR 439? Yes ✓ No ___
If yes, has user certified to the absence of cyanide? Yes ✓ No ___
If yes, Special Condition E.15 is applicable. ~~MODIFIED.~~
~~If no, must total cyanide limitations be adjusted? Yes ___ No ___~~
~~If yes, calculate adjusted limitations. Is worksheet attached? Yes ___ No ___~~
If yes, has user certified to the absence of other specific regulated pollutants? Yes ✓ No ✓
If yes, Special Conditions E.22 and E.23 are applicable. (FOR SP 920)
If yes, has user requested the use of surrogate pollutants for monitoring? Yes ✓ No ___
If yes, Special Condition E.24 is applicable.

37. Is user a pesticide formulator/packager/repackager subject to 40 CFR 455? Yes ___ No ✓
If yes, has user requested and been approved for the pollution prevention allowable discharge option? Yes ___ No ___
If yes, Special Condition 455a is applicable.

38. Is user a metal molder/caster subject to 40 CFR 464? Yes ___ No ✓
If yes, Special Condition D.4 is applicable.

39. Is user a coil coater subject to 40 CFR 465? Yes ___ No ✓
If yes, is user subject to 40 CFR 465 Subpart(s) A__, B__ or C__? Yes ___ No ___
If yes, Special Condition E.16 is applicable.
If yes, is user subject to 40 CFR 465 Subpart D? Yes ___ No ___
If yes, Special Conditions D.5, D.9 and E.17 are applicable.
If yes, is there a separate categorical SP for the regulated waste?
If yes, include O&G (Hydrocarbon) in the list of parameters at the categorical SP.
If no, and categorical waste discharges at a combined ord/cat SP point, include O&G (Total) and O&G (Hydrocarbon) in the list of parameters at the combined SP.

40. Do any sampling points have both Ordinance & Categorical TTO limits? Yes ___ No ✓
If yes, which SP(s):_____
Is Special Condition E.13 applicable? Yes ___ No ___
If yes, explain:_____.

41. Can user certify, in lieu of monitoring, for categorical TTO at a categorical or combined SP? Yes ___ No ✓
If yes, which SP(s):_____
If yes, Special Condition E.11 ___ or E.12 ___ is applicable.

42. May user monitor for Oil & Grease, in lieu of TTO, at a categorical SP? Yes ___ No ✓
If yes, which SP(s):_____
If yes, Special Condition D.8 is applicable.
If yes, is a modification of Special Condition E.13 applicable? Yes ___ No ___

List all the Special Conditions from Part 2 that are applicable to this permit:

#E.19 905 #B.1(MOD) 905 #E.15(MOD) 060 915 920 931 930 935 #E.22 920 #E.24 920 #E.20 930 # ___ # ___ # ___ # ___

Rev 12/01

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for MODIFICATION

GDb: X
P:\ X
PIMS: X
File: X

Permit to be Modified:

Company Name: MALLINCKRODT INC.

Location: 8600 N. 2nd ST. / ST. LOUIS, MO 63147

Permit No: 2112059 6-00 Effective Date: 08.08.05

What is to be Modified:

Briefly explain what is to be modified and then list the pages affected.

REMOVE SP 928 & AMEND RELATED SPECIAL CONDITIONS.

Pg. # 1 ADD MODIFICATION DATE. REMOVE SP 928 REFERENCE.

Pg. # 8 REVISE SP 010 FLOW. REMOVE SP 928 REFERENCE.

Pg. # 24-25 (SP 928) ADD "THIS PAGE VOID".

Pg. # 43 II.C.6, II.C.7, & II.D.3; REMOVE SP 928 REFERENCE.

Reasons for Modification:

Cite regulation, policy, etc. and identify any other documents which support the modification.

SEE ATTACHMENTS.

Prepared by: FTG	Date: 07.28.05	Permit Modified by: FTG	Date 07.28.05
Reviewed by: DMM	Date: 08-01-05	Entire Permit Reissued?	NO
		Only these pages modified:	1, 8, 24, 25, & 43

Rev 12/01

tyco
Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

21120596 00

July 26, 2005

Mr. Doug Mendoza
Manager, Environmental Compliance
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: Request to de-activate SP928
Permit No. 21120596-00

Dear Mr. Mendoza:

On March 7, 2005, MSD issued an Administrative Compliance Order concerning chloroform exceedances at sample point (SP928). Mallinckrodt has been collecting the wastewater discharge from SP928 for treatment or offsite disposal since December, 2004. After extensive study Mallinckrodt is requesting de-activation of this sample point and close-out of the administrative compliance order. Mallinckrodt will not discharge any wastewater from this discharge point unless additional process or equipment changes are instituted and re-activation approved by MSD.

Additionally, I wanted to take formally confirm my move into a new role at Mallinckrodt. The new technical contact for wastewater issues is Mr. Jeff DeWald. Jeff can be reached at 654-1294.

If you have any questions or require more detailed information, please contact me at (314) 654-1920 or Jeff.

Thank you,

Karen Siebenberger
Principal HSE Engineer

RECEIVED
JUL 27 2005
DIVISION OF
ENVIRONMENTAL COMPLIANCE

From: Jason Gill
To: Fabian Grabski
Date: 7/28/2005 1:30:56 PM
Subject: Re: Mallinckrodt 21120596-00

Fab,

Karen informed me during the insp. on 7/20 that they were going to go ahead and close SP928 in order to get out of the AO issued last year. I was to wait for the formal request (sounds like you have it) from Karen S. on it. I need to talk to Doug then to see if I should make another site visit to verify. This would be the only permit change.

JAG

>>> Fabian Grabski 7/28/2005 12:41:42 PM >>>
J,

I am in receipt of a letter from them requesting that SP 928 be closed. Did you confirm this via-avis your 7/20 inspection? Any other changes for the permit from the inspection????

Fab

CC: Doug Mendoza

Metropolitan
St. Louis Sewer
District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

August 1, 2005

Jeff DeWald
HS&E Engineer
MALLINCKRODT INC.
3600 N. 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 N. 2nd Street

Dear Mr. DeWald:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on June 1, 2005, for the premise identified above, is hereby modified as per the attached pages 1, 8, 24, 25, and 43. This modification removes sampling point 928 and amends related special conditions. This letter and the revised pages 1, 8, 24, 25, and 43 should be affixed to your permit as your official record and become a part thereof. These changes were identified pursuant to your July 26, 2005 letter to the District and the District's July 20, 2005 inspection of the above premise.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please note that the District's March 7, 2005 Administrative Order to Mallinckrodt Inc. is hereby closed pursuant to this permit modification.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

Enclosure

~~cc: Industry file~~
Permit

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2005
MODIFICATION DATE: August 08, 2005
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2ND STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 22
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 919, 920, 927, 930, 931, 932, 933, 934

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski

Douglas M. Mendoza, P.E.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,631,301

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918-920, 927, & 930-934)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 928

SAMPLING POINT LOCATION: Tank 309 (lime press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Benzene [mg/L]****	3	Daily Max	Once/3 mo
Benzene [mg/L]****	.7	Monthly Avg	
n-Butyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]****	8.2	Monthly Avg	
Chlorobenzene [mg/L]****	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]****	.7	Monthly Avg	
Chloroform [mg/L]****	.1	Daily Max	Once/3 mo
Chloroform [mg/L]****	.0	Monthly Avg	
1,2-Dichlorobenzene [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]****	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]****	8.2	Monthly Avg	
Diethylamine [mg/L]****	255	Daily Max	Once/year
Diethylamine [mg/L]****	100	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
n-Heptane [mg/L]****	3	Daily Max	Once/3 mo
n-Heptane [mg/L]****	.7	Monthly Avg	
n-Hexane [mg/L]****	3	Daily Max	Once/3 mo
n-Hexane [mg/L]****	.7	Monthly Avg	
Isobutyraldehyde [mg/L]****	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	0.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	

THIS PAGE VOID

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **928**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]****	0.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]****	[illegible]	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	
Methyl Formate [mg/L]****	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]****	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]****	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]****	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]****	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]****	3.4	Monthly Avg	
Toluene [mg/L]****	.3	Daily Max	Once/3 mo
Toluene [mg/L]****	.2	Monthly Avg	
Triethylamine [mg/L]****	255	Daily Max	Once/year
Triethylamine [mg/L]****	100	Monthly Avg	
Xylene [mg/L]****	3	Daily Max	Once/3 mo
Xylene [mg/L]****	.7	Monthly Avg	

THIS PAGE VOID

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.7** of the permit conditions.

6. At sampling points **080, 915, 918-920, 927**, and **930-934,** the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

7. Monitoring at sampling point **927** shall include the following:

a. Samples collected from sampling point **927** (Tank 308) shall be representative of the contents within Tank 308;

b. Permittee shall collect samples from sampling point **927** while Tank 308 is discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

1. The permittee is not required to sample discharges at sampling points **001** or **002** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001** or **002** since the last report.

2. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 919, 920, 931, 932, 933,** and **934**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 919, 920, 931, 932, 933,** and **934**.

4. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for MODIFICATION

GDb: X
P:\ X
ECIMS: X
File: ___

Permit to be Modified:

Company Name: MALLINCKRODT INC.

Location: 3600 N. 2nd STREET ST. LOUIS, MO 63147

Permit No: 2120596-00 Effective Date: 11.01.03

What is to be Modified:

Briefly explain what is to be modified and then list the pages affected.

ADD SP011. REMOVE SPs 007, 914, & 926. REMOVE METHYL CELLOSOLVE FROM 439 SPs. AMEND SPECIAL CONDITIONS.

Pg. #1 ADD MODIFICATION DATE. REMOVE SP 007 & SP914 & SP926. ADD SP 011.

Pg. #6 ADD "THIS PAGE VOID" TO SP 007.

Pg. #9 AMEND DISCHARGE COMPONENTS; REMOVE SPs 914 & 926.

Pg. #9A ADD PAGE 9A & SP 011.

Reasons for Modification:

OTHER PAGES

Cite regulation, policy, etc. and identify any other documents which support the modification.

SEE ATTACHED DOCUMENTS

Prepared by: FG	Date: 10.22.03
Reviewed by: DMM	Date: 10-23-03

Permit Modified by: FG	Date: 10.22.03
Entire Permit Reissued?	NO
Only these pages modified:	1, 6, 9, 9A, 17, 18, 20, 22, 24, 26, 28, 30, 31, 34, & 41-44.

Rev 12/01

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for MODIFICATION

Pg. # 17-18 ADD "THIS PAGE VOID" TO SP 914.

Pg. # 20, 22, 24, 26, 28, 30; REMOVE METHYL CELLOSOLVE FROM SPs 915, 916, 917, 918, 919, & 920.

Pg. # 31 - ADD "THIS PAGE VOID" TO SP 926.

Pg. # 34 REMOVE METHYL CELLOSOLVE FROM SP 928.

Pg. # 41 II.C.2; ADD SP 011.

Pg. # 42 II.C.7; REMOVE & REPLACE W/ NEW CONDITION RELATING TO DMAC & BUDG 505. II.C.4; REMOVE SP 007 & ADD SP 011.

Pg. # 43 II.D.1; REMOVE SP 007.

Pg. # 44 AMENDED DUE TO SHIFTING PREVIOUS CONDITIONS.

Pg. #___

Pg. #___

Pg. #___

Pg. #___

Fabian,

21120596-00 Mallinckrodt permit needs to be modified. See 8/21/03, 9/12/03, 10/3/03 and 10/16/03 letters from them. See also the 9/11/03 inspection report (especially comments at end of report).

Need to remove SP926. Add a special condition in the permit requiring them to continue in-process monitoring to verify absence of DMAC in bldg 505, and to certify no discharge of DMAC from bldg 505. Will also need to modify associated special conditions for SPs 912/926.

Need to remove methyl cellosolve monitoring from all pharmaceutical sample points. 40 CFR 439 was revised earlier this year, and removed it from the list of regulated pollutants.

Need to add SP011. Set it up like SP008. SP011 collects plant 5 overflow (the rest of the facility's emergency overflow goes through SP088).

Need to remove SP914. That flow has been rerouted through the pretreatment system.

Remember to inactivate the SPs & stuff that are being eliminated.

--- DMM 10/22/03

+ REMOVE SP 007.
FG

tyco Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

Permit

October 16, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Request to eliminate SP007
Permit No. 21120596-00

This letter is to formally request the elimination of SP007 from Mallinckrodt's permit. SP007 is the manhole in the Railroad spur under the McKinley Bridge. It is described as the line running North on Hall, then East along Salisbury to interceptor at Wharf. A review of records and current operations indicate no plant flow to this point other than stormwater. No process or sanitary wastewaters are discharged and no vehicle unloading areas discharge to this point. Since MSD is in the process of re-issuing the permit for Mallinckrodt, I wanted to make this request so that all sample points listed are accurate and capture current discharges appropriately.

OK

If you have any further questions, please call me at (314) 654-1920.

Point originally received discharge from bldgs that are now gone.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

Permit

October 3, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: **Alternate in-process testing for SP926**
Permit No. 21120596-00

This letter is to provide you with additional information on dimethylacetamide (DMAC) control from the Ioversol production buildings. As discussed, in lieu of Building 505 wastewater analysis for DMAC, there is on-going in-process testing that will also ensure no detectable DMAC in the building wastewater. DMAC content in the Building 505 Ioversol is measured at the second processing step to ensure DMAC does not exceed 50 ppm. Again, Building 505 is a very water intensive operation, so that DMAC will not be detected in the wastewater. We also discussed that the DMAC testing is actually performed because it is part of the original drug master file submitted to the FDA and can not easily be changed due to FDA regulations.

Additionally, prior to the Ioversol being moved from Building 504 (SP912)to Building 505 (SP926), conductivity of the intermediate is checked and recorded on building trend charts. Trending the decrease in conductivity indicates a concurrent decrease in DMAC concentration. Ioversol above a certain conductivity (corresponding to DMAC concentration) will not be moved forward to Building 505.

Add as S.C. to permit. -DMW

Mallinckrodt recognizes MSD's concern with DMAC discharges and continued monitoring at SP912 (Building 504) will accurately reflect DMAC discharges from the plant. If you have any further questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger
Principal HSE Engineer

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Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

Permit

September 12, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: **Request to eliminate SP926**
Permit No. 21120596-00

In January of this year, Mallinckrodt requested a modification to SP912 which was the point of wastewater discharge from Buildings 504 and 505 – Ioversol production. Wastewater from Building 505 was discharged through a sump and then pumped over to Building 504 – Tank 450 where it combined with the Building 504 effluent. Mallinckrodt requested this change due to operational difficulties in pumping over the Building 505 effluent. Mallinckrodt provided process information that showed no dimethylacetamide (DMAC), the only parameter monitored at SP912, was used in Building 505.

MSD responded that the effluents could be separated but that the current SP912 pounds DMAC per day limit would need to be applied to the combined effluents. SP 926 was established for Building 505 with a DMAC limit as < 5 mg/L (non-detect). Building 504 wastewater effluent, SP912, retained the established DMAC limits.

Mallinckrodt agreed that a DMAC level of non-detect was acceptable and requested that MSD be open to revisiting this subject after SP926 data had been collected with the hope of eliminating this monitoring. DMAC is present in the crude Ioversol entering Building 505 at levels less than 100 ppm w/w. Building 505 uses water in excess of 100,000 gpd to decolorize, deionize, and further purify the Ioversol. Mallinckrodt's continued in-process testing ensures that no detectable amounts of DMAC will be discharged in the wastewater.

← after DMAC removal in bldg 504.

Mallinckrodt has now conducted weekly wastewater sampling of Building 505 for 7 months (31 samples) with all results at the expected non-detect level (<5 mg/L). Based on these results and the continued in-process monitoring of the product for DMAC, Mallinckrodt requests the elimination of SP926. MSD's concern for DMAC monitoring is achieved through the continued Building 504 effluent sampling at SP912.

← Add an a specific condition in permit.

conductivity of DMAC salts measured for each batch

Kevin will send letter

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SEP 17 2003

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Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

Jason,
FYI

August 21, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Corrective Actions for SP914 and SP916
Permit No. 21120596-00

This letter is in follow-up to Mallinckrodt's corrective actions regarding the above sample points.

On July 17th, I notified you by phone that samples obtained on July 1st (SP914 @22:30 and SP916 @22:45) had failed toluene at 0.83 and 1.5 mg/L respectively. These results are above the maximum daily limit of 0.3 and the monthly average of 0.2 mg/L.

Initial investigations into the failure at SP914 indicated that a dip tube normally used for toluene transfer was used to transfer alcohol, thereby contaminating the alcohol. SP914 was sampled on four additional days in July, with the first three samples passing and the final sample collected July 30th failing for toluene. The July 30th failure at 3.0 mg/L was phoned into you on August 7th. The monthly average for SP914 was 0.83 mg/L. Mallinckrodt has since found toluene contamination in the alcohol process that discharges at SP914. Since this is not a high volume discharge (average 450 gpd), Mallinckrodt has decided to route this wastewater discharge to the central PEG treatment system and eliminate the SP914 discharge. Due to being in the first month of the current six month period used to calculate SNC, Mallinckrodt's actions are in avoidance of any SNC determination by MSD.

OK. WE HAD DISCUSSED ON TELEPHONE. -DMM

At SP916, a recovery batch was being processed and was identified as the source of toluene in the July 1st sample. Future recovery batches will discharge the wastewater to the PEG treatment system. Typical batches will continue to discharge through SP916.

For SP916, samples were obtained on 10 additional days in July. The daily average of 0.9867 mg/L toluene in the July 22nd samples exceeded the daily maximum, as did a single sample on July 23rd at 0.56 mg/L. These exceedances were reported to you on July 29th and July 31st, respectively. Nine out of the ten sampling days passed, but the monthly average for SP916 was 0.2732 mg/L. Further adjustment of processing time and temperature have been instituted and this sample point demonstrated compliance in August with toluene at <0.001 mg/L toluene (August 5th at 06:55).

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Mallinckrodt

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

October 28, 2004

Mr. Tom Boehm
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2004 3rd Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Boehm:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 3rd quarter 2004. Please note that Mallinckrodt has performed additional monitoring at SP919 for chloroform and has found no exceedances.

If you have any questions or require more detailed information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger
Principal HSE Engineer

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OCT 29 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

4CB
12/02/04
Rec'd

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	0

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

(A.) CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

PDV I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

RECEIVED
OCT 29 2004
DIVISION OF ENVIRONMENTAL COMPLIANCE

Print/type name of signing official: Paul Vander-Heyden

Title: Site Director Telephone: 314-654-8090

Signature: PDVanderHeyden Date: 10/28/04

radrpt.doc 2/00

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

A. If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[PDV] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 003.

B. If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[PDV] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit.

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

D. If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[PDV] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 915, 929.

E. If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[PDV] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 except for wastes conveyed by SP905 (should refer to 40CFR439 @ SP082) TCB-

F. Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[PDV] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufactur process subject to Categorical Standards in 40 CFR 439. SP 005, 010, 080, 915, 917, 919, 920, 928, 929, 930, 931, 932 and 933

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. Everyone must complete the information under statement B and sign this report.

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____, I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing of the last discharge monitoring report.

B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

RECEIVED OCT 28 2004 DIVISION OF ENVIRONMENTAL COMPLIANCE

Print or type name of signing official: Paul Vander Heyden

Title: Site Director

Telephone: 314-654-8040

Signature: PD Vander Heyden

Date: 10/28/04

SMF 10/93

4CB
12/02/04
SS ✓
Per ✓
Certs ✓
DE ✓

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

-III E refers to wrong CFR reference & wrong SP

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) _X__(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->	001						
DATES ON WHICH SAMPLES WERE COLLECTED	---->	NA						
TIMES AT WHICH SAMPLES WERE COLLECTED	---->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

RECEIVED
OCT 29 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) _X_(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		002					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,800					gal/day
NO MONITORING REQUIRED ✓								
SANITARY ONLY								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X_(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->	003		009		099		
DATES ON WHICH SAMPLES WERE COLLECTED	----->	08/05/2004		08/05/2004		calculated		
TIMES AT WHICH SAMPLES WERE COLLECTED	----->	7:40		8:30				
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	29,376	M	7,517	E	21,859	gal/day
Oil & Grease	200	G	6.9	G	7.8	E	0.000	mg/l
Biochemical Oxygen Demand	****	C	<72.9	C	<72.9	E	0.000	mg/l
Chemical Oxygen Demand	****	C	96	C	199	E	0.000	mg/l
Total Suspended Solids	****	C	15	C	47	E	0.000	mg/l
Temperature	60	G	24	G	26	E	25	deg C
pH Acidic	5.5	G	7	G	7	E	7	S.U.
pH Basic	11.5	G	8	G	8.5	E	8	S.U.

not entered

* Where 2 pH readings are presented through this report, 7 was used a placeholder. During conversation with Karen Siebenberger on 12/03/04, she stated they will edit report to show only one pH reading per column on subsequent reports.

TCB

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X__(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		005						
DATES ON WHICH SAMPLES WERE COLLECTED	----->		08/05/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:50						
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow							UNITS
FLOW		E	32,000						gal/day
Oil & Grease	200	G	9.1						mg/l
Biochemical Oxygen Demand	****	C	<72.9						mg/l
Chemical Oxygen Demand	****	C	94						mg/l
Total Suspended Solids	****	C	3						mg/l
Temperature	60	G	28						deg C
pH Acidic	5.5	G	7						S.U.
pH Basic	11.5	G	9						S.U.

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		008					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		09/18/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		9:00					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E						gal/day
Oil & Grease	200	G	15.1					mg/l
Biochemical Oxygen Demand	****	C	31.40					mg/l
Chemical Oxygen Demand	****	C	93.0					mg/l
Temperature	60	G	25.0					deg C
Total Suspended Solids	****		25.0					mg/L
pH Acidic	5.5	G	~~7.0~~					S.U.
pH Basic	11.5	G	8.7					S.U.

Revised 12/15/04

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Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	--->		008						
DATES ON WHICH SAMPLES WERE COLLECTED	--->		9/18/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED	--->		9:00						
PARAMETER		LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW			E	300.00	E		E		gal/day
Chloromethane			G	<0.010	G		G		mg/l
Vinyl Chloride			G	0.0019	G		G		mg/l
Bromomethane			G	<0.010	G		G		mg/l
Chloroethane			G	<0.010	G		G		mg/l
Methylene Chloride			G	0.0025	G		G		mg/l
Chloroform			G	0.0029	G		G		mg/l
1,1-Dichloroethane			G	<0.005	G		G		mg/l
1,2-Dichloroethane			G	<0.005	G		G		mg/l
1,1-Dichloroethene			G	<0.005	G		G		mg/l
1,2-Dichloropropane			G	<0.005	G		G		mg/l
Carbon Tetrachloride			G	<0.005	G		G		mg/l
cis-1,3-Dicholropropene			G	<0.005	G		G		mg/l
trans-1,3-Dichloropropene			G	<0.005	G		G		mg/l
trans-1,2-Dichloroethene			G	<0.005	G		G		mg/l
Dibromochloromethane			G	<0.005	G		G		mg/l
Bromodichloromethane			G	0.00088	G		G		mg/l
1,1,1-Trichloroethane			G	<0.005	G		G		mg/l
1,1,2-Trichloroethane			G	0.001	G		G		mg/l
Benzene			G	<0.005	G		G		mg/l
Toluene			G	0.0022	G		G		mg/l
Trichloroethene			G	<0.005	G		G		mg/l
Ethylbenzene			G	<0.005	G		G		mg/l
1,1,2,2-Tetrachloroethane			G	<0.005	G		G		mg/l
Tetrachloroethene			G	<0.005	G		G		mg/l
Chlorobenzene			G	<0.005	G		G		mg/l
1,3-Dichlorobenzene			G	<0.005	G		G		mg/l
1,2-Dichlorobenzene			G	<0.005	G		G		mg/l
1,4-Dichlorobenzene			G	<0.005	G		G		mg/l
Bromoform			G	<0.005	G		G		mg/l
2-Chloroethylvinylether			G	<0.05	G		G		mg/l
Acrolein			G	<0.1	G		G		mg/l
Acrylonitrile			G	<0.025	G		G		mg/l
Phenol			G	<0.01	G		G		mg/l
2-Chlorophenol			G	<0.01	G		G		mg/l
2,4-Dimethylphenol			G	<0.01	G		G		mg/l
2,4-Dichlorophenol			G	<0.01	G		G		mg/l
2-Nitrophenol			G	<0.01	G		G		mg/l
4-Nitrophenol			G	<0.01	G		G		mg/l
2,4-Dinitrophenol			G	<0.05	G		G		mg/l
2,4,6-Trichlorophenol			G	<0.01	G		G		mg/l
Pentachlorophenol			G	<0.05	G		G		mg/l
4-Chloro-3-methylphenol			G	<0.01	G		G		mg/l
2-Methyl-4,6-dinitrophenol			G	<0.05	G		G		mg/l
N-nitrosodimethylamine			G	<0.01	G		G		mg/l
Bis(2-chloroethyl)ether			G	<0.01	G		G		mg/l
Bis(2-chloroisopropyl)ether			G	<0.01	G		G		mg/l
N-nitrosodi-n-propylamine			G	<0.01	G		G		mg/l
Hexachloroethane			G	<0.01	G		G		mg/l
Nitrobenzene			G	<0.01	G		G		mg/l
Isophorone			G	<0.01	G		G		mg/l
Bis(2-chloroethoxy)methane			G	<0.01	G		G		mg/l
1,2,4-Trichlorobenzene			G	<0.01	G		G		mg/l

Revised 12/15/04

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Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		008					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		9/18/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		9:00					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	300,00	E		E		gal/day
Dimethyl phthalate (NY)		G	<0.01	G		G		mg/l
Hexachlorobutadiene (SP)		G	<0.01	G		G		mg/l
Hexachlorocyclopentadiene (SP)		G	<0.05	G		G		mg/l
2-Chloronapthalene		G	<0.01	G		G		mg/l
2,6-Dinitrotoluene		G	<0.01	G		G		mg/l
2,4-Dinitrotoluene (SP)		G	<0.01	G		G		mg/l
4-Chlorophenyl-phenylether		G	<0.01	G		G		mg/l
4-Bromophenyl-phenylether		G	<0.01	G		G		mg/l
Diethyl phthalate (SP)		G	<0.01	G		G		mg/l
Hexachlorobenzene (SP)		G	<0.01	G		G		mg/l
N-nitrosodiphenylamine		G	<0.01	G		G		mg/l
1,2-Diphenylhydrazine		G	<0.01	G		G		mg/l
Di-n-butyl phthalate		G	<0.01	G		G		mg/l
3,3-Dichlorobenzidine		G	<0.05	G		G		mg/l
Bis(2-ethylhexyl)phthalate (NY)		G	<0.01	G		G		mg/l
Butyl benzyl phthalate		G	<0.01	G		G		mg/l
Di-n-octyl-phthalate		G	<0.01	G		G		mg/l
Benzidine (SP)		G	<0.1	G		G		mg/l
Naphthalene (SP)		G	<0.01	G		G		mg/l
Phenanthrene (SP)		G	<0.01	G		G		mg/l
Fluorene		G	<0.01	G		G		mg/l
Anthracene		G	<0.01	G		G		mg/l
Acenapthene		G	<0.01	G		G		mg/l
Acenaphthylene		G	<0.01	G		G		mg/l
Benzo(a)pyrene (SP)		G	<0.01	G		G		mg/l
Chrysene		G	<0.01	G		G		mg/l
Fluoranthene		G	<0.01	G		G		mg/l
Pyrene		G	<0.01	G		G		mg/l
Benzo(a)anthracene		G	<0.01	G		G		mg/l
Benzo(b)fluoranthene		G	<0.01	G		G		mg/l
Benzo(k)fluoranthene		G	<0.01	G		G		mg/l
Dibenzo(a,h)anthracene		G	<0.01	G		G		mg/l
Benzo(g,h,i)perylene		G	<0.01	G		G		mg/l
Ideno(1,2,3-cd)pyrene		G	<0.01	G		G		mg/l
Total Toxic Organics	5.52	--	0.01138		0		0	mg/l
Shaded cells represent known absent or suspected absent								

TTO008 = L 0.425

Revised 12/15/04

METROPOLITAN ST. LOUIS SEWER DISTRICT
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Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X__(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		010							
DATES ON WHICH SAMPLES WERE COLLECTED	----->		8/5/2004							
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:15							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow								UNITS
FLOW		E	1,860,482							gal/day
Oil & Grease	200	G	<10							mg/l
Biochemical Oxygen Demand	****	C	422							mg/l
Chemical Oxygen Demand	****	C	858							mg/l
Total Suspended Solids	****	C	50							mg/l
Temperature	60	G	36							deg C
pH Acidic	5.5	G	see attached							S.U.
pH Basic	11.5	G	see attached							S.U.
Chromium	5	C	0.0104							mg/l
Copper	2.7	C	0.0153 B							mg/l
Nickel	2.3	C	<0.04							mg/l
Zinc	3	C	0.058							mg/l

Mallinckrodt pH Monitoring for SP010: August 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
08/05/2004	12:32	3.5	2	August-04
08/12/2004	12:46	4.1		August-04
08/12/2004	12:48	4.1	4	August-04
08/12/2004	12:54	3.9		August-04
08/12/2004	12:56	3.9	4	August-04
08/12/2004	13:00	5.4	2	August-04
08/18/2004	12:30	4.4		August-04
08/18/2004	12:32	4.3	4	August-04
08/18/2004	12:38	4		August-04
08/18/2004	12:40	4	4	August-04
08/26/2004	8:36	4.5		August-04
08/26/2004	8:38	4.5	4	August-04
08/26/2004	8:44	4	2	August-04
	August Total		26	

Mallinckrodt pH Monitoring for SP010: September 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
09/03/2004	10:26	4.3	2	September-04
09/03/2004	10:30	4		September-04
09/03/2004	10:32	4.1		September-04
09/03/2004	10:34	4.1	6	September-04
09/09/2004	10:36	5.1		September-04
09/09/2004	10:38	0		September-04
09/09/2004	10:40	0		September-04
09/09/2004	10:42	0		September-04
09/09/2004	10:44	3		September-04
09/09/2004	10:46	3		September-04
09/09/2004	10:48	14		September-04
09/09/2004	10:50	3.8		September-04
09/09/2004	10:52	3.8	18	September-04
09/09/2004	10:56	3.9		September-04
09/09/2004	10:58	4	4	September-04
09/15/2004	10:46	4.6		September-04
09/15/2004	10:48	4.5	4	September-04
09/15/2004	10:54	4		September-04
09/15/2004	10:56	4	4	September-04
09/19/2004	9:26	11.6		September-04
09/19/2004	9:28	11.6		September-04
09/19/2004	9:30	11.6		September-04
09/19/2004	9:32	11.6		September-04
09/19/2004	9:34	11.6		September-04
09/19/2004	9:36	11.6	12	September-04
09/22/2004	9:40	3.4		September-04
09/22/2004	9:42	4	4	September-04
09/22/2004	9:46	3.5	2	September-04
09/22/2004	9:52	3.9		September-04
09/22/2004	9:54	3.9		September-04
09/22/2004	9:56	3.8	6	September-04
09/29/2004	13:10	4.2	2	September-04
09/29/2004	13:16	4	2	September-04
	September Total		66	

Mallinckrodt pH Monitoring for SP010: July 2004

No events > 60 minutes
TCB

Date	Time	pH	Total for Event in Minutes	Month-Year
07/01/2004	7:12	0	2	July-04
07/07/2004	10:00	4.2		July-04
07/07/2004	10:02	4.1	4	July-04
07/07/2004	10:08	4		July-04
07/07/2004	10:10	3.9	4	July-04
07/08/2004	7:34	5.2	2	July-04
07/13/2004	14:06	11.6		July-04
07/13/2004	14:08	11.6		July-04
07/13/2004	14:10	11.6		July-04
07/13/2004	14:12	11.6		July-04
07/13/2004	14:14	11.6		July-04
07/13/2004	14:16	11.6		July-04
07/13/2004	14:18	11.6		July-04
07/13/2004	14:20	11.6		July-04
07/13/2004	14:22	11.6	18	July-04
07/15/2004	7:52	4		July-04
07/15/2004	7:54	3.9	4	July-04
07/15/2004	8:02	3.9		July-04
07/15/2004	8:04	3.9	4	July-04
07/20/2004	19:46	11.6		July-04
07/20/2004	19:48	11.6		July-04
07/20/2004	19:50	11.6		July-04
07/20/2004	19:52	11.6		July-04
07/20/2004	19:54	11.6	10	July-04
07/21/2004	12:46	4.3		July-04
07/21/2004	12:48	4.3	4	July-04
07/21/2004	12:54	4		July-04
07/21/2004	12:56	4	4	July-04
07/25/2004	13:07	0.1	2	July-04
07/30/2004	14:48	4		July-04
07/30/2004	14:50	4	4	July-04
07/30/2004	14:58	4		July-04
07/30/2004	15:00	4		July-04
07/30/2004	15:02	4	6	July-04
07/30/2004	15:08	4	2	July-04
		July Total	70	

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Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		011					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		9/18/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E						gal/day
Oil & Grease	200	G	<0.05					mg/l
Biochemical Oxygen Demand	****	C	< 5.7					mg/l
Chemical Oxygen Demand	****	C	48					mg/l
Total Suspended Solids	****	C	14					mg/l
Temperature	60	G	24					deg C
pH	5.5-11.5	G	8.4					S.U.

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Analysis Performed By: STL

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MSD SAMPLE POINT REFERENCE NUMBERS	----->		080		088			
DATES ON WHICH SAMPLES WERE COLLECTED	----->		8/5/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:00					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=compc		G=grab,C=composite,M=measured flow,E=e				UNITS
FLOW		E	10,775					gal/day
Oil & Grease	200	G	<1.0					mg/l
Biochemical Oxygen Demand	****	C	< 72.9					mg/l
Chemical Oxygen Demand	****	C	126.0					mg/l
Total Suspended Solids	****	C	64.0					mg/l
Temperature	60	G	23					deg C
pH	5.5-11.5	G	6.5					S.U.

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MSD SAMPLE POINT REFERENCE NUMBERS	---->		011					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		9/18/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	100000	E		E		gal/day
Chloromethane		G	<0.01	G		G		mg/l
Vinyl Chloride		G	<0.01	G		G		mg/l
Bromomethane		G	ND LO 01 -	G		G		mg/l
Chloroethane		G	<0.01	G		G		mg/l
Methylene Chloride		G	0.0028	G		G		mg/l
Chloroform		G	0.0084	G		G		mg/l
1,1-Dichloroethane		G	<0.005	G		G		mg/l
1,2-Dichloroethane		G	<0.005	G		G		mg/l
1,1-Dichloroethene		G	<0.005	G		G		mg/l
1,2-Dichloropropane		G	<0.005	G		G		mg/l
Carbon Tetrachloride		G	<0.005	G		G		mg/l
cis-1,3-Dicholropropene		G	<0.005	G		G		mg/l
trans-1,3-Dichloropropene		G	<0.005	G		G		mg/l
trans-1,2-Dichloroethene		G	<0.005	G		G		mg/l
Dibromochloromethane		G	<0.005	G		G		mg/l
Bromodichloromethane		G	0.0011	G		G		mg/l
1,1,1-Trichloroethane		G	<0.005	G		G		mg/l
1,1,2-Trichloroethane		G	<0.005	G		G		mg/l
Benzene		G	<0.005	G		G		mg/l
Toluene		G	<0.005	G		G		mg/l
Trichloroethene		G	<0.005	G		G		mg/l
Ethylbenzene		G	<0.005	G		G		mg/l
1,1,2,2-Tetrachloroethane		G	<0.005	G		G		mg/l
Tetrachloroethene		G	<0.005	G		G		mg/l
Chlorobenzene		G	<0.005	G		G		mg/l
1,3-Dichlorobenzene		G	<0.005	G		G		mg/l
1,2-Dichlorobenzene		G	<0.005	G		G		mg/l
1,4-Dichlorobenzene		G	<0.005	G		G		mg/l
Bromoform		G	<0.005	G		G		mg/l
2-Chloroethylvinylether		G	<0.05	G		G		mg/l
Acrolein		G	<0.1	G		G		mg/l
Acrylonitrile		G	<0.025	G		G		mg/l
Phenol		G	<0.01	G		G		mg/l
2-Chlorophenol		G	<0.01	G		G		mg/l
2,4-Dimethylphenol		G	<0.01	G		G		mg/l
2,4-Dichlorophenol		G	<0.01	G		G		mg/l
2-Nitrophenol		G	<0.01	G		G		mg/l
4-Nitrophenol		G	<0.01	G		G		mg/l
2,4-Dinitrophenol		G	<0.05	G		G		mg/l
2,4,6-Trichlorophenol		G	<0.01	G		G		mg/l
Pentachlorophenol		G	<0.05	G		G		mg/l
4-Chloro-3-methylphenol		G	<0.01	G		G		mg/l
2-Methyl-4,6-dinitrophenol		G	<0.05	G		G		mg/l
N-nitrosodimethylamine		G	<0.01	G		G		mg/l
Bis(2-chloroethyl)ether		G	<0.01	G		G		mg/l
Bis(2-chloroisopropyl)ether		G	<0.01	G		G		mg/l
N-nitrosodi-n-propylamine		G	<0.01	G		G		mg/l
Hexachloroethane		G	<0.01	G		G		mg/l
Nitrobenzene		G	<0.01	G		G		mg/l
Isophorone		G	<0.01	G		G		mg/l
Bis(2-chloroethoxy)methane		G	<0.01	G		G		mg/l
1,2,4-Trichlorobenzene		G	<0.01	G		G		mg/l

Revised 12/15/04

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X_(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->	011						
DATES ON WHICH SAMPLES WERE COLLECTED	---->	9/18/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED	---->	8:30						
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	100000	E		E		gal/day
Dimethyl phthalate (A)		G	<0.01	G		G		mg/l
Hexachlorobutadiene (SP)		G	<0.01	G		G		mg/l
Hexachlorocyclopentadiene (SP)		G	<0.05	G		G		mg/l
2-Chloronapthalene		G	<0.01	G		G		mg/l
2,6-Dinitrotoluene		G	<0.01	G		G		mg/l
2,4-Dinitrotoluene (SP)		G	<0.01	G		G		mg/l
4-Chlorophenyl-phenylether		G	<0.01	G		G		mg/l
4-Bromophenyl-phenylether		G	<0.01	G		G		mg/l
Diethyl phthalate (SP)		G	<0.01	G		G		mg/l
Hexachlorobenzene (SP)		G	<0.01	G		G		mg/l
N-nitrosodiphenylamine		G	<0.01	G		G		mg/l
1,2-Diphenylhydrazine		G	<0.01	G		G		mg/l
Di-n-butyl phthalate		G	<0.01	G		G		mg/l
3,3-Dichlorobenzidine		G	<0.05	G		G		mg/l
Bis(2-ethylhexyl)phthalate (A)		G	<0.01	G		G		mg/l
Butyl benzyl phthalate		G	<0.01	G		G		mg/l
Di-n-octyl-phthalate		G	<0.01	G		G		mg/l
Benzidine (SP)		G	<0.1	G		G		mg/l
Naphthalene (SP)		G	<0.01	G		G		mg/l
Phenanthrene (SP)		G	<0.01	G		G		mg/l
Fluorene		G	<0.01	G		G		mg/l
Anthracene		G	<0.01	G		G		mg/l
Acenapthene		G	<0.01	G		G		mg/l
Acenaphthylene		G	<0.01	G		G		mg/l
Benzo(a)pyrene (SP)		G	<0.01	G		G		mg/l
Chrysene		G	<0.01	G		G		mg/l
Fluoranthene		G	<0.01	G		G		mg/l
Pyrene		G	<0.01	G		G		mg/l
Benzo(a)anthracene		G	<0.01	G		G		mg/l
Benzo(b)fluoranthene		G	<0.01	G		G		mg/l
Benzo(k)fluoranthene		G	<0.01	G		G		mg/l
Dibenzo(a,h)anthracene		G	<0.01	G		G		mg/l
Benzo(g,h,i)perylene		G	<0.01	G		G		mg/l
Ideno(1,2,3-cd)pyrene		G	<0.01	G		G		mg/l
Total Toxic Organics	5.52	--	0.0123		0		0	mg/l
Shaded cells represent known absent or suspected absent								

$TTO_{011} = 0.525$

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) __X__(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->				905			
DATES ON WHICH SAMPLES WERE COLLEC ---->				08/05/2004			
TIMES AT WHICH SAMPLES WERE COLLECT ---->				9:00			
PARAMETER	LIMIT (ave) (gm/day)	LIMIT (gm/day)	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW M=measured flow			UNITS	Lab results mg/L
FLOW			M	35,013		gal/day	
Chloromethane	52.41	140.56	G	0.623		gm/day	0.0047
Vinyl Chloride	46.22	81.96	G	1.325		gm/day	0.01
Chloroethane	52.41	140.56	G	1.325		gm/day	0.01
Methylene Chloride	17.15	81	G	0.663		gm/day	0.005
Chloroform	52.89	154.86	G	0.729		gm/day	0.0055
1,1-Dichloroethane	10.48	28.11	G	0.663		gm/day	0.005
1,2-Dichloroethane	85.77	273.51	G	0.663		gm/day	0.005
1,1-Dichloroethene	10.48	28.59	G	0.663		gm/day	0.005
1,2-Dichloropropane	93.39	378.33	G	0.663		gm/day	0.005
Carbon Tetrachloride	67.66	181.07	G	0.663		gm/day	0.005
cis-1,3-Dichloropropene	93.39	378.33	G	0.663		gm/day	0.005
trans-1,3-Dichloropropene	93.39	378.33	G	0.663		gm/day	0.005
trans-1,2-Dichloroethene	11.91	31.45	G	0.663		gm/day	0.005
1,1,1-Trichloroethane	10.48	28.11	G	0.663		gm/day	0.005
1,1,2-Trichloroethane	15.25	60.51	G	0.663		gm/day	0.005
Benzene	27.16	63.85	G	0.021		gm/day	0.00016
Toluene	13.34	35.26	G	0.663		gm/day	0.005
Trichloroethene	12.39	32.88	G	0.663		gm/day	0.005
Ethylbenzene	67.66	181.07	G	0.663		gm/day	0.005
Tetrachloroethene	24.78	78.14	G	0.663		gm/day	0.005
Chlorobenzene	67.66	181.07	G	0.663		gm/day	0.005
1,3-Dichlorobenzene	67.66	181.07	G	0.663		gm/day	0.005
1,2-Dichlorobenzene	93.39	378.33	G	0.663		gm/day	0.005
1,4-Dichlorobenzene	67.66	181.07	G	0.663		gm/day	0.005
2-Nitrophenol	30.97	110.07	G	1.325		gm/day	0.01
4-Nitrophenol	77.19	274.46	G	6.626		gm/day	0.05
2-Methyl-4,6-dinitrophenol	37.17	131.99	G	6.626		gm/day	0.05
Hexachloroethane	93.39	378.33	G	1.325		gm/day	0.01
Nitrobenzene	1065.91	3050.49	G	1.325		gm/day	0.01
1,2,4-Trichlorobenzene	93.39	378.33	G	1.325		gm/day	0.01
Dimethyl phthalate	9.05	22.4	G	1.325		gm/day	0.01
Hexachlorobutadiene	67.66	181.066	G	1.325		gm/day	0.01
Diethyl phthalate	21.92	53.84	G	1.325		gm/day	0.01
Hexachlorobenzene	93.39	378.33	G	1.325		gm/day	0.01
Di-n-butyl phthalate	9.53	20.49	G	1.325		gm/day	0.01
Bis(2-ethylhexyl)phthalate	45.27	122.93	G	1.325		gm/day	0.01
Naphthalene	9.05	22.4	G	1.325		gm/day	0.01
Phenanthrene	9.05	22.4	G	1.325		gm/day	0.01
Fluorene	9.05	22.4	G	1.325		gm/day	0.01
Anthracene	9.05	22.4	G	1.325		gm/day	0.01
Acenapthene	9.05	22.4	G	1.325		gm/day	0.01
Fluoranthene	10.48	25.73	G	1.325		gm/day	0.01
Pyrene	9.53	22.87	G	1.325		gm/day	0.01
Shaded values represent detection limits							

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X_(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		912						
DATES ON WHICH SAMPLES WERE COLLECTED	---->		See attached						
TIMES AT WHICH SAMPLES WERE COLLECTED	---->								
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow							UNITS
FLOW		M	See attached						gal/day
DMAC (daily max)	7091	C	See attached						lb/day
DMAC (monthly average)	5459	C	See attached						lb/day
	*								
* Monitoring requirement only.									

Times not supplied

DMAC Analysis and Mass Loadings
Jul-04

SP 912

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day
1-Jul	165,462	790	1,092
2-Jul			
3-Jul			
4-Jul			
5-Jul			
6-Jul			
7-Jul			
8-Jul	168,326	950	1,336
9-Jul			
10-Jul			
11-Jul			
12-Jul			
13-Jul			
14-Jul			
15-Jul	202,652	810	1,372
16-Jul			
17-Jul			
18-Jul			
19-Jul			
20-Jul			
21-Jul			
22-Jul	152,262	830	1,056
23-Jul			
24-Jul			
25-Jul			
26-Jul			
27-Jul			
28-Jul			
29-Jul	147,603	1,000	1,233
30-Jul			
31-Jul			
Avg (weighted):	167,261	876	1,218
Max:			1,372
Min:			1,056
Monthly Limit:	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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DMAC Analysis and Mass Loadings
Aug-04

SP 912

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day	
1-Aug				
2-Aug				
3-Aug				
4-Aug				
5-Aug	183562	950	1,457	
6-Aug				
7-Aug				
8-Aug				
9-Aug				
10-Aug				
11-Aug				
12-Aug	176873	820	1,212	
13-Aug				
14-Aug				
15-Aug				
16-Aug				
17-Aug				
18-Aug				
19-Aug	195650	860	1,406	
20-Aug				
21-Aug				
22-Aug				
23-Aug				
24-Aug				
25-Aug				
26-Aug	204657	700	1,197	
27-Aug				
28-Aug				
29-Aug				
30-Aug				
31-Aug				
Avg (weighted):	190185	833	1,323	
Max:	204657	950	1,457	
Min:	176873	700	1,197	
Monthly Limit:	n/a	n/a	5,459	
Daily Max:	n/a	n/a	7,091	

DMAC Analysis and Mass Loadings
Sep-04

SP 912

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day		
1-Sep					
2-Sep	143,747	550	661		
3-Sep					
4-Sep					
5-Sep					
6-Sep					
7-Sep					
8-Sep					
9-Sep	157,014	1,100	1,443		
10-Sep					
11-Sep					
12-Sep					
13-Sep					
14-Sep					
15-Sep					
16-Sep	103121	780	672		
17-Sep					
18-Sep					
19-Sep					
20-Sep					
21-Sep					
22-Sep					
23-Sep	153,493	1,400	1,796		
24-Sep					
25-Sep					
26-Sep					
27-Sep					
28-Sep					
29-Sep					
30-Sep	123,445	180	186		
Avg (weighted):	136,164	802	912		
Max:	157,014	1,400	1,796		
Min:	103,121	180	186		
Monthly Limit:	n/a	n/a	5,459		
Daily Max:	n/a	n/a	7,091		

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

→ Flow only

MSD SAMPLE POINT REFERENCE NUMBERS ----->					082						
DATES ON WHICH SAMPLES WERE COLLECTED ----->					08/05/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED ----->					13:00						
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow							UNITS
FLOW				E	10,775						gal/day
Acetone	524.2	20.70	8.20	G	0.16						mg/L
Benzene	524.2	3.00	0.70	G	0.026						mg/L
Chlorobenzene	524.2	3.00	0.70	G	<0.001						mg/L
Chloroform	524.2	0.10	0.03	G	0.0084						mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G	<0.001						mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G	<0.001						mg/L
Ethyl Acetate	1666	20.70	8.20	G	<0.001						mg/L
n-Hexane	1666	3.00	0.70	G	<0.001						mg/L
Methylene chloride	524.2	3.00	0.70	G	<0.003						mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G	<0.001						mg/L
Tetrahydrofuran	1666	9.20	3.40	G	<0.001						mg/L
Toluene	524.2	0.30	0.20	G	0.0044 J						mg/L
Xylenes	1666	3.00	0.70	G	<0.002						mg/L
Isobutyraldehyde	1666	20.70	8.20	G	<0.001						mg/L
n-Amyl acetate	1666	20.70	8.20	G	<0.001						mg/L
n-Butyl acetate	1666	20.70	8.20	G	<0.001						mg/L
Isopropyl acetate	1666	20.70	8.20	G	<0.001						mg/L
Isopropyl ether	1666	20.70	8.20	G	<0.001						mg/L
n-Heptane	1666	3.00	0.70	G	<0.002						mg/L
Methyl formate	1666	20.70	8.20	G	<0.005						mg/L
Diethyl amine	1671	255.00	100.00	G	<85.0						mg/L
Triethyl amine	1671	255.00	100.00	G	<85.0						mg/L
Dilution by lab					5, 1, 10						

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS					915							
DATES ON WHICH SAMPLES WERE COLLECTED					08/18/2004							
TIMES AT WHICH SAMPLES WERE COLLECTED					11:30							
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow								UNITS
FLOW				E	2,700							gal/day
Acetone	524.2	20.70	8.20	G	0.3							mg/L
Benzene	524.2	3.00	0.70	G	<0.010							mg/L
Chlorobenzene	524.2	3.00	0.70	G	<0.010							mg/L
Chloroform	524.2	0.10	0.03	G	<0.010							mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G	<0.010							mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G	<0.010							mg/L
Ethyl Acetate	1666	20.70	8.20	G	<0.010							mg/L
n-Hexane	1666	3.00	0.70	G	<0.010							mg/L
Methylene chloride	524.2	3.00	0.70	G	<0.030							mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G	<0.010							mg/L
Tetrahydrofuran	1666	9.20	3.40	G	.0131 J							mg/L
Toluene	524.2	0.30	0.20	G	.013 J							mg/L
Xylenes	1666	3.00	0.70	G	<0.020							mg/L
Isobutyraldehyde	1666	20.70	8.20	G	0.0642 J							mg/L
n-Amyl acetate	1666	20.70	8.20	G	0.0198 J							mg/L
n-Butyl acetate	1666	20.70	8.20	G	<0.010							mg/L
Isopropyl acetate	1666	20.70	8.20	G	<0.010							mg/L
Isopropyl ether	1666	20.70	8.20	G	<0.010							mg/L
n-Heptane	1666	3.00	0.70	G	<0.020							mg/L
Methyl formate	1666	20.70	8.20	G	<0.050							mg/L
Diethyl amine	1671	255.00	100.00	G	<85.0							mg/L
Triethyl amine	1671	255.00	100.00	G	<85.0							mg/L
Dilution by lab					5, 10, 100							

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->			917					
DATES ON WHICH SAMPLES WERE COLLECTED			---->			07/28/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED			---->			11:06					
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow							UNITS
FLOW				E	5,000						gal/day
Acetone	524.2	20.70	8.20	G	1.1						mg/L
Benzene	524.2	3.00	0.70	G	<0.001						mg/L
Chlorobenzene	524.2	3.00	0.70	G	<0.001						mg/L
Chloroform	524.2	0.10	0.03	G	0.0011 J						mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G	<0.001						mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G	<0.001						mg/L
Ethyl Acetate	1666	20.70	8.20	G	0.00293 J						mg/L
n-Hexane	1666	3.00	0.70	G	<0.001						mg/L
Methylene chloride	524.2	3.00	0.70	G	0.0036 J						mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G	0.0732						mg/L
Tetrahydrofuran	1666	9.20	3.40	G	<0.001						mg/L
Toluene	524.2	0.30	0.20	G	0.007						mg/L
Xylenes	1666	3.00	0.70	G	<0.002						mg/L
Isobutyraldehyde	1666	20.70	8.20	G	<0.001						mg/L
n-Amyl acetate	1666	20.70	8.20	G	<0.001						mg/L
n-Butyl acetate	1666	20.70	8.20	G	<0.001						mg/L
Isopropyl acetate	1666	20.70	8.20	G	<0.001						mg/L
Isopropyl ether	1666	20.70	8.20	G	<0.001						mg/L
n-Heptane	1666	3.00	0.70	G	<0.002						mg/L
Methyl formate	1666	20.70	8.20	G	<0.005						mg/L
Diethyl amine	1671	255.00	100.00	G	<17						mg/L
Triethyl amine	1671	255.00	100.00	G	<17						mg/L
Dilution by lab					1, 10						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: _____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->		918					
DATES ON WHICH SAMPLES WERE COLLECTED			---->							
TIMES AT WHICH SAMPLES WERE COLLECTED			---->							
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	**RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW** G=Grab, C-composite, M=measured flow, E=estimated flow						UNITS
FLOW				E	0					gal/day
Acetone	524.2	20.70	8.20	G						mg/L
Benzene	524.2	3.00	0.70	G						mg/L
Chlorobenzene	524.2	3.00	0.70	G						mg/L
Chloroform	524.2	0.10	0.03	G						mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G						mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G						mg/L
Ethyl Acetate	1666	20.70	8.20	G						mg/L
n-Hexane	1666	3.00	0.70	G						mg/L
Methylene chloride	524.2	3.00	0.70	G						mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G						mg/L
Tetrahydrofuran	1666	9.20	3.40	G						mg/L
Toluene	524.2	0.30	0.20	G						mg/L
Xylenes	1666	3.00	0.70	G						mg/L
Isobutyraldehyde	1666	20.70	8.20	G						mg/L
n-Amyl acetate	1666	20.70	8.20	G						mg/L
n-Butyl acetate	1666	20.70	8.20	G						mg/L
Isopropyl acetate	1666	20.70	8.20	G						mg/L
Isopropyl ether	1666	20.70	8.20	G						mg/L
n-Heptane	1666	3.00	0.70	G						mg/L
Methyl formate	1666	20.70	8.20	G						mg/L
Diethyl amine	1671	255.00	100.00	G						mg/L
Triethyl amine	1671	255.00	100.00	G						mg/L
Dilution by lab										

*** NO FLOW THIS QUARTER**

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->						919		919		919		
DATES ON WHICH SAMPLES WERE COLLECTED ---->						07/27/2004		08/17/2004		09/28/2004		
TIMES AT WHICH SAMPLES WERE COLLECTED ---->						15:00		7:45		8:40		
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow								UNITS
FLOW					E	6,000		6,000		6,000		gal/day
Acetone	524.2	20.70	8.20		G	<0.030						mg/L
Benzene	524.2	3.00	0.70		G	<0.001						mg/L
Chlorobenzene	524.2	3.00	0.70		G	<0.001						mg/L
Chloroform	524.2	0.10	0.03		G	0.0093	G	0.0084	G	0.0053		mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20		G	<0.001						mg/L
1,2-Dichloroethane	524.2	20.70	8.20		G	<0.001						mg/L
Ethyl Acetate	1666	20.70	8.20		G	<0.001						mg/L
n-Hexane	1666	3.00	0.70		G	<0.001						mg/L
Methylene chloride	524.2	3.00	0.70		G	0.0032 J						mg/L
4-Methyl-2-pentanone	1666	20.70	8.20		G	<0.001						mg/L
Tetrahydrofuran	1666	9.20	3.40		G	<0.001						mg/L
Toluene	524.2	0.30	0.20		G	<0.001						mg/L
Xylenes	1666	3.00	0.70		G	<0.002						mg/L
Isobutyraldehyde	1666	20.70	8.20		G	<0.001						mg/L
n-Amyl acetate	1666	20.70	8.20		G	<0.001						mg/L
n-Butyl acetate	1666	20.70	8.20		G	<0.001						mg/L
Isopropyl acetate	1666	20.70	8.20		G	<0.001						mg/L
Isopropyl ether	1666	20.70	8.20		G	<0.001						mg/L
n-Heptane	1666	3.00	0.70		G	<0.002						mg/L
Methyl formate	1666	20.70	8.20		G	<0.005						mg/L
Diethyl amine	1671	255.00	100.00		G	<17						mg/L
Triethyl amine	1671	255.00	100.00		G	<17						mg/L
Dilution by lab						1, 10		10		10		

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ----->					920							
DATES ON WHICH SAMPLES WERE COLLECTED ----->					07/29/2004							
TIMES AT WHICH SAMPLES WERE COLLECTED ----->					14:45							
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow								UNITS
FLOW				E	24,000							gal/day
Acetone	524.2	20.70	8.20	G	<0.060							mg/L
Benzene	524.2	3.00	0.70	G	<0.002							mg/L
Chlorobenzene	524.2	3.00	0.70	G	<0.002							mg/L
Chloroform	524.2	0.10	0.03	G	<0.002							mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G	<0.002							mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G	<0.002							mg/L
Ethyl Acetate	1666	20.70	8.20	G	<0.001							mg/L
n-Hexane	1666	3.00	0.70	G	<0.001							mg/L
Methylene chloride	524.2	3.00	0.70	G	<0.006							mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G	<0.001							mg/L
Tetrahydrofuran	1666	9.20	3.40	G	<0.001							mg/L
Toluene	524.2	0.30	0.20	G	<0.0047 J							mg/L
Xylenes	1666	3.00	0.70	G	<0.002							mg/L
Isobutyraldehyde	1666	20.70	8.20	G	<0.001							mg/L
n-Amyl acetate	1666	20.70	8.20	G	<0.001							mg/L
n-Butyl acetate	1666	20.70	8.20	G	<0.001							mg/L
Isopropyl acetate	1666	20.70	8.20	G	<0.001							mg/L
Isopropyl ether	1666	20.70	8.20	G	<0.001							mg/L
n-Heptane	1666	3.00	0.70	G	<0.002							mg/L
Methyl formate	1666	20.70	8.20	G	<0.005							mg/L
Diethyl amine	1671	255.00	100.00	G	<85.0							mg/L
Triethyl amine	1671	255.00	100.00	G	<85.0							mg/L
Dilution by lab					5, 1, 20							

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->			927						
DATES ON WHICH SAMPLES WERE COLLECTED			---->			08/19/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED			---->			7:25						
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow								UNITS
FLOW				E		2,200						gal/day
Acetone	524.2	20.70	8.20	G		<0.150						mg/L
Ethyl Acetate	1666	20.70	8.20	G		<0.010						mg/L
Methylene chloride	524.2	3.00	0.70	G		<0.015						mg/L
n-Amyl acetate	1666	20.70	8.20	G		<0.010						mg/L
Isopropyl acetate	1666	20.70	8.20	G		<0.010						mg/L
Dilution by lab						10, 50						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: _____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->		928						
DATES ON WHICH SAMPLES WERE COLLECTED			---->		08/19/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED			---->		7:15						
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	**RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW** G=Grab, C-composite, M=measured flow, E=estimated flow							UNITS
FLOW				E	2,200						gal/day
Acetone	524.2	20.70	8.20	G	0.380 J						mg/L
Benzene	524.2	3.00	0.70	G	<0.010						mg/L
Chlorobenzene	524.2	3.00	0.70	G	<0.010						mg/L
Chloroform	524.2	0.10	0.03	G	0.023 J						mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G	<0.010						mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G	<0.010						mg/L
Ethyl Acetate	1666	20.70	8.20	G	<0.010						mg/L
n-Hexane	1666	3.00	0.70	G	<0.010						mg/L
Methylene chloride	524.2	3.00	0.70	G	<0.030						mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G	<0.010						mg/L
Tetrahydrofuran	1666	9.20	3.40	G	<0.010						mg/L
Toluene	524.2	0.30	0.20	G	0.025 J						mg/L
Xylenes	1666	3.00	0.70	G	<0.020						mg/L
Isobutyraldehyde	1666	20.70	8.20	G	0.0247 J						mg/L
n-Amyl acetate	1666	20.70	8.20	G	<0.010						mg/L
n-Butyl acetate	1666	20.70	8.20	G	<0.010						mg/L
Isopropyl acetate	1666	20.70	8.20	G	<0.010						mg/L
Isopropyl ether	1666	20.70	8.20	G	<0.010						mg/L
n-Heptane	1666	3.00	0.70	G	<0.020						mg/L
Methyl formate	1666	20.70	8.20	G	<0.050						mg/L
Diethyl amine	1671	255.00	100.00	G	<85.0						mg/L
Triethyl amine	1671	255.00	100.00	G	<85.0						mg/L
Dilution by lab					5, 10, 100						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS					929						
DATES ON WHICH SAMPLES WERE COLLECTED											
TIMES AT WHICH SAMPLES WERE COLLECTED											
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C=composite, M=measured flow, E=estimated flow							UNITS
FLOW				E	0						gal/day
Acetone	524.2	20.70	8.20	G							mg/L
Benzene	524.2	3.00	0.70	G							mg/L
Chlorobenzene	524.2	3.00	0.70	G							mg/L
Chloroform	524.2	0.10	0.03	G							mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G							mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G							mg/L
Ethyl Acetate	1666	20.70	8.20	G							mg/L
n-Hexane	1666	3.00	0.70	G							mg/L
Methylene chloride	524.2	3.00	0.70	G							mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G							mg/L
Tetrahydrofuran	1666	9.20	3.40	G							mg/L
Toluene	524.2	0.30	0.20	G							mg/L
Xylenes	1666	3.00	0.70	G							mg/L
Isobutyraldehyde	1666	20.70	8.20	G							mg/L
n-Amyl acetate	1666	20.70	8.20	G							mg/L
n-Butyl acetate	1666	20.70	8.20	G							mg/L
Isopropyl acetate	1666	20.70	8.20	G							mg/L
Isopropyl ether	1666	20.70	8.20	G							mg/L
n-Heptane	1666	3.00	0.70	G							mg/L
Methyl formate	1666	20.70	8.20	G							mg/L
Diethyl amine	1671	255.00	100.00	G							mg/L
Triethyl amine	1671	255.00	100.00	G							mg/L
Dilution by lab											

*** NO FLOW THIS QUARTER**

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS					930							
DATES ON WHICH SAMPLES WERE COLLECTED					07/19/2004							
TIMES AT WHICH SAMPLES WERE COLLECTED					9:50							
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	**RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW** G=Grab, C-composite, M=measured flow, E=estimated flow								UNITS
FLOW				E	2,200							gal/day
Acetone	524.2	20.70	8.20	G	<0.300							mg/L
Benzene	524.2	3.00	0.70	G	<0.010							mg/L
Chlorobenzene	524.2	3.00	0.70	G	<0.010							mg/L
Chloroform	524.2	0.10	0.03	G	<0.010							mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G	<0.010							mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G	<0.010							mg/L
Ethyl Acetate	1666	20.70	8.20	G	<0.010							mg/L
n-Hexane	1666	3.00	0.70	G	<0.010							mg/L
Methylene chloride	524.2	3.00	0.70	G	<0.030							mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G	<0.010							mg/L
Tetrahydrofuran	1666	9.20	3.40	G	<0.010							mg/L
Toluene	524.2	0.30	0.20	G	<0.010							mg/L
Xylenes	1666	3.00	0.70	G	<0.020							mg/L
Isobutyraldehyde	1666	20.70	8.20	G	<0.010							mg/L
n-Amyl acetate	1666	20.70	8.20	G	<0.010							mg/L
n-Butyl acetate	1666	20.70	8.20	G	<0.010							mg/L
Isopropyl acetate	1666	20.70	8.20	G	<0.010							mg/L
Isopropyl ether	1666	20.70	8.20	G	<0.010							mg/L
n-Heptane	1666	3.00	0.70	G	<0.020							mg/L
Methyl formate	1666	20.70	8.20	G	<0.050							mg/L
Diethyl amine	1671	255.00	100.00	G	<85.0							mg/L
Triethyl amine	1671	255.00	100.00	G	<85.0							mg/L
Dilution by lab					5, 10, 100							

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->		931							
DATES ON WHICH SAMPLES WERE COLLECTED			---->									
TIMES AT WHICH SAMPLES WERE COLLECTED			---->									
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow								UNITS
FLOW				E	0							gal/day
Acetone	524.2	20.70	8.20	G								mg/L
Benzene	524.2	3.00	0.70	G								mg/L
Chlorobenzene	524.2	3.00	0.70	G								mg/L
Chloroform	524.2	0.10	0.03	G								mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G								mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G								mg/L
Ethyl Acetate	1666	20.70	8.20	G								mg/L
n-Hexane	1666	3.00	0.70	G								mg/L
Methylene chloride	524.2	3.00	0.70	G								mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G								mg/L
Tetrahydrofuran	1666	9.20	3.40	G								mg/L
Toluene	524.2	0.30	0.20	G								mg/L
Xylenes	1666	3.00	0.70	G								mg/L
Isobutyraldehyde	1666	20.70	8.20	G								mg/L
n-Amyl acetate	1666	20.70	8.20	G								mg/L
n-Butyl acetate	1666	20.70	8.20	G								mg/L
Isopropyl acetate	1666	20.70	8.20	G								mg/L
Isopropyl ether	1666	20.70	8.20	G								mg/L
n-Heptane	1666	3.00	0.70	G								mg/L
Methyl formate	1666	20.70	8.20	G								mg/L
Diethyl amine	1671	255.00	100.00	G								mg/L
Triethyl amine	1671	255.00	100.00	G								mg/L
Dilution by lab												

*** NO FLOW THIS QUARTER**

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: _____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->		932						
DATES ON WHICH SAMPLES WERE COLLECTED			---->								
TIMES AT WHICH SAMPLES WERE COLLECTED			---->								
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	**RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW** G=Grab, C-composite, M=measured flow, E=estimated flow							UNITS
FLOW				E	0						gal/day
Acetone	524.2	20.70	8.20	G							mg/L
Benzene	524.2	3.00	0.70	G							mg/L
Chlorobenzene	524.2	3.00	0.70	G							mg/L
Chloroform	524.2	0.10	0.03	G							mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G							mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G							mg/L
Ethyl Acetate	1666	20.70	8.20	G							mg/L
n-Hexane	1666	3.00	0.70	G							mg/L
Methylene chloride	524.2	3.00	0.70	G							mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G							mg/L
Tetrahydrofuran	1666	9.20	3.40	G							mg/L
Toluene	524.2	0.30	0.20	G							mg/L
Xylenes	1666	3.00	0.70	G							mg/L
Isobutyraldehyde	1666	20.70	8.20	G							mg/L
n-Amyl acetate	1666	20.70	8.20	G							mg/L
n-Butyl acetate	1666	20.70	8.20	G							mg/L
Isopropyl acetate	1666	20.70	8.20	G							mg/L
Isopropyl ether	1666	20.70	8.20	G							mg/L
n-Heptane	1666	3.00	0.70	G							mg/L
Methyl formate	1666	20.70	8.20	G							mg/L
Diethyl amine	1671	255.00	100.00	G							mg/L
Triethyl amine	1671	255.00	100.00	G							mg/L
Dilution by lab											

*** NO FLOW THIS QUARTER**

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: ____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ----->					933						
DATES ON WHICH SAMPLES WERE COLLECTED ----->											
TIMES AT WHICH SAMPLES WERE COLLECTED ----->											
PARAMETER	EPA METHOD	DAILY MAX	AVG MONTHLY	RECORD SAMPLE TYPES (G, C, M OR E) & RESULTS BELOW G=Grab, C-composite, M=measured flow, E=estimated flow							UNITS
FLOW				E	0						gal/day
Acetone	524.2	20.70	8.20	G							mg/L
Benzene	524.2	3.00	0.70	G							mg/L
Chlorobenzene	524.2	3.00	0.70	G							mg/L
Chloroform	524.2	0.10	0.03	G							mg/L
1,2-Dichlorobenzene	524.2	20.70	8.20	G							mg/L
1,2-Dichloroethane	524.2	20.70	8.20	G							mg/L
Ethyl Acetate	1666	20.70	8.20	G							mg/L
n-Hexane	1666	3.00	0.70	G							mg/L
Methylene chloride	524.2	3.00	0.70	G							mg/L
4-Methyl-2-pentanone	1666	20.70	8.20	G							mg/L
Tetrahydrofuran	1666	9.20	3.40	G							mg/L
Toluene	524.2	0.30	0.20	G							mg/L
Xylenes	1666	3.00	0.70	G							mg/L
Isobutyraldehyde	1666	20.70	8.20	G							mg/L
n-Amyl acetate	1666	20.70	8.20	G							mg/L
n-Butyl acetate	1666	20.70	8.20	G							mg/L
Isopropyl acetate	1666	20.70	8.20	G							mg/L
Isopropyl ether	1666	20.70	8.20	G							mg/L
n-Heptane	1666	3.00	0.70	G							mg/L
Methyl formate	1666	20.70	8.20	G							mg/L
Diethyl amine	1671	255.00	100.00	G							mg/L
Triethyl amine	1671	255.00	100.00	G							mg/L
Dilution by lab											

*** NO FLOW THIS QUARTER**

Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 080/082; Building 98

Date Sampled: 8/5/04

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
Peptides				MSD		n/a	No
Leuprolide	Pharmaceutical	07/01/2004	07/02/2004				
		07/05/04	07/09/04				
		07/12/04	07/15/04				
		07/21/04	07/21/04				
		07/23/04	07/25/04				
		07/26/04	08/01/04				
		08/02/04	08/06/04				
		08/08/04	08/13/04				
		08/16/04	08/17/04				
		08/27/04	08/27/04				
		08/30/04	09/03/04				
		09/07/04	09/09/04				
		09/17/04	09/17/04				
		09/20/04	09/24/04				
		09/27/04	09/30/04				
Exenatide	Pharmaceutical	07/01/04	07/02/04				
		07/05/04	07/09/04				
		07/11/04	07/15/04				
		07/18/04	07/30/04				
		08/01/04	08/05/04				
		08/23/04	08/29/04				
		08/30/04	09/03/04				
		09/05/04	09/10/04				
		09/12/04	09/16/04				
		09/12/04	09/24/04				
		09/26/04	09/30/04				

Mallinckrodt, Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 917; Building 97

Quarterly Sample Date: July 28, 2004

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Amphetamines	Pharmaceutical	07/07/04	07/11/03	SP917 (change over cleanouts - HCl/water)	NA	No	No
Meperidine HCl	Pharmaceutical	07/07/04	07/12/04	SP917 (change over cleanouts - HCl/water)	NA	No	No
Methylphenidate HCl	Pharmaceutical	07/14/04	08/06/04	SP917 (change over cleanouts - HCl/water)	NA	No	No
Versetamide	Pharmaceutical	07/22/04	08/10/04	SP917 (change over cleanouts - water)	NA	No	No
Bis-Anhydride	Pharmaceutical	08/10/04	09/13/04	SP917 (change over cleanouts - water)	NA	No	No
Naltrexone MeBr	Pharmaceutical	08/16/04	09/10/04	SP917 (change over cleanouts - Acetic/water)	NA	No	No
Meperidine HCl	Pharmaceutical	09/13/04	09/25/04	SP917 (change over cleanouts - HCl/water)	NA	No	No
Hydrocodone Polistirex	Pharmaceutical	09/20/04	09/22/04	SP917 (change over cleanouts - water)	NA	No	No
Chloropheniramine Polistirex	Pharmaceutical	09/23/04	09/28/04	SP917 (change over cleanouts - water)	NA	No	No

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

December 7, 2004

Karen Siebenberger
HS&E Engineer
MALLINCKRODT INC
3600 N. Second St.
St. Louis, MO 63147

Re: Discharge Permit No: 21120596-00
For Premise at: 3600 N. Second St.

Dear Ms. Siebenberger:

Your current permit has an expiration date of February 28, 2005. Please note that the District has not completed the permit renewal process at this time. Pursuant to the provisions in MSD Ordinance 8472, Article VI, Section 3.A.4, the current permit is hereby extended by the District pending final development of the new permit. We expect that the draft permit renewal will be submitted to you no later than March 2005.

If you have any questions, please contact me at 314-436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

file-permit

tyco
Healthcare

Mallinckrodt

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

(1 NO) DW

December 17, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: PEG wastewater – upset incident December 13, 2004
PERMIT NO. 21120596-00

This letter is in follow-up to my December 13, 2004 phone call reporting a small leak of Subpart 439 wastewater. Approximately 30 gallons of wastewater leaked from a pH adjustment tank loop at Building 6 and was discharged to the plant sewer system without PEG treatment. This wastewater stream is normally sent to the PEG stripper, sample point 920. The leak was immediately stopped and the loop has been repaired.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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DEC 21 2004
DIVISION OF
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Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

November 17, 2004

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC
3600 N. Second St.
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS
MSD Account No: 21120596-00
For premise at: 3600 N. Second St., 63147

Ms. Siebenberger:

Thank you for your 11/09/04 letter advising us of the results of recent monitoring of your wastewater discharge. That letter was a follow up to a phone notification on 11/02/04 reporting a chloroform stripper problem. The following violations of permit limitations were identified in your letter and report:

Date	Time	Sample Point	Sample Type	Parameter	Permit Limit	Limit Type	Value Reported
10/12/04	1230	928	Grab	Chloroform	0.1 mg/L	DM	0.59 mg/L **
10/12/04	1230	928	Grab	Chloroform	0.03 mg/L	MA	0.59 mg/L **

(T) = Total substance **DM = Daily Maximum**
mg/l = milligrams per liter **MA = Monthly Average**

See enclosure for explanation of asterisks which appear in the Value Reported column.

REQUIRED ACTION/RESPONSE:

Pursuant to Section 403.12 (g) (2) of the federal pretreatment regulations and Article VIII, Section 4.C of MSD Ordinance 8472, you are required to resample the discharge and to submit the results of analyses to the District, within thirty (30) days of your first becoming aware of the violation. Thank you for your prompt notification. From the above mentioned letter, we are aware that you have a schedule set to resample this sample point for chloroform in November and December of 2004. Please provide results to us upon receipt.

Refer to the enclosure for information on potential enforcement actions should noncompliance continue. The enclosure also explains the meaning of any asterisks which appear in the Value Reported column above. You should consider the percentages applicable to Significant Noncompliance when planning for additional sampling.

Please submit your response on the above items by December 20, 2004. If you have any questions, please contact me at 314.436.8761 or Jason Gill at 314.436.8709.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

TB

Tom Boehm
Environmental Engineering Associate

Enclosures: SNC Attachment
pc: Jason Gill, MSD

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P.O Box 470158
St Louis, MO 63147

Tele 314 654-2000
Fax. 314 654-1251

Permit
✓ DM
TCB
11/15/04
DE ✓
NOV ✓

November 9, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: SP928 Chloroform failure October 12, 2004 @12:30
PERMIT NO. 21120596-00

This letter is in follow-up to my November 2, 2004 phone call at 3:15 pm reporting a chloroform exceedance for SP928. The sample collected 10/12/04 @12:30 indicated chloroform failing at 0.59 mg/L versus a daily maximum limit of 0.10 mg/L and a monthly average limit of 0.03 mg/L. Mallinckrodt initiated an investigation, and has determined that a faulty steam control valve on the chloroform stripper system contributed to the failure at SP928. Mallinckrodt is updating the batch records to ensure the steam strippers are at the required temperature before initiating a batch. Currently the batch records require temperatures be recorded at hourly intervals, but not initially. Mallinckrodt is also evaluating the use of alarms/interlocks on the steam strippers to alert operators to halt operations when temperatures are out of range.

← NOV
DM **
MA **

Resamples of SP28 will be obtained in November and December to demonstrate compliance.
If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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NOV 10 2004
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Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P O Box 470158
St. Louis, MO 63147

Tele 314 654-2000
Fax 314 654-1251

October 15, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Request to permanently route Building 505 wastewater through SP912 (Building 504)
PERMIT NO. 21120596-00

Dear Mr. Mendoza,

This letter is in follow-up to several telephone conversations and my letter of September 9, 2004 regarding the discharge of Building 505 wastewater through Building 504 (SP912). These buildings are home to Ioversol production, with Building 504 performing the manufacture of crude Ioversol and Building 505 performing the purification. Prior to December 2002, Building 505 wastewater was pumped to Building 504 where the combined wastewaters discharged through Sample Point 912. Mallinckrodt had requested to separate these discharges and the current permit lists the wastewater source for SP912 as production operations in Building 504. Dimethylacetamide (mass limits) is the monitored parameter and is only used in Building 504.

After piping modifications were made in June, sewers in Building 505 experienced flow throughput issues and Operations was able to alleviate it by pumping the Building 505 sump over to the former T-450 discharge tank at Building 504 rather than allowing natural overflow to the sewer. Further investigation and an internal need for improved pH control from Ioversol operations indicate that the continued discharge arrangement is most beneficial to operations.

Since dimethylacetamide limits are mass based, the increased flows do not impact the monitoring results. Building 505 is a water intensive operation and as a result, flows through SP912 will be approximately 200,000 gpd. Mallinckrodt is at this time requesting that the wastewater source for SP912 be modified to cover production operations in Building 504 and 505.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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OCT 18 2004
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Metropolitan
St. Louis Sewer
District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

August 23, 2004

Karen Siebenberger
MALLINCKRODT INC.
3600 N. Second St.
St. Louis, MO 63147

Dear Ms. Siebenberger:

The Metropolitan St. Louis Sewer District is required to track the status of compliance of all industrial users with the terms of the federal pretreatment regulations (40 CFR 403), MSD Ordinance 8472 and the user's industrial wastewater discharge permit. On a semi-annual basis, the District is required to identify those users who are in significant noncompliance (SNC) as defined in the ordinance.

Using the criteria defined in the ordinance, the Mallinckrodt facility at 3600 N. Second St., St. Louis, MO 63147 has been found to be in SNC for the six month period January 1, 2004 through June 30, 2004.

> At sample point 919, the Technical Review Criteria (TRC) daily maximum limitation for chloroform has been exceeded for one of two samples analyzed, resulting in a TRC noncompliance rate of 50.0 %.
>
> Also at sample point 919, the TRC monthly average limitation for chloroform has been exceeded for one of two months in which samples were analyzed, resulting in a TRC noncompliance rate of 50.0 %.

In accordance with the provisions of Section 403.8(f)(5) of the federal regulations, the District has developed an Enforcement Response Plan. That plan has been approved by the Missouri Department of Natural Resources and incorporated as an integral part of the District's pretreatment program. The Plan requires the District to make an annual newspaper publication of the names of all users found to be in SNC, and to initiate additional enforcement action if necessary.

We recognize that your investigation showed that a rinse discharge was probably incorrectly discharged directly to the sample point, rather than through the pretreatment system. Operators have been trained on the pretreatment system and proper discharge procedures. Subsequent samples by Mallinckrodt have indicated chloroform levels in your wastewater discharge to be in compliance. Consequently, we have determined that the annual newspaper publication is the only District action required at this time.

Mallinckrodt was previously issued an administrative compliance order for wastewater discharge violations related to its pharmaceutical manufacturing operations. Mallinckrodt successfully completed the order, and was not in significant noncompliance for two successive review periods before the current review period. Should Mallinckrodt be placed in significant noncompliance again in at least the next two review periods, the District will need to take additional enforcement action. This may include administrative compliance orders or other appropriate measures.

If you have any questions regarding this matter, please contact me at 314-436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

file-permit

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele 314 654-2000
Fax 314 654-1251

Permit
TCB
DE

August 19, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: SP919 resample results
PERMIT NO. 21120596-00

This letter is in follow-up to my July 26, 2004 phone call reporting a chloroform exceedance for SP919. The sample collected 4/29/04 @13:30 indicated chloroform failing at 4.2 mg/L. Mallinckrodt initiated an investigation, and has concluded that a hose or drum pump may have been inadvertently rinsed and used. The rinse was discharged to SP919 rather than to the PEG treatment system. Where written batch records exist, the discharges of pharmaceutical wastewaters are notated to PEG or the Non-stripped PEG discharge point, in this case SP919. It is possible that an operator discharged the rinsate to the improper PEG discharge point (non-stripped SP919 as opposed to PEG stripper). The operators have been trained on the plant PEG systems and the importance of discharging all rinses to the PEG system.

A resample of SP19 was obtained on July 27 at 15:00 and indicated chloroform at 0.0093 mg/L. An additional sample will be obtained in August.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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AUG 20 2004
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tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele 314 654-2000
Fax 314 654-1251

July 26, 2004

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2004 2nd Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Grabski:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 2nd quarter 2004. Please note that the SP919 sample collected on 4/29/04 @13:30 failed chloroform at 4.2 mg/L (max daily limit 0.10 mg/L; average monthly limit 0.03 mg/L). This result was phoned into Doug Mendoza on July 26, when Mallinckrodt became aware of it. The email notification of analytical results from the lab was not received for SP919 and contributed to the delay in reporting. Mallinckrodt has initiated an investigation into this exceedance and will resample SP919 within the next 30 days. All other monitoring results were within permitted discharge limits.

If you have any questions or require more detailed information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECEIVED
JUL 28 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☐(JAN-MAR) ☒(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	0

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

RECEIVED
JUL 28 2004
DIVISION OF ENVIRONMENTAL COMPLIANCE

Print/type name of signing official: Paul Vanderstegden

Title: Site Director Telephone: 314-654-8090

Signature: PDVanderstegden Date: 7/27/04

radrpt.doc 2/00

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

(A) If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[PDV/JW] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 080

(B) If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[PDV/JW] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit .

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

(D) If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[PDV/JW] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 915, 929.

(E) If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[PDV/JW] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 except for wastes covered by SP905

(F) Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[PDV/JW] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufactu... process subject to Categorical Standards in 40 CFR 439. SP 010, 005, 080, 915, 917, 919, 920, 928 and 929

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____, I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing of the last discharge monitoring report.

B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: Paul VanderHeyden

Title: Site Director

Telephone: 314-654-8090

Signature: PD VanderHeyden

Date: 7/27/04

RECEIVED
JUL 28 2004
DIVISION OF ENVIRONMENTAL COMPLIANCE

SMF 10/93

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		001					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) __X__(APR-JUNE) __(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By: _____

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		002						
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA						
TIMES AT WHICH SAMPLES WERE COLLECTED	----->								
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow							UNITS
FLOW		E	1,800						gal/day
NO MONITORING REQUIRED									
SANITARY ONLY									

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DIVISION OF
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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) __(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

		DOWN		UP				
MSD SAMPLE POINT REFERENCE NUMBERS	------>		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED	------>		04/27/2004		04/27/2004		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED	------>		7:50		8:10			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	15,984	M	4,061	E	11,923	gal/day
Oil & Grease	200	G	6	G	7.8	E	0.000	mg/l
Biochemical Oxygen Demand	****	C	31	C	130	E	0.000	mg/l
Chemical Oxygen Demand	****	C	155	C	237	E	0.000	mg/l
Total Suspended Solids	****	C	66	C	103	E	0.000	mg/l
Temperature	60	G	16	G	16	E	16	deg C
pH Acidic	5.5	G	7	G	7	E	7	S.U.
pH Basic	11.5	G	7	G	7	E	7	S.U.

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METROPOLITAN ST. LOUIS SEWER DISTRICT
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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) _X___(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

	MSD SAMPLE POINT REFERENCE NUMBERS				---->		003		009		099	
	DATES ON WHICH SAMPLES WERE COLLECTED				---->		04/27/2004		04/27/2004		calculated	
	TIMES AT WHICH SAMPLES WERE COLLECTED				---->		7:50		8:10			
	PARAMETER				LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
	FLOW					E	15,984	E	4,061		11,923	gal/day
1	Chloromethane					G	ND	G	ND		ND	mg/l
2	Vinyl Chloride					G	0.015	G	0.013		0.016	mg/l
3	Bromomethane					G	ND	G	ND		ND	mg/l
4	Chloroethane					G	ND	G	ND		ND	mg/l
5	Methylene Chloride					G	ND	G	ND		ND	mg/l
6	Chloroform					G	0.0039	G	0.014		0.000	mg/l
7	1,1-Dichloroethane					G	0.012	G	0.0083		0.013	mg/l
8	1,2-Dichloroethane					G	0.0008	G	ND		ND	mg/l
9	1,1-Dichloroethene					G	0.0055	G	0.0048		0.006	mg/l
10	1,2-Dichloropropane					G	ND	G	ND		ND	mg/l
11	Carbon Tetrachloride					G	ND	G	ND		ND	mg/l
12	cis-1,3-Dicholropropene					G	ND	G	ND		ND	mg/l
13	trans-1,3-Dichloropropene					G	ND	G	ND		ND	mg/l
14	1,2-Dichloroethene					G	0.0017	G	0.0012		ND	mg/l
15	Dibromochloromethane					G	ND	G	ND		ND	mg/l
16	Bromodichloromethane					G	ND	G	0.0014		ND	mg/l
17	1,1,1-Trichloroethane					G	0.0041	G	0.0016		ND	mg/l
18	1,1,2-Trichloroethane					G	ND	G	ND		ND	mg/l
19	Benzene					G	0.002	G	0.0017		0.000	mg/l
20	Toluene					G	ND	G	ND		#VALUE!	mg/l
21	Trichloroethene					G	0.034	G	0.031		0.035	mg/l
22	Ethylbenzene					G	ND	G	ND		ND	mg/l
23	1,1,2,2-Tetrachloroethane					G	ND	G	ND		ND	mg/l
24	Tetrachloroethene					G	0.0011	G	ND		ND	mg/l
25	Chlorobenzene					G	ND	G	ND		ND	mg/l
26	1,3-Dichlorobenzene					G	ND	G	ND		ND	mg/l
27	1,2-Dichlorobenzene					G	ND	G	ND		ND	mg/l
28	1,4-Dichlorobenzene					G	ND	G	ND		ND	mg/l
29	Bromoform					G	ND	G	ND		ND	mg/l
30	2-Chloroethylvinylether					G	ND	G	ND		ND	mg/l
31	Acrolein					G	ND	G	ND		ND	mg/l
32	Acrylonitrile					G	ND	G	ND		ND	mg/l
33	Phenol					G	0.0021	G	ND		ND	mg/l
34	2-Chlorophenol					G	ND	G	ND		ND	mg/l
35	2,4-Dimethylphenol					G	ND	G	ND		ND	mg/l
36	2,4-Dichlorophenol					G	ND	G	ND		ND	mg/l
37	2-Nitrophenol					G	ND	G	ND		ND	mg/l
38	4-Nitrophenol					G	ND	G	ND		ND	mg/l
39	2,4-Dinitrophenol					G	ND	G	ND		ND	mg/l
40	2,4,6-Trichlorophenol					G	ND	G	ND		ND	mg/l
41	Pentachlorophenol					G	ND	G	ND		ND	mg/l
42	4-Chloro-3-methylphenol					G	ND	G	ND		ND	mg/l
43	2-Methyl-4,6-dinitrophenol					G	ND	G	ND		ND	mg/l
44	N-nitrosodimethylamine					G	ND	G	ND		ND	mg/l
45	Bis(2-chloroethyl)ether					G	ND	G	ND		ND	mg/l
46	Bis(2-chloroisopropyl)ether					G	ND	G	ND		ND	mg/l
47	N-nitrosodi-n-propylamine					G	ND	G	ND		ND	mg/l
48	Hexachloroethane					G	ND	G	ND		ND	mg/l
49	Nitrobenzene					G	ND	G	ND		ND	mg/l
50	Isophorone					G	ND	G	ND		ND	mg/l
51	Bis(2-chloroethoxy)methane					G	ND	G	ND		ND	mg/l
52	1,2,4-Trichlorobenzene					G	ND	G	ND		ND	mg/l

ND = <0.001 mg/L
(for entire report) RCB

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) _X___(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

	MSD SAMPLE POINT REFERENCE NUMBERS				---->		003		009		099	
	DATES ON WHICH SAMPLES WERE COLLECTED				---->		04/27/2004		04/27/2004		calculated	
	TIMES AT WHICH SAMPLES WERE COLLECTED				---->		7:50		8:10			
	PARAMETER				LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
	FLOW					E	15,984	E	4,061		11,923	gal/day
53	Dimethyl phthalate					G	ND	G	ND		ND	mg/l
54	Hexachlorobutadiene					G	ND	G	ND		ND	mg/l
55	Hexachlorocyclopentadiene					G	ND	G	ND		ND	mg/l
56	2-Chloronapthalene					G	ND	G	ND		ND	mg/l
57	2,6-Dinitrotoluene					G	ND	G	ND		ND	mg/l
58	2,4-Dinitrotoluene					G	ND	G	ND		ND	mg/l
59	4-Chlorophenyl-phenylether					G	ND	G	ND		ND	mg/l
60	4-Bromophenyl-phenylether					G	ND	G	ND		ND	mg/l
61	Diethyl phthalate					G	0.0058	G	ND		ND	mg/l
62	Hexachlorobenzene					G	ND	G	ND		ND	mg/l
63	N-nitrosodiphenylamine					G	ND	G	ND		ND	mg/l
64	1,2-Diphenylhydrazine					G	ND	G	ND		ND	mg/l
65	Di-n-butyl phthalate					G	ND	G	ND		ND	mg/l
66	3,3-Dichlorobenzidine					G	ND	G	ND		ND	mg/l
67	Bis(2-ethylhexyl)phthalate					G	ND	G	ND		0.060	mg/l
68	Butyl benzyl phthalate					G	ND	G	ND		ND	mg/l
69	Di-n-octyl-phthalate					G	ND	G	ND		ND	mg/l
70	Benzidine					G	ND	G	ND		ND	mg/l
71	Naphthalene					G	ND	G	ND		ND	mg/l
72	Phenanthrene					G	ND	G	ND		ND	mg/l
73	Fluorene					G	ND	G	ND		ND	mg/l
74	Anthracene					G	ND	G	ND		ND	mg/l
75	Acenapthene					G	ND	G	ND		ND	mg/l
76	Acenaphthylene					G	ND	G	ND		ND	mg/l
77	Benzo(a)pyrene					G	ND	G	ND		ND	mg/l
78	Chrysene					G	ND	G	ND		ND	mg/l
79	Fluoranthene					G	ND	G	ND		ND	mg/l
80	Pyrene					G	ND	G	ND		ND	mg/l
81	Benzo(a)anthracene					G	ND	G	ND		ND	mg/l
82	Benzo(b)fluoranthene					G	ND	G	ND		ND	mg/l
83	Benzo(k)fluoranthene					G	ND	G	ND		ND	mg/l
84	Dibenzo(a,h)anthracene					G	ND	G	ND		ND	mg/l
85	Benzo(g,h,i)perylene					G	ND	G	ND		ND	mg/l
86	Ideno(1,2,3-cd)pyrene					G	ND	G	ND		ND	mg/l
	Total Toxic Organics				5.52	--	0.0035	--	0.077	--	#VALUE!	mg/l
	Shaded cells represent known absent or suspected absent											

0.061 0.058 0.064

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) _X___(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		005					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		04/27/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		7:40					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	32,000					gal/day
Oil & Grease	200	G	1.3					mg/l
Biochemical Oxygen Demand	****	C	ND					mg/l
Chemical Oxygen Demand	****	C	79					mg/l
Total Suspended Solids	****	C	6					mg/l
Temperature	60	G	16					deg C
pH Acidic	5.5	G	6.5					S.U.
pH Basic	11.5	G	7					S.U.
BOD detection limit = 2 mg/l								
TSS detection limit = 1 mg/l								

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ENVIRONMENTAL COMPLIANCE

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DIVISION OF ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->	005				
DATES ON WHICH SAMPLES WERE COLLECTED	---->	04/27/2004				
TIMES AT WHICH SAMPLES WERE COLLECTED	---->	7:40				
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow				UNITS
FLOW		E	32,000			gal/day
Chloromethane		G	0.00098			mg/l
Vinyl Chloride		G	ND			mg/l
Bromomethane		G	ND			mg/l
Chloroethane		G	ND			mg/l
Methylene Chloride		G	0.014			mg/l
Chloroform		G	0.0044			mg/l
1,1-Dichloroethane		G	ND			mg/l
1,2-Dichloroethane		G	ND			mg/l
1,1-Dichloroethene		G	ND			mg/l
1,2-Dichloropropane		G	ND			mg/l
Carbon Tetrachloride		G	ND			mg/l
cis-1,3-Dichloropropene		G	ND			mg/l
trans-1,3-Dichloropropene		G	ND			mg/l
trans-1,2-Dichloroethene		G	ND			mg/l
Dibromochloromethane		G	ND			mg/l
Bromodichloromethane		G	0.0013			mg/l
1,1,1-Trichloroethane		G	ND			mg/l
1,1,2-Trichloroethane		G	ND			mg/l
Benzene		G	ND			mg/l
Toluene		G	ND			mg/l
Trichloroethene		G	ND			mg/l
Ethylbenzene		G	ND			mg/l
1,1,2,2-Tetrachloroethane		G	ND			mg/l
Tetrachloroethene		G	ND			mg/l
Chlorobenzene		G	ND			mg/l
1,3-Dichlorobenzene		G	ND			mg/l
1,2-Dichlorobenzene		G	ND			mg/l
1,4-Dichlorobenzene		G	ND			mg/l
Bromoform		G	ND			mg/l
2-Chloroethylvinylether		G	ND			mg/l
Acrolein		G	ND			mg/l
Acrylonitrile		G	ND			mg/l
Phenol		G	ND			mg/l
2-Chlorophenol		G	ND			mg/l
2,4-Dimethylphenol		G	ND			mg/l
2,4-Dichlorophenol		G	ND			mg/l
2-Nitrophenol		G	ND			mg/l
4-Nitrophenol		G	ND			mg/l
2,4-Dinitrophenol		G	ND			mg/l
2,4,6-Trichlorophenol		G	ND			mg/l
Pentachlorophenol		G	ND			mg/l
4-Chloro-3-methylphenol		G	ND			mg/l
2-Methyl-4,6-dinitrophenol		G	ND			mg/l
N-nitrosodimethylamine		G	ND			mg/l
Bis(2-chloroethyl)ether		G	ND			mg/l
Bis(2-chloroisopropyl)ether		G	ND			mg/l
N-nitrosodi-n-propylamine		G	ND			mg/l
Hexachloroethane		G	ND			mg/l
Nitrobenzene		G	ND			mg/l
Isophorone		G	ND			mg/l
Bis(2-chloroethoxy)methane		G	ND			mg/l
1,2,4-Trichlorobenzene		G	ND			mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: X (JAN-MAR) X (APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		005					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		04/27/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		7:40					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	32,000					gal/day
Dimethyl phthalate		G	ND					mg/l
Hexachlorobutadiene		G	ND					mg/l
Hexachlorocyclopentadiene		G	ND					mg/l
2-Chloronapthalene		G	ND					mg/l
2,6-Dinitrotoluene		G	ND					mg/l
2,4-Dinitrotoluene		G	ND					mg/l
4-Chlorophenyl-phenylether		G	ND					mg/l
4-Bromophenyl-phenylether		G	ND					mg/l
Diethyl phthalate		G	ND					mg/l
Hexachlorobenzene		G	ND					mg/l
N-nitrosodiphenylamine		G	ND					mg/l
1,2-Diphenylhydrazine		G	ND					mg/l
Di-n-butyl phthalate		G	ND					mg/l
3,3-Dichlorobenzidine		G	ND					mg/l
Bis(2-ethylhexyl)phthalate		G	ND					mg/l
Butyl benzyl phthalate		G	ND					mg/l
Di-n-octyl-phthalate		G	ND					mg/l
Benzidine		G	ND					mg/l
Naphthalene		G	ND					mg/l
Phenanthrene		G	ND					mg/l
Fluorene		G	ND					mg/l
Anthracene		G	ND					mg/l
Acenapthene		G	ND					mg/l
Acenaphthylene		G	ND					mg/l
Benzo(a)pyrene		G	ND					mg/l
Chrysene		G	ND					mg/l
Fluoranthene		G	ND					mg/l
Pyrene		G	ND					mg/l
Benzo(a)anthracene		G	ND					mg/l
Benzo(b)fluoranthene		G	ND					mg/l
Benzo(k)fluoranthene		G	ND					mg/l
Dibenzo(a,h)anthracene		G	ND					mg/l
Benzo(g,h,i)perylene		G	ND					mg/l
Ideno(1,2,3-cd)pyrene		G	ND					mg/l
Total Toxic Organics	5.52	--	~~0.02068~~					mg/l
Shaded cells represent known absent or suspected absent								

0.014

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ___(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		008				
DATES ON WHICH SAMPLES WERE COLLECTED	----->		OK				
TIMES AT WHICH SAMPLES WERE COLLECTED	----->						
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW					
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW		E					gal/day
Oil & Grease	200	G					mg/l
Biochemical Oxygen Demand	****	C					mg/l
Chemical Oxygen Demand	****	C					mg/l
Temperature	60	G					deg C
Total Suspended Solids	****						mg/L
pH Acidic	5.5	G					S.U.
pH Basic	11.5	G					S.U.

***No flow this quarter**

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JUL 28 2004

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ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
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Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		010					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		04/27/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,860,482					gal/day
Oil & Grease	200	G	117					mg/l
Biochemical Oxygen Demand	****	C	see attached					mg/l
Chemical Oxygen Demand	****	C	see attached					mg/l
Total Suspended Solids	****	C	see attached					mg/l
Temperature	60	G	19					deg C
pH Acidic	5.5	G	see attached					S.U.
pH Basic	11.5	G	see attached					S.U.
Chromium	5	C	ND					mg/l
Copper	2.7	C	0.0272					mg/l
Nickel	2.3	C	0.0217 B					mg/l
Zinc	3	C	0.395					mg/l

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SP010 BOD/COD/TSS Sample Results

Date	Time	Parameter	Result	Units
04/06/04	11:00 AM	BOD	599	mg/L
04/06/04	11:00 AM	COD	1250	mg/L
04/06/04	11:00 AM	TSS	89	mg/L
04/08/04	12:00 PM	BOD	858	mg/L
04/08/04	12:00 PM	COD	1570	mg/L
04/08/04	12:00 PM	TSS	28	mg/L
04/27/04	8:30 AM	BOD	363	mg/L
04/27/04	8:30 AM	COD	805	mg/L
04/27/04	8:30 AM	TSS	407	mg/L
05/17/04	1:00 PM	BOD	200	mg/L
05/17/04	1:00 PM	COD	843	mg/L
05/17/04	1:00 PM	TSS	34	mg/L
06/14/04	1:00 PM	BOD	586	mg/L
06/14/04	1:00 PM	COD	1270	mg/L
06/14/04	1:00 PM	TSS	76	mg/L
06/30/04	1:00 PM	BOD	416	mg/L
06/30/04	1:00 PM	COD	717	mg/L
06/30/04	1:00 PM	TSS	14	mg/L

- data on other parameters on SMR *

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc

Permit No.. 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		010					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		04/27/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,860,482	E		E		gal/day
Chloromethane		G	ND	G		G		mg/l
Vinyl Chloride		G	0.0014	G		G		mg/l
Bromomethane		G	ND	G		G		mg/l
Chloroethane		G	ND	G		G		mg/l
Methylene Chloride		G	ND	G		G		mg/l
Chloroform		G	0.022	G		G		mg/l
1,1-Dichloroethane		G	ND	G		G		mg/l
1,2-Dichloroethane		G	ND	G		G		mg/l
1,1-Dichloroethene		G	ND	G		G		mg/l
1,2-Dichloropropane		G	ND	G		G		mg/l
Carbon Tetrachloride		G	ND	G		G		mg/l
cis-1,3-Dicholropropene		G	ND	G		G		mg/l
trans-1,3-Dichloropropene		G	ND	G		G		mg/l
trans-1,2-Dichloroethene		G	ND	G		G		mg/l
Dibromochloromethane		G	ND	G		G		mg/l
Bromodichloromethane		G	0.00066	G		G		mg/l
1,1,1-Trichloroethane		G	ND	G		G		mg/l
1,1,2-Trichloroethane		G	0.0013	G		G		mg/l
Benzene		G	ND	G		G		mg/l
Toluene		G	0.0019	G		G		mg/l
Trichloroethene		G	ND	G		G		mg/l
Ethylbenzene		G	ND	G		G		mg/l
1.1,2,2-Tetrachloroethane		G	ND	G		G		mg/l
Tetrachloroethene		G	ND	G		G		mg/l
Chlorobenzene		G	ND	G		G		mg/l
1.3-Dichlorobenzene		G	ND	G		G		mg/l
1,2-Dichlorobenzene		G	ND	G		G		mg/l
1,4-Dichlorobenzene		G	ND	G		G		mg/l
Bromoform		G	ND	G		G		mg/l
2-Chloroethylvinylether		G	ND	G		G		mg/l
Acrolein		G	ND	G		G		mg/l
Acrylonitrile		G	ND	G		G		mg/l
Phenol		G	ND	G		G		mg/l
2-Chlorophenol		G	ND	G		G		mg/l
2,4-Dimethylphenol		G	ND	G		G		mg/l
2,4-Dichlorophenol		G	ND	G		G		mg/l
2-Nitrophenol		G	ND	G		G		mg/l
4-Nitrophenol		G	ND	G		G		mg/l
2,4-Dinitrophenol		G	ND	G		G		mg/l
2,4,6-Trichlorophenol		G	ND	G		G		mg/l
Pentachlorophenol		G	ND	G		G		mg/l
4-Chloro-3-methylphenol		G	ND	G		G		mg/l
2-Methyl-4,6-dinitrophenol		G	ND	G		G		mg/l
N-nitrosodimethylamine		G	ND	G		G		mg/l
Bis(2-chloroethyl)ether		G	ND	G		G		mg/l
Bis(2-chloroisopropyl)ether		G	ND	G		G		mg/l
N-nitrosodi-n-propylamine		G	ND	G		G		mg/l
Hexachloroethane		G	ND	G		G		mg/l
Nitrobenzene		G	ND	G		G		mg/l
Isophorone		G	ND	G		G		mg/l
Bis(2-chloroethoxy)methane		G	ND	G		G		mg/l
1,2,4-Trichlorobenzene		G	ND	G		G		mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By. Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		010						
DATES ON WHICH SAMPLES WERE COLLECTED	---->		04/27/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:30						
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow							UNITS
FLOW		E	1,860,482	E		E			gal/day
Dimethyl phthalate		G	ND	G		G			mg/l
Hexachlorobutadiene		G	ND	G		G			mg/l
Hexachlorocyclopentadiene		G	ND	G		G			mg/l
2-Chloronapthalene		G	ND	G		G			mg/l
2,6-Dinitrotoluene		G	ND	G		G			mg/l
2,4-Dinitrotoluene		G	ND	G		G			mg/l
4-Chlorophenyl-phenylether		G	ND	G		G			mg/l
4-Bromophenyl-phenylether		G	ND	G		G			mg/l
Diethyl phthalate		G	ND	G		G			mg/l
Hexachlorobenzene		G	ND	G		G			mg/l
N-nitrosodiphenylamine		G	ND	G		G			mg/l
1,2-Diphenylhydrazine		G	ND	G		G			mg/l
Di-n-butyl phthalate		G	ND	G		G			mg/l
3,3-Dichlorobenzidine		G	ND	G		G			mg/l
Bis(2-ethylhexyl)phthalate		G	ND	G		G			mg/l
Butyl benzyl phthalate		G	ND	G		G			mg/l
Di-n-octyl-phthalate		G	ND	G		G			mg/l
Benzidine		G	ND	G		G			mg/l
Naphthalene		G	ND	G		G			mg/l
Phenanthrene		G	ND	G		G			mg/l
Fluorene		G	ND	G		G			mg/l
Anthracene		G	ND	G		G			mg/l
Acenapthene		G	ND	G		G			mg/l
Acenaphthylene		G	ND	G		G			mg/l
Benzo(a)pyrene		G	ND	G		G			mg/l
Chrysene		G	ND	G		G			mg/l
Fluoranthene		G	ND	G		G			mg/l
Pyrene		G	ND	G		G			mg/l
Benzo(a)anthracene		G	ND	G		G			mg/l
Benzo(b)fluoranthene		G	ND	G		G			mg/l
Benzo(k)fluoranthene		G	ND	G		G			mg/l
Dibenzo(a,h)anthracene		G	ND	G		G			mg/l
Benzo(g,h,i)perylene		G	ND	G		G			mg/l
Ideno(1,2,3-cd)pyrene		G	ND	G		G			mg/l
Total Toxic Organics	5.52	--	~~0.02726~~		0		0		mg/l
Shaded cells represent known absent or suspected absent									

0.022

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ENVIRONMENTAL COMPLIANCE

Mallinckrodt pH Monitoring for SP010: April 2004

- No events > 60 min
YEE

Date	Time	pH	Total for Event in Minutes	Month-Year
04/01/04	13:06:01	4.7	2	April-04
04/01/04	13:12:01	4.8		April-04
04/01/04	13:14:01	4.6		April-04
04/01/04	13:16:01	4.7		April-04
04/01/04	13:18:01	4.7		April-04
04/01/04	13:20:01	4.7	10	April-04
04/01/04	13:26:01	3.9	2	April-04
04/05/04	0:00:01	0		April-04
04/05/04	0:02:01	0		April-04
04/05/04	0:04:01	0		April-04
04/05/04	0:06:01	0		April-04
04/05/04	0:08:01	0		April-04
04/05/04	0:10:01	0	12	April-04 *
04/08/04	10:28:01	4.6		April-04
04/08/04	10:30:01	4.4		April-04
04/08/04	10:32:01	4.4	4	April-04
04/08/04	10:38:01	3.9		April-04
04/08/04	10:40:01	4	4	April-04
04/15/04	12:30:01	3.9		April-04
04/15/04	12:32:01	4.1	4	April-04
04/15/04	12:48:01	2.6		April-04
04/15/04	12:50:01	3.9	4	April-04
04/15/04	12:56:01	4	2	April-04
04/22/04	9:30:01	4		April-04
04/22/04	9:32:01	3.9		April-04
04/22/04	9:34:01	3.9	4	April-04
04/22/04	9:38:01	3.9		April-04
04/22/04	9:40:01	3.9		April-04
04/22/04	9:42:01	3.9		April-04
04/22/04	9:44:01	3.9		April-04
04/22/04	9:46:01	3.9		April-04
04/22/04	9:48:01	4		April-04
04/22/04	9:50:01	4		April-04
04/22/04	9:52:01	4	16	April-04
04/29/04	4:54:01	0		April-04
04/29/04	4:56:01	0		April-04
04/29/04	4:58:01	0		April-04
04/29/04	5:00:01	0		April-04
04/29/04	5:02:01	0		April-04
04/29/04	5:04:01	0		April-04
04/29/04	5:06:01	0		April-04
04/29/04	5:08:01	0		April-04
04/29/04	5:10:01	0		April-04
04/29/04	5:12:01	0		April-04
04/29/04	5:14:01	0		April-04
04/29/04	5:16:01	0		April-04
04/29/04	5:18:01	0		April-04
04/29/04	5:20:01	0		April-04
04/29/04	5:22:01	0		April-04
04/29/04	5:24:01	0		April-04
04/29/04	5:26:01	0		April-04
04/29/04	5:28:01	0		April-04
04/29/04	5:30:01	0	36	April-04
04/29/04	5:40:01	4.9		April-04
04/29/04	5:42:01	5	4	April-04
		April Total	104	

Note: *pH values of 0 are missing pH data and not actual pH values.

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* ENVIRONMENTAL COMPLIANCE

Mallinckrodt pH Monitoring for SP010: May 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
05/06/04	14:58:01	5.4		May-04
05/06/04	15:00:01	5.1		May-04
05/06/04	15:02:01	5	6	May-04
05/06/04	15:06:01	3.9	2	May-04
05/06/04	23:50:01	11.6		May-04
05/06/04	23:52:01	11.6		May-04
05/06/04	23:54:01	11.7		May-04
05/06/04	23:56:01	11.7		May-04
05/06/04	23:58:01	11.7		May-04
05/07/04	0:00:01	11.7		May-04
05/07/04	0:02:01	11.7		May-04
05/07/04	0:04:01	11.7		May-04
05/07/04	0:06:01	11.7		May-04
05/07/04	0:08:01	11.7	20	May-04
05/07/04	8:20:01	11.6		May-04
05/07/04	8:22:01	11.6		May-04
05/07/04	8:24:01	11.6		May-04
05/07/04	8:26:01	11.6		May-04
05/07/04	8:28:01	11.6	10	May-04
05/07/04	8:38:01	11.6		May-04
05/07/04	8:40:01	11.6		May-04
05/07/04	8:42:01	11.7		May-04
05/07/04	8:44:01	11.7		May-04
05/07/04	8:46:01	11.8		May-04
05/07/04	8:48:01	11.7	12	May-04
05/07/04	9:00:01	5.3	2	May-04
05/07/04	9:04:01	3.9	2	May-04
05/07/04	9:14:01	12.3		May-04
05/07/04	9:16:01	12.8		May-04
05/07/04	9:18:01	12.9		May-04
05/07/04	9:20:01	12.9		May-04
05/07/04	9:22:01	12.8		May-04
05/07/04	9:24:01	12.7		May-04
05/07/04	9:26:01	12.6		May-04
05/07/04	9:28:01	12.5		May-04
05/07/04	9:30:01	12.4		May-04
05/07/04	9:32:01	12.3		May-04
05/07/04	9:34:01	12.3		May-04
05/07/04	9:36:01	12.2		May-04
05/07/04	9:38:01	12.1		May-04
05/07/04	9:40:01	11.9		May-04
05/07/04	9:42:01	11.8		May-04
05/07/04	9:44:01	11.6	32	May-04
05/13/04	10:00:01	5.1	2	May-04
05/13/04	10:06:01	4.1	2	May-04
05/17/04	2:42:01	0	2	May-04
05/21/04	11:02:01	4		May-04
05/21/04	11:04:01	4.1	4	May-04
05/21/04	11:12:01	3.9		May-04
05/21/04	11:14:01	4.1	4	May-04
05/28/04	14:24:01	4.3	2	May-04
05/28/04	14:26:01	4.3	2	May-04
05/28/04	14:30:01	4	2	May-04
		May Total	106	

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ENVIRONMENTAL COMPLIANCE

Mallinckrodt pH Monitoring for SP010: June 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
06/02/04	13:12:01	4.1		June-04
06/02/04	13:14:01	4.1		June-04
06/02/04	13:16:01	4.1		June-04
06/02/04	13:18:01	4	8	June-04
06/02/04	13:24:01	3.8		June-04
06/02/04	13:26:01	4	4	June-04
06/03/04	19:30:01	11.6		June-04
06/03/04	19:32:01	11.7		June-04
06/03/04	19:34:01	11.7		June-04
06/03/04	19:36:01	11.8		June-04
06/03/04	19:38:01	11.8		June-04
06/03/04	19:40:01	11.8		June-04
06/03/04	19:42:01	11.9		June-04
06/03/04	19:44:01	11.9		June-04
06/03/04	19:46:01	11.8		June-04
06/03/04	19:48:01	11.7	20	June-04
06/11/04	14:12:01	4.9		June-04
06/11/04	14:14:01	4.8	4	June-04
06/11/04	14:18:01	4	2	June-04
06/17/04	9:50:01	0		June-04
06/17/04	9:52:01	0		June-04
06/17/04	9:54:01	0		June-04
06/17/04	9:56:01	4.6		June-04
06/17/04	9:58:01	3.4		June-04
06/17/04	10:00:01	2.5		June-04
06/17/04	10:02:01	2.3	14	June-04
06/17/04	10:06:01	4	2	June-04
06/18/04	16:36:01	11.6		June-04
06/18/04	16:38:01	11.6		June-04
06/18/04	16:40:01	11.6		June-04
06/18/04	16:42:01	11.6		June-04
06/18/04	16:44:01	11.6	10	June-04
06/20/04	16:10:01	11.6		June-04
06/20/04	16:12:01	11.6	4	June-04
06/22/04	1:42:01	11.7		June-04
06/22/04	1:44:01	11.7		June-04
06/22/04	1:46:01	11.7		June-04
06/22/04	1:48:01	11.6	8	June-04
06/24/04	10:00:01	0.3		June-04
06/24/04	10:02:01	3.2		June-04
06/24/04	10:04:01	3.2	6	June-04
06/24/04	10:08:01	3.9		June-04
06/24/04	10:10:01	3.8	4	June-04
06/24/04	12:40:01	11.9		June-04
06/24/04	12:42:01	12		June-04
06/24/04	12:44:01	12		June-04
06/24/04	12:46:01	12		June-04
06/24/04	12:48:01	11.9		June-04
06/24/04	12:50:01	11.9		June-04
06/24/04	12:52:01	11.8		June-04
06/24/04	12:54:01	11.7		June-04
06/24/04	12:56:01	11.7		June-04
06/24/04	12:58:01	11.6	20	June-04

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JUL 28 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Mallinckrodt pH Monitoring for SP010: June 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
06/25/04	23:02:01	11.8		June-04
06/25/04	23:04:01	11.8		June-04
06/25/04	23:06:01	11.8		June-04
06/25/04	23:08:01	11.8		June-04
06/25/04	23:10:01	11.7		June-04
06/25/04	23:12:01	11.6	12	June-04
06/26/04	23:38:01	11.8		June-04
06/26/04	23:40:01	11.8		June-04
06/26/04	23:42:01	11.8		June-04
06/26/04	23:44:01	11.8		June-04
06/26/04	23:46:01	11.8		June-04
06/26/04	23:48:01	11.7		June-04
06/26/04	23:50:01	11.7		June-04
06/26/04	23:52:01	11.6	16	June-04
06/29/04	9:46:01	11.8		June-04
06/29/04	9:48:01	11.8		June-04
06/29/04	9:50:01	11.8		June-04
06/29/04	9:52:01	11.8		June-04
06/29/04	9:54:01	11.8		June-04
06/29/04	9:56:01	11.8		June-04
06/29/04	9:58:01	11.8		June-04
06/29/04	10:00:01	11.8		June-04
06/29/04	10:02:01	11.7		June-04
06/29/04	10:04:01	11.7		June-04
06/29/04	10:06:01	11.7		June-04
06/29/04	10:08:01	11.6		June-04
06/29/04	10:10:01	11.6		June-04
06/29/04	10:12:01	11.6		June-04
06/29/04	10:14:01	11.6		June-04
06/29/04	10:16:01	11.6	32	June-04
06/30/04	4:52:01	11.8		June-04
06/30/04	4:54:01	11.8		June-04
06/30/04	4:56:01	11.9		June-04
06/30/04	4:58:01	11.8		June-04
06/30/04	5:00:01	11.8		June-04
06/30/04	5:02:01	11.8		June-04
06/30/04	5:04:01	11.7		June-04
06/30/04	5:06:01	11.6	16	June-04
06/30/04	10:10:01	4.5	2	June-04
06/30/04	10:20:01	4.4		June-04
06/30/04	10:22:01	4	4	June-04
	June Total		188	

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

RECEIVED
JUL 28 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->	011							
DATES ON WHICH SAMPLES WERE COLLECTED	----->								
TIMES AT WHICH SAMPLES WERE COLLECTED	----->								
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow							UNITS
FLOW		E							gal/day
Oil & Grease	200	G							mg/l
Biochemical Oxygen Demand	****	C							mg/l
Chemical Oxygen Demand	****	C							mg/l
Total Suspended Solids	****	C							mg/l
Temperature	60	G							deg C
pH Acidic	5.5	G							S.U.
pH Basic	11.5	G							S.U.
***No flow this quarter**									

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) _X__(APR-JUNE) __(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		080		081		082	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		04/27/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=compc		G=grab,C=composite,M=measured flow,E=e				UNITS
FLOW		E	10,775					gal/day
Oil & Grease	200	G	ND					mg/l
Biochemical Oxygen Demand	****	C	ND					mg/l
Chemical Oxygen Demand	****	C	25.0					mg/l
Total Suspended Solids	****	C	6.0					mg/l
Temperature	60	G	18					deg C
pH Acidic	5.5	G	6					S.U.
pH Basic	11.5	G	7					S.U.
Total Toxic Organics	5.52	G	see attached					mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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ENVIRONMENTAL COMPLIANCE

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) ____ (JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->			080					
DATES ON WHICH SAMPLES WERE COLLECTED ---->			04/27/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED ---->			7:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BEL G=grab,C=composite,M=measured flow,E=e						UNITS
FLOW		E	10,775					gal/day
Chloromethane		G	ND					mg/l
Vinyl Chloride		G	ND					mg/l
Bromomethane		G	ND					mg/l
Chloroethane		G	ND					mg/l
Methylene Chloride		G	ND					mg/l
Chloroform		G	0.0034					mg/l
1,1-Dichloroethane		G	ND					mg/l
1,2-Dichloroethane		G	ND					mg/l
1,1-Dichloroethene		G	ND					mg/l
1,2-Dichloropropane		G	ND					mg/l
Carbon Tetrachloride		G	ND					mg/l
cis-1,3-Dichloropropene		G	ND					mg/l
trans-1,3-Dichloropropene		G	ND					mg/l
trans-1,2-Dichloroethene		G	ND					mg/l
Dibromochloromethane		G	ND					mg/l
Bromodichloromethane		G	0.001					mg/l
1,1,1-Trichloroethane		G	ND					mg/l
1,1,2-Trichloroethane		G	ND					mg/l
Benzene		G	ND					mg/l
Toluene		G	ND					mg/l
Trichloroethene		G	ND					mg/l
Ethylbenzene		G	ND					mg/l
1,1,2,2-Tetrachloroethane		G	ND					mg/l
Tetrachloroethene		G	ND					mg/l
Chlorobenzene		G	ND					mg/l
1,3-Dichlorobenzene		G	ND					mg/l
1,2-Dichlorobenzene		G	ND					mg/l
1,4-Dichlorobenzene		G	ND					mg/l
Bromoform		G	ND					mg/l
2-Chloroethylvinylether		G	ND					mg/l
Acrolein		G	ND					mg/l
Acrylonitrile		G	ND					mg/l
Phenol		G	ND					mg/l
2-Chlorophenol		G	ND					mg/l
2,4-Dimethylphenol		G	ND					mg/l
2,4-Dichlorophenol		G	ND					mg/l
2-Nitrophenol		G	ND					mg/l
4-Nitrophenol		G	ND					mg/l
2,4-Dinitrophenol		G	ND					mg/l
2,4,6-Trichforophenol		G	ND					mg/l
Pentachlorophenol		G	ND					mg/l
4-Chloro-3-methylphenol		G	ND					mg/l
2-Methyl-4,6-dinitrophenol		G	ND					mg/l
N-nitrosodimethylamine		G	ND					mg/l
Bis(2-chloroethyl)ether		G	ND					mg/l
Bis(2-chloroisopropyl)ether		G	ND					mg/l
N-nitrosodi-n-propylamine		G	ND					mg/l
Hexachloroethane		G	ND					mg/l
Nitrobenzene		G	ND					mg/l
Isophorone		G	ND					mg/l
Bis(2-chloroethoxy)methane		G	ND					mg/l
1,2,4-Trichforobenzene		G	ND					mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

RECEIVED
JUL 28 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) ____ (JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		080					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		04/27/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		7:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BEL G=grab,C=composite,M=measured flow,E=e						UNITS
FLOW		E	10,775					gal/day
Dimethyl phthalate		G	ND					mg/l
Hexachlorobutadiene		G	ND					mg/l
Hexachlorocyclopentadiene		G	ND					mg/l
2-Chloronapthalene		G	ND					mg/l
2,6-Dinitrotoluene		G	ND					mg/l
2,4-Dinitrotoluene		G	ND					mg/l
4-Chlorophenyl-phenylether		G	ND					mg/l
4-Bromophenyl-phenylether		G	ND					mg/l
Diethyl phthalate		G	ND					mg/l
Hexachlorobenzene		G	ND					mg/l
N-nitrosodiphenylamine		G	ND					mg/l
1,2-Diphenylhydrazine		G	ND					mg/l
Di-n-butyl phthalate		G	ND					mg/l
3,3-Dichlorobenzidine		G	ND					mg/l
Bis(2-ethylhexyl)phthalate		G	ND					mg/l
Butyl benzyl phthalate		G	ND					mg/l
Di-n-octyl-phthalate		G	ND					mg/l
Benzidine		G	ND					mg/l
Naphthalene		G	ND					mg/l
Phenanthrene		G	ND					mg/l
Fluorene		G	ND					mg/l
Anthracene		G	ND					mg/l
Acenapthene		G	ND					mg/l
Acenaphthylene		G	ND					mg/l
Benzo(a)pyrene		G	ND					mg/l
Chrysene		G	ND					mg/l
Fluoranthene		G	ND					mg/l
Pyrene		G	ND					mg/l
Benzo(a)anthracene		G	ND					mg/l
Benzo(b)fluoranthene		G	ND					mg/l
Benzo(k)fluoranthene		G	ND					mg/l
Dibenzo(a,h)anthracene		G	ND					mg/l
Benzo(g,h,i)perylene		G	ND					mg/l
Ideno(1,2,3-cd)pyrene		G	ND					mg/l
Total Toxic Organics	5.52	--	0.0044					mg/l
Shaded cells represent known absent or suspected absent								

0.01

Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 080/081/082; Building 98

Date Sampled: 4/27/04

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
Peptides				MSD		n/a	No
Leuprolide	Pharmaceutical	04/01/2004	04/02/2004				
		04/04/2004	04/08/2004				
		04/12/2004	04/16/2004				
		04/19/2004	04/23/2004				
		04/26/2004	04/30/2004				
		05/07/2004	05/07/2004				
		05/11/2004	05/14/2004				
		05/17/2004	05/21/2004				
		05/24/2004	05/27/2004				
		06/03/2004	06/04/2004				
		06/07/2004	06/09/2004				
		06/11/2004	06/11/2004				
		06/14/2004	06/17/2004				
		06/19/2004	06/25/2004				
		06/28/2004	06/30/2004				
Exenatide		04/20/2004	04/22/2004				
		04/24/2004	04/25/2004				
		05/03/2004	05/30/2004				

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06/01/2004	06/01/2004
06/05/2004	06/25/2004
06/27/2004	06/30/2004

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) _X___(APR-JUNE) _____(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		--->		905			
DATES ON WHICH SAMPLES WERE COLLEC		--->		04/27/2004			
TIMES AT WHICH SAMPLES WERE COLLECT		--->		9:35			
PARAMETER	LIMIT (ave) (gm/day)	LIMIT (gm/day)	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW M=measured flow			UNITS	Lab results mg/L
FLOW			M	37,213		gal/day	
Chloromethane	52.41	140.56	G	1.409		gm/day	0.01
Vinyl Chloride	46.22	81.96	G	1.409		gm/day	0.01
Chloroethane	52.41	140.56	G	1.409		gm/day	0.01
Methylene Chloride	17.15	81	G	0.704		gm/day	0.005
Chloroform	52.89	154.86	G	0.704		gm/day	0.005
1,1-Dichloroethane	10.48	28.11	G	0.704		gm/day	0.005
1,2-Dichloroethane	85.77	273.51	G	0.704		gm/day	0.005
1,1-Dichloroethene	10.48	28.59	G	0.704		gm/day	0.005
1,2-Dichloropropane	93.39	378.33	G	0.704		gm/day	0.005
Carbon Tetrachloride	67.66	181.07	G	0.704		gm/day	0.005
cis-1,3-Dichloropropene	93.39	378.33	G	0.704		gm/day	0.005
trans-1,3-Dichloropropene	93.39	378.33	G	0.704		gm/day	0.005
trans-1,2-Dichloroethene	11.91	31.45	G	0.704		gm/day	0.005
1,1,1-Trichloroethane	10.48	28.11	G	0.704		gm/day	0.005
1,1,2-Trichloroethane	15.25	60.51	G	0.704		gm/day	0.005
Benzene	27.16	63.85	G	0.704		gm/day	0.005
Toluene	13.34	35.26	G	0.704		gm/day	0.005
Trichloroethene	12.39	32.88	G	0.704		gm/day	0.005
Ethylbenzene	67.66	181.07	G	0.704		gm/day	0.005
Tetrachloroethene	24.78	78.14	G	0.704		gm/day	0.005
Chlorobenzene	67.66	181.07	G	0.704		gm/day	0.005
1,3-Dichlorobenzene	67.66	181.07	G	0.704		gm/day	0.005
1,2-Dichlorobenzene	93.39	378.33	G	0.704		gm/day	0.005
1,4-Dichlorobenzene	67.66	181.07	G	0.704		gm/day	0.005
2-Nitrophenol	30.97	110.07	G	14.085		gm/day	0.1
4-Nitrophenol	77.19	274.46	G	70.427		gm/day	0.5
2-Methyl-4,6-dinitrophenol	37.17	131.99	G	70.427		gm/day	0.5
Hexachloroethane	93.39	378.33	G	14.085		gm/day	0.1
Nitrobenzene	1065.91	3050.49	G	14.085		gm/day	0.1
1,2,4-Trichlorobenzene	93.39	378.33	G	14.085		gm/day	0.1
Dimethyl phthalate	9.05	22.4	G	14.085		gm/day	0.1
Hexachlorobutadiene	67.66	181.066	G	14.085		gm/day	0.1
Diethyl phthalate	21.92	53.84	G	14.085		gm/day	0.1
Hexachlorobenzene	93.39	378.33	G	14.085		gm/day	0.1
Di-n-butyl phthalate	9.53	20.49	G	14.085		gm/day	0.1
Bis(2-ethylhexyl)phthalate	45.27	122.93	G	14.085		gm/day	0.1
Naphthalene	9.05	22.4	G	14.085		gm/day	0.1
Phenanthrene	9.05	22.4	G	14.085		gm/day	0.1
Fluorene	9.05	22.4	G	14.085		gm/day	0.1
Anthracene	9.05	22.4	G	14.085		gm/day	0.1
Acenapthene	9.05	22.4	G	14.085		gm/day	0.1
Fluoranthene	10.48	25.73	G	14.085		gm/day	0.1
Pyrene	9.53	22.87	G	14.085		gm/day	0.1
Shaded values represent detection limits							
LAB RESULTS							

All lab results were non detect. Reporting or method detection limits were used as lab results.

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ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) __(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		912					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		See attached					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	See attached					gal/day
DMAC (daily max)	7091	C	See attached					lb/day
DMAC (monthly average)	5459	C	See attached					lb/day
	*							
* Monitoring requirement only.								

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ENVIRONMENTAL COMPLIANCE

Time: 8:00 am
use on previous reports
TCB

DMAC Analysis and Mass Loadings
Apr-04

SP912

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day
1-Apr	29368	3,600	883
2-Apr			
3-Apr			
4-Apr			
5-Apr			
6-Apr			
7-Apr			
8-Apr	59085	2,500	1,234
9-Apr			
10-Apr			
11-Apr			
12-Apr			
13-Apr			
14-Apr			
15-Apr	76704	1,600	1,025
16-Apr			
17-Apr			
18-Apr			
19-Apr			
20-Apr			
21-Apr			
22-Apr	67210	1,300	730
23-Apr			
24-Apr			
25-Apr			
26-Apr			
27-Apr			
28-Apr			
29-Apr	26518	250	55
30-Apr			
Avg (weighted):	51,777	1,850	786
Max:	76,704	3,600	1,234
Min:	26,518	250	55
Monthly Limit:	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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DMAC Analysis and Mass Loadings
May-04

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day
1-May			
2-May			
3-May			
4-May			
5-May	75200	1,500	942
6-May			
7-May			
8-May			
9-May			
10-May			
11-May			
12-May			
13-May	108068	1,700	1,535
14-May			
15-May			
16-May			
17-May	81873	1,800	1,231
18-May			
19-May			
20-May	102159	1900	1,622
21-May			
22-May			
23-May			
24-May			
25-May			
26-May			
27-May	84641	1,100	778
28-May			
29-May			
30-May			
31-May			
Avg (weighted):	90,388	1,600	1,222
Max:	108,068	1,900	1,622
Min:	75,200	1,100	778
Monthly Limit:	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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DMAC Analysis and Mass Loadings
Jun-04

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day
1-Jun			
2-Jun			
3-Jun	66003	2,200	1,213
4-Jun			
5-Jun			
6-Jun			
7-Jun			
8-Jun			
9-Jun			
10-Jun	142620	1,100	1,311
11-Jun			
12-Jun			
13-Jun			
14-Jun			
15-Jun			
16-Jun			
17-Jun	154350	930	1,199
18-Jun			
19-Jun			
20-Jun			
21-Jun			
22-Jun			
23-Jun			
24-Jun	164068	990	1,357
25-Jun			
26-Jun			
27-Jun			
28-Jun			
29-Jun			
30-Jun			
Avg (weighted)	131,760	1,305	1,270
Max:	164,068	2,200	1,357
Min:	66,003	930	1,199
Monthly Limit	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	_____(JAN-MAR)	__X__(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 915		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	04/28/2004		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	9:30		
SAMPLE TYPE				Grab		
FLOW			E	2,700		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result		
Acetone	524.2	20.70	8.20	<0.300		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	<0.010		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	<0.100		
n-Hexane	1666	3.00	0.70	<0.100		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100		
Tetrahydrofuran	1666	9.20	3.40	<0.100		
Toluene	524.2	0.30	0.20	<0.010		
Xylenes	1666	3.00	0.70	<0.200		
Isobutyraldehyde	1666	20.70	8.20	<0.1		
n-Amyl acetate	1666	20.70	8.20	<0.100		
n-Butyl acetate	1666	20.70	8.20	<0.100		
Isopropyl acetate	1666	20.70	8.20	<0.100		
Isopropyl ether	1666	20.70	8.20	<0.100		
n-Heptane	1666	3.00	0.70	<0.200		
Methyl formate	1666	20.70	8.20	<0.500		
Diethyl amine	1671	255.00	100.00	<17.0		
Triethyl amine	1671	255.00	100.00	<17.0		
Dilution by lab				1, 100		

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DIVISION OF
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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.		
Permit No.:	21120596-00		
Premise Address:	3600 North Second St., St. Louis, MO 63147		
Monitoring Period:	_____(JAN-MAR)	__X__(APR-JUN)	____(JULY-SEP) ____(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc		
Analysis Performed By:	Lancaster Labs		

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->	SP 917
DATES ON WHICH SAMPLES WERE COLLECTED	----->	04/29/2004
TIMES AT WHICH SAMPLES WERE COLLECTED	----->	9:15
SAMPLE TYPE		Grab
FLOW	E	5000 GPD

PARAMETER Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result
Acetone	524.2	20.70	8.20	0.15
Benzene	524.2	3.00	0.70	<0.001
Chlorobenzene	524.2	3.00	0.70	<0.001
Chloroform	524.2	0.10	0.03	0.0028 J
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001
1,2-Dichloroethane	524.2	20.70	8.20	<0.001
Ethyl Acetate	1666	20.70	8.20	<0.001
n-Hexane	1666	3.00	0.70	<0.001
Methylene chloride	524.2	3.00	0.70	<0.003
4-Methyl-2-pentanone	1666	20.70	8.20	0.019
Tetrahydrofuran	1666	9.20	3.40	0.00490 J
Toluene	524.2	0.30	0.20	0.015
Xylenes	1666	3.00	0.70	<0.002
Isobutyraldehyde	1666	20.70	8.20	<0.001
n-Amyl acetate	1666	20.70	8.20	<0.001
n-Butyl acetate	1666	20.70	8.20	<0.001
Isopropyl acetate	1666	20.70	8.20	<0.001
Isopropyl ether	1666	20.70	8.20	<0.001
n-Heptane	1666	3.00	0.70	<0.002
Methyl formate	1666	20.70	8.20	<0.005
Diethyl amine	1671	255.00	100.00	<17.0
Triethyl amine	1671	255.00	100.00	<17.0
Dilution factor by lab				1, 10

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Mallinckrodt, Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 917; Building 97

Quarterly Sample Date: April 29, 2004

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Meperidine HCl	Pharmaceutical	04/01/04	06/30/04	SP917 (change over cleanouts - HCl/water)	NA	No	No
Methylphenidate HCl	Pharmaceutical	04/01/04	04/02/04	SP917 (change over cleanouts - HCl/water)	NA	No	No
Thebaine SFH	Pharmaceutical	04/03/04	04/08/04	SP917 (change over cleanouts - Acetic/water)	NA	No	No
Amphetamines	Pharmaceutical	04/08/04	04/12/03	SP917 (change over cleanouts - HCl/water)	NA	No	No
Versetamide	Pharmaceutical	04/13/04	04/28/04	SP917 (change over cleanouts - water)	NA	No	No
Bis-Anhydride	Pharmaceutical	04/29/04	05/28/04	SP917 (change over cleanouts - water)	NA	No	No
Diphenoxylate HCl	Pharmaceutical	05/30/04	06/18/04	SP917 (change over cleanouts - Acetic/water)	NA	No	No
Nalbuphine HCl	Pharmaceutical	06/19/04	06/30/04	SP917 (change over cleanouts - HCl/water)	NA	No	No

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MSD 019397

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	_____(JAN-MAR)	__X__(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
MSD SAMPLE POINT REFERENCE NUMBERS			---->	SP 918		
DATES ON WHICH SAMPLES WERE COLLECTED			---->	N/A		
TIMES AT WHICH SAMPLES WERE COLLECTED			---->	N/A		
SAMPLE TYPE						
FLOW			E	0	NO FLOW	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly			
Acetone	524.2	20.70	8.20			
Benzene	524.2	3.00	0.70			
Chlorobenzene	524.2	3.00	0.70			
Chloroform	524.2	0.10	0.03			
1,2-Dichlorobenzene	524.2	20.70	8.20			
1,2-Dichloroethane	524.2	20.70	8.20			
Ethyl Acetate	1666	20.70	8.20			
n-Hexane	1666	3.00	0.70			
Methylene chloride	524.2	3.00	0.70			
4-Methyl-2-pentanone	1666	20.70	8.20			
Tetrahydrofuran	1666	9.20	3.40			
Toluene	524.2	0.30	0.20			
Xylenes	1666	3.00	0.70			
Isobutyraldehyde	1666	20.70	8.20			
n-Amyl acetate	1666	20.70	8.20			
n-Butyl acetate	1666	20.70	8.20			
Isopropyl acetate	1666	20.70	8.20			
Methyl cellosolve	1671	275.00	59.70			
Isopropyl ether	1666	20.70	8.20			
n-Heptane	1666	3.00	0.70			
Methyl formate	1666	20.70	8.20			
Diethyl amine	1671	255.00	100.00			
Triethyl amine	1671	255.00	100.00			
Dilution by lab						

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METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	____(JAN-MAR) __X__(APR-JUN) ____(JULY-SEP) ____(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		SP 919
DATES ON WHICH SAMPLES WERE COLLECTED	----->	04/29/2004
TIMES AT WHICH SAMPLES WERE COLLECTED	----->	13:30
SAMPLE TYPE	----->	Grabs
FLOW	E	6,000

		PARAMETER				
		Results reported in mg/l (ppm)	EPA Method		Avg Monthly Limit	Result
1	22	Diethyl amine	1671	255.00	100.00	<17
3	23	Triethyl amine	1671	255.00	100.00	<17
4	14	Isobutyraldehyde	1666	20.70	8.20	<0.001
5	19	Isopropyl ether	1666	20.70	8.20	<0.001
6	17	Isopropyl acetate	1666	20.70	8.20	<0.001
7	10	4-Methyl-2-pentanone	1666	20.70	8.20	<0.001
8	16	n-Butyl acetate	1666	20.70	8.20	<0.001
9	15	n-Amyl acetate	1666	20.70	8.20	<0.001
10	21	Methyl formate	1666	20.70	8.20	<0.005
11	8	n-Hexane	1666	3.00	0.70	<0.001
12	7	Ethyl Acetate	1666	20.70	8.20	<0.001
13	11	Tetrahydrofuran	1666	9.20	3.40	<0.001
14	20	n-Heptane	1666	3.00	0.70	<0.002
15	13	Xylenes	1666	3.00	0.70	<0.002
16	1	Acetone	524.2	20.70	8.20	<0.030
17	9	Methylene chloride	524.2	3.00	0.70	<0.003
18	4	Chloroform	524.2	0.10	0.03	4.2
19	2	Benzene	524.2	3.00	0.70	<0.001
20	6	1,2-Dichloroethane	524.2	20.70	8.20	<0.001
21	12	Toluene	524.2	0.30	0.20	<0.001
22	5	1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001
23	3	Chlorobenzene	524.2	3.00	0.70	<0.001
		Dilution by Lab				1, 10

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	_X___(APR-JUN)		__(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 920		
DATES ON WHICH SAMPLES WERE COLLECTE			----->	04/19/2004		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	11:15		
SAMPLE TYPE				Grabs		
FLOW			E	24,000		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result		
Acetone	524.2	20.70	8.20	<0.060		
Benzene	524.2	3.00	0.70	<0.002		
Chlorobenzene	524.2	3.00	0.70	<0.002		
Chloroform	524.2	0.10	0.03	<0.002		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.002		
1,2-Dichloroethane	524.2	20.70	8.20	<0.002		
Ethyl Acetate	1666	20.70	8.20	<0.001		
n-Hexane	1666	3.00	0.70	<0.001		
Methylene chloride	524.2	3.00	0.70	<0.006		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001		
Tetrahydrofuran	1666	9.20	3.40	<0.001		
Toluene	524.2	0.30	0.20	0.0032 J		
Xylenes	1666	3.00	0.70	<0.002		
Isobutyraldehyde	1666	20.70	8.20	<0.001		
n-Amyl acetate	1666	20.70	8.20	<0.001		
n-Butyl acetate	1666	20.70	8.20	<0.001		
Isopropyl acetate	1666	20.70	8.20	<0.001		
Isopropyl ether	1666	20.70	8.20	<0.001		
n-Heptane	1666	3.00	0.70	<0.002		
Methyl formate	1666	20.70	8.20	<0.005		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by lab				1, 20		

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT					
INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:		____(JAN-MAR)	__X__(APR-JUN)	____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP927	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	04/26/2004	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	22:00	
SAMPLE TYPE				Grab	
FLOW			E	2,200	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.150	
Methylene chloride	524.2	3.00	0.70	<0.015	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Dilution by lab				10, 50	

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT					
INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:		____(JAN-MAR)	__X__(APR-JUN)	____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP928	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	4/26/2004	5/21/2004
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	22:00	14:50
SAMPLE TYPE				Grab	Grab
FLOW			E	2,200	2,200
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	0.020*	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	<0.100	
n-Hexane	1666	3.00	0.70	<0.100	
Methylene chloride	524.2	3.00	0.70	<0.030	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100	
Tetrahydrofuran	1666	9.20	3.40	<0.100	
Toluene	524.2	0.30	0.20	<0.010	0.014 J
Xylenes	1666	3.00	0.70	<0.200	
Isobutyraldehyde	1666	20.70	8.20	<0.100	
n-Amyl acetate	1666	20.70	8.20	<0.100	
n-Butyl acetate	1666	20.70	8.20	<0.100	
Isopropyl acetate	1666	20.70	8.20	<0.100	
Isopropyl ether	1666	20.70	8.20	<0.100	
n-Heptane	1666	3.00	0.70	<0.200	
Methyl formate	1666	20.70	8.20	<0.500	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution				1, 100	100
*net chloroform result					

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT					
INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:		____(JAN-MAR)	__X__(APR-JUN)	____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP929	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	04/27/2004	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	7:15	
SAMPLE TYPE				Grab	
FLOW			E	2,200	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.150	
Benzene	524.2	3.00	0.70	<0.005	
Chlorobenzene	524.2	3.00	0.70	<0.005	
Chloroform	524.2	0.10	0.03	<0.005	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.005	
1,2-Dichloroethane	524.2	20.70	8.20	<0.005	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Hexane	1666	3.00	0.70	<0.010	
Methylene chloride	524.2	3.00	0.70	<0.015	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
Tetrahydrofuran	1666	9.20	3.40	0.0102 J	
Toluene	524.2	0.30	0.20	<0.005	
Xylenes	1666	3.00	0.70	<0.020	
Isobutyraldehyde	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
n-Butyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Isopropyl ether	1666	20.70	8.20	<0.010	
n-Heptane	1666	3.00	0.70	<0.020	
Methyl formate	1666	20.70	8.20	<0.050	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution				1, 10, 50	

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	____(JAN-MAR) __X__(APR-JUN) ____(JULY-SEP) ____(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP930
DATES ON WHICH SAMPLES WERE COLLECTED			----->	04/19/2004
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	13:15
SAMPLE TYPE				Grab
FLOW			E	2,200
PARAMETER				
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result

1	22	Diethyl amine	1671	255.00	100.00	<17.0
3	23	Triethyl amine	1671	255.00	100.00	<17.0
4	14	Isobutyraldehyde	1666	20.70	8.20	<0.010
5	19	Isopropyl ether	1666	20.70	8.20	<0.010
6	17	Isopropyl acetate	1666	20.70	8.20	<0.010
7	10	4-Methyl-2-pentanone	1666	20.70	8.20	<0.010
8	16	n-Butyl acetate	1666	20.70	8.20	<0.010
9	15	n-Amyl acetate	1666	20.70	8.20	<0.010
10	21	Methyl formate	1666	20.70	8.20	<0.050
11	8	n-Hexane	1666	3.00	0.70	<0.010
12	7	Ethyl Acetate	1666	20.70	8.20	<0.010
13	11	Tetrahydrofuran	1666	9.20	3.40	<0.010
14	20	n-Heptane	1666	3.00	0.70	<0.020
15	13	Xylenes	1666	3.00	0.70	<0.020
16	1	Acetone	524.2	20.70	8.20	<0.075
17	9	Methylene chloride	524.2	3.00	0.70	<0.0075
18	4	Chloroform	524.2	0.10	0.03	<0.0025
19	2	Benzene	524.2	3.00	0.70	<0.0025
20	6	1,2-Dichloroethane	524.2	20.70	8.20	<0.0025
21	12	Toluene	524.2	0.30	0.20	<0.0025
22	5	1,2-Dichlorobenzene	524.2	20.70	8.20	<0.0025
23	3	Chlorobenzene	524.2	3.00	0.70	<0.0025
		Dilution				1, 10, 25

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

July 13, 2004

Karen Siebenberger
HS&E Engineer
MALLINCKRODT INC.
3600 N. 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 N. 2nd Street

Dear Ms. Siebenberger:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on May 1, 2003, for the premise identified above, is hereby modified as per the attached pages 1, 9, 19, 20, 33, 34, 34A, 34B, 34B, 34C, 34D, 34E, 34F, 34G, 34H, 34I, 34J, 42, 43, and 44. Please note this is a second part of the March 25, 2004 permit modification previously forwarded to Mallinckrodt. This modification adds sampling points 930, 931, 932, and 933 and two related special conditions. Special condition II.C.6 has been amended to include sampling points 929, 932 and 933. Special condition II.D.3 has been amended to include new sampling points 930, 931, 932, and 933. Additionally, the monitoring frequencies for Diethylamine and Triethylamine at sampling points 915, 928, and 929 have been revised from quarterly to annually. This letter and the revised pages 1, 9, 19, 20, 33, 34, 34A, 34B, 34B, 34C, 34D, 34E, 34F, 34G, 34H, 34I, 34J, 42, 43, and 44 should be affixed to your permit as your official record and become a part thereof. These changes were identified pursuant to recent communication between Mallinckrodt and the District.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

Enclosurers

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: May 01, 2003
MODIFICATION DATE: March 25, 2004
EXPIRATION DATE: February 28, 2005

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2ND STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 25
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 082, 099, 905, 912, 915, 917, 918, 919, 920, 927, 928, 929, 903, 931, 932, 933

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,860,482

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Categorical (from sampling points 905, 915, 917-920, 927-933)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 928

SAMPLING POINT LOCATION: Tank 309 (lime press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Benzene [mg/L]****	3	Daily Max	Once/3 mo
Benzene [mg/L]****	.7	Monthly Avg	
n-Butyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]****	8.2	Monthly Avg	
Chlorobenzene [mg/L]****	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]****	.7	Monthly Avg	
Chloroform [mg/L]****	.1	Daily Max	Once/3 mo
Chloroform [mg/L]****	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]****	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]****	8.2	Monthly Avg	
Diethylamine [mg/L]****	255	Daily Max	Once/year
Diethylamine [mg/L]****	100	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
n-Heptane [mg/L]****	3	Daily Max	Once/3 mo
n-Heptane [mg/L]****	.7	Monthly Avg	
n-Hexane [mg/L]****	3	Daily Max	Once/3 mo
n-Hexane [mg/L]****	.7	Monthly Avg	
Isobutyraldehyde [mg/L]****	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **928**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	
Methyl Formate [mg/L]****	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]****	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]****	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]****	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]****	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]****	3.4	Monthly Avg	
Toluene [mg/L]****	.3	Daily Max	Once/3 mo
Toluene [mg/L]****	.2	Monthly Avg	
Triethylamine [mg/L]****	255	Daily Max	Once/year
Triethylamine [mg/L]****	100	Monthly Avg	
Xylene [mg/L]****	3	Daily Max	Once/3 mo
Xylene [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.8** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 929

SAMPLING POINT LOCATION: 1/2" stainless steel pipe in sink with effluent from #639 centrifuge, 15' from W wall

AVERAGE WASTEWATER FLOW (GPD): 800

WASTEWATER SOURCE AND CATEGORY: 439 Sub C PSES (CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **929**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Bldg. 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: 439 Sub C PSES (CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/year
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/year
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/year
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/year
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/year
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/year
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/year
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/year
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/year
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/year
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/year
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/year
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/year
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **930**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/year
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/year
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/year
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/year
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/year
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/year
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 931

SAMPLING POINT LOCATION: Valve on 1" line 4' from Hydrogenator wall and 8' from S wall in SE corner of Building 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: 439 Sub C PSES (CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **931**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: 439 Sub C PSES (CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **932**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: 439 Sub C PSES (CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **933**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

4. Sample points **001, 003, 008, 009, 010, 011**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

5. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where: DF= downstream flow rate

DC = downstream concentration
UF = upstream flow rate
UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

6. The permittee is authorized to perform self-monitoring at sampling points **915, 929, 932,** and **933** using grab samples in lieu of the composite samples specified in General Condition I.A.3. Each quarterly monitoring report shall include a statement that the grab sample results accurately represent the permittee's average daily discharge.

7. Permittee shall continue in-process monitoring to very absence of **DMAC** in building **505.** Each quarterly report shall include a statement certifying that no discharge of **DMAC** from building **505** has occurred.

8. Monitoring at sampling points **927** and **928** shall include the following:

a. Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b. Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

1. The permittee is not required to sample discharges at sampling points **001, 002,** or **082** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points

001, **002**, or **082** since the last report.

2. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **005**, **010**, **080**, **915**, **917**, **918**, **919**, **920**, **928**, **929**, **930**, **931**, **932**, and **933** Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **005**, **010**, **080**, **915**, **917**, **918**, **919**, **920**, **928**, **929**, **930**, **931**, **932**, and **933**.

4. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

5. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

6. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

7. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

8. For sampling points **930** and **933**, permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **930** and **933** are adhered to.

9. For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

E. SPECIAL BILLING REQUIREMENTS

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **692 mg/l** for **BOD**, **1,524 mg/l** for **COD**, and **360 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

Permit File

DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
MEMORANDUM

MEMO TO: Doug Mendoza

ACCT #: 21120596-00

FROM: Jason Gill JAG

DATE: 7/9/04

SUBJECT: **Mallinckrodt Site Visit – New Sample Point Info**

SP931 Description: " 2" valve from Sump Pump PD-21 4' from Hydrogenator wall, 8' from S wall in SE corner of bldg. #260."

SP932 Description: " 1" valve 5' inside N dyke wall, 27'W from NE corner of neutralization tank farm wall."

- Wastewater that did not go through the air stripper process will be transported from totes or tankers to the neutralization area. Then it will be pumped over to a section of pipe before entering the neutralization process for treatment.

SP933 Description: " 1" valve on tank #1 10'NW of SE corner of bldg. #200W."

Note

Karen S. will be faxing us the flow estimates for the above proposed sample points ASAP. ✓

2112-0896-00

Tyco Healthcare/ Mallinckrodt
Wastewater Sampling Procedure
Miscellaneous PEG Wastewaters – SP932

Background: Per 40 CFR 439, pharmaceutical process wastewaters may only be discharged through an approved *in plant monitoring point*. Currently, the use of a manufacturing building that does not a have an identified pharmaceutical discharge point forces Mallinckrodt to collect all the pharmaceutical process wastewaters for offsite disposal.
Mallinckrodt has petitioned MSD for approval of an *in plant monitoring point* where miscellaneous pharmaceutical process wastewaters may be discharged. This gives Mallinckrodt the ability to use under-utilized manufacturing buildings for various types of production in response to business demand. The new sample point is SP932.

Change Request Date: August 1, 2004

Discharges at SP932:
SP932 is located at the truck unloading station near the wastewater neutralization system (Building 904) on the north end of the plant. Approved PEG wastewaters will be collected in the processing areas in containers or tank trucks and will be transported to this truck unloading station. Sampling of the wastewater will be at the sump. This location ultimately discharges through SP010.

Approval Process: Any pharmaceutical wastewater to be discharged at SP932 must first be characterized and known to be below the PEG pollutant regulatory limits. Areas without a PEG monitoring point that generate a PEG wastewater will complete the attached *Wastewater Questionnaire* (see Exhibit 1) and submit it to the HSE Wastewater Engineer for approval. The wastewater engineer will keep a log of approved discharges for SP932.

Sampling Protocol at SP932:
Use of this in plant monitoring point will be sporadic, so SP 932 quarterly samples will be obtained of the first discharge. If there are no discharges during the quarter, no flow will be reported on the Quarterly Report submission. A quarterly Sampling Log Sheet (see Exhibit 2) will be retained in the Quarterly Report files by Mallinckrodt.

Sample collection, handling, shipping and testing will comply with the established PEG requirements.

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JUL 09 2004
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COMPLIANCE

Exhibit 1

SP932 - Wastewater Questionnaire

Complete for Pharmaceutical Process Wastewaters to be sewered at SP932

Product/Item Code:_____

Wastewater description:_____

Wastewater Composition (as percentages):

Component	Percentage

Composition: Engineering Estimate or Analytical data

Total quantity:_____

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DEPT. OF ENVIRONMENTAL
COMPLIANCE

Exhibit 2

Wastewater Sampling Log Sheet
(to be kept on file with the Quarterly reports)

Sample Point Number: SP932

Date: _____ **Time:** _____

Sample ID: _____

Sampler: _____

Describe process discharge: _____

_____

Quantity Discharged: _____

Describe Sample (color, solids, foam etc): _____

Sample collection: Fill 9 x 40mL glass screw cap (teflon lined silicone septa) VOA vials by the following steps:

1. Open the sample line and allow to flush for one minute.
2. Gently introduce the liquids into the vials, reducing any agitation which may drive off volatile compounds. Fill the vials completely, so that when the septum cap is fitted and sealed and the vial inverted no headspace is visible.
3. Immediately cool and store samples to 4 degrees C (until analysis).
4. Note: VOA vials should not be filled near a running motor or any type of exhaust fumes.

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ENVIRONMENTAL COMPLIANCE

2172058-00

Tyco Healthcare/ Mallinckrodt
Wastewater Sampling Procedure
Building 200- SP933

Background: Manufacturing a product subject to the Pharmaceutical Effluent Guidelines (PEG) under the Clean Water Act requires wastewater compliance demonstration. An *in plant monitoring location* must be identified where pharmaceutical process wastewaters exclusively discharge. Samples are collected and analyzed quarterly to demonstrate compliance with the PEG limits. Samples must be representative of the normal pharmaceutical process discharge.

Reason for Change: Noscapine production is subject to the PEG limits. Noscapine is projected to run once each quarter in Building 200W, a building previously dedicated to the manufacture of Imaging compounds. The manufacture of Imaging compounds is not covered by the PEG rule.

Change Request Date: July 15, 2004

General Process Wastewater Flow:
Building 200 is separated by a wall into two sections referred to as 200 East and 200 West. Noscapine production is located in 200W. Wastewaters from the cleanout of Noscapine production equipment are discharged from Tank 1 to the building neutralization system. Tank 1 is located near the southeast corner of Building 200W wall and is labeled with tag "SP933".

The cleanout wastewater does not contain any non-contact cooling water or any Imaging compound wastewater.

Sampling Protocol:
Sampling is triggered by the Building 200 process engineer during the first Noscapine run of the quarter (Jan-Mar; Apr-June; Jul-Sep; Oct-Dec). Sample collection from Tank 1 will be performed or supervised by either the Process engineer or HSE engineer. The Building 200 Sampling Log Sheet must be completed and returned to HSE for the Quarterly Report files.

Sample collection, handling, shipping and testing will comply with the established PEG requirements.

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JUL 09 2004
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COMPLIANCE

K. Siebenberger
S:\HSE\Sitewide\Imaging\Wastewater\200 PEG Sampling Procedure.doc
Revised 7-07-2004

tyco / Healthcare / Mallinckrodt

Facsimile Communication

To: Mr. Jason Gill
Company: MSD
Fax Number: 314-436-8753
Date: 7/9/04

Number of Pages *(including cover sheet)*: 1

X For your information
Please respond
Urgent
Confidential

Comments:

Dear Mr. Gill,

You requested additional information on flows for four new sample points, SP930-934.

SP930 – 650 gpd (on an annualized basis). Actual is 2000 gpd for days in production.

SP931- 15,000 gpd (The majority of the flow is from the scrubber discharge – 14,400 gpd)

SP932 – 100 gpd (on annualized basis). This point will only be used sporadically.

SP933 – 100 gpd (on an annualized basis). This will a quarterly cleanout of no more than 10,000 gallons.

Please call me at 654-1920 if you need any further information.

Thank-you,

Karen Siebenberger

2112-0596-00

	Summary of Mallinckrodt testing requests - July 1, 2004	
(*)	~~SP080~~	~~Void. Becomes SP932 subject to Subpart C. Quarterly monitoring~~, ~~0+6, TSS etc.?~~ ~~direct to MSD.~~
	SP915	triethylamine & diethylamine- change from quarterly to annual
	SP917	no change
	SP918	no change
	SP919	no change
	SP920	surrogate testing quarterly of toluene(high strippability class) and tetrahydrofuran (medium strippability class)
	SP927	no change
	SP928	triethylamine & diethylamine- change from quarterly to annual
	SP929	triethylamine & diethylamine- change from quarterly to annual
2225 (A) (B)	SP930-new	Quarterly test for toluene - other subpart C parameters annually
260 (A)	SP931 - new	triethylamine & diethylamine- annual monitoring. All other subpart C monitor quarterly. (D)
9[illegible] (*)	~~SP932 - new~~	~~Quarterly monitoring of all subpart C~~
904 (A)	~~SP933~~ - new (932)	Quarterly monitoring of all subpart C (new special condition, too for misc. discharges) ← to follow SOP
(B) (A) 200 W	SP~~934~~ (933) - new	triethylamine & diethylamine- annual monitoring. All other subpart C monitor quarterly. *Have not documented reduced testing request ← Do ASAP (D)
meOH (C)	~~SP935 - new~~	~~surrogate testing quarterly of toluene(high strippability class) and tetrahydrofuran (medium strippability class)~~

Karen Siebenberger 7/1/04

Karen Siebenberger

✓ (*) NO - keep using 082 as needed. (with 080)

✓ (A) Need to get descriptions

✓ (B) SOP's to sample only when 439 mat'l discharging (need SOP for SP933) - special conditions

✓ (C) Hold off on this for now.

(D) Need initial tests showing non-detects for annual pollutants - 931 + 933

931 → already done → will tax

933 → will do next quarter

tyco / Healthcare / **Mallinckrodt**

Facsimile Communication

To: Mr. Doug Mendoza
Company: MSD
Fax Number: 314-436-8753
Date: 6-18-04

Number of Pages *(including cover sheet)*: 5

- ☐ For your information
- X Please respond
- ☐ Urgent
- X Confidential

Health, Safety, Environmental

Mallinckrodt Inc.
3600 N. Second St.
St. Louis, Missouri 63147

Telephone 314-654-2000
Facsimile 314-654-1251

Comments:

Doug,

I am sorry we played phone tag the last few days. I know MSD invests considerable time in making permit modifications and that you would like to include any and all modification requests in the next revision.

Attached is a draft letter requesting the establishment of SP931-935 and the supporting rationale. We have discussed many of these requests at prior meetings, with SP934 being the only one not previously discussed.

I will be on vacation the week of June 21, returning to the office Tuesday, June 29th. I will call you on my return.

Thanks,

Karen Siebenberger

Karen Siebenberger

Draft

DRAFT

June 18, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Blvd.
St. Louis, Mo 63147

RE: Establishment of new PEG discharge points
Permit No. 21120596-00

New PEG point (proposed Sample Point 931) - Building 260

At our May 18th meeting we discussed establishing the Building 260 PEG point. On May 18th, I indicated the building 260 scrubber discharged to the enclosed sump. That was incorrect, the scrubber joined after the sump. However, the Building scrubber discharge is being rerouted, so that all process wastewaters will discharge to the previously discussed sump. Wastewaters that are MACT affected under the Pharmaceutical NESHAP (in this case, methanol containing) are discharged to the PEG stripper and will not be discharged through SP931.

Per 40 CFR 439.4, permit limits and compliance monitoring are not required for regulated pollutants neither used nor generated at the facility. Mallinckrodt is requesting the reduced monitoring for triethylamine and diethylamine. This is based on the assessment of process chemistry, products and by-products resulting from the manufacturing processes and a review of all the raw materials used in the building (includes a review of all components of each Material Safety Data Sheet for raw materials used in Building 260). This determination will be kept with the permit records at Mallinckrodt. Mallinckrodt is requesting approval to perform the annual chemical analysis to reconfirm the non-detect status of both triethlyamine and diethylamine. Mallinckrodt will perform quarterly monitoring for the other PEG constituents.

New PEG point (proposed Sample Point ~~932~~) – Peptides/Building 98 NO - should be using 082 for pharm. pollutants

At our meeting on May 18th, we discussed wastewater discharges from the Peptides area. Peptides are amino acid chains that are biologically active and are produced in small quantities (grams) in a portion of the Building 96 R&D labs and the Building 98 pilot plant.

Traditional process wastewater has been collected in drums and disposed of off site as waste. Additional infrequent or small discharges have been identified. At the meeting,

you requested Mallinckrodt submit in writing what actions we proposed to handle these waters.
In Building 96, Mallinckrodt will ensure no pharmaceutical wastewaters are discharged through the Building 96 sink (we had identified a 0.1% Trifluoroacetic acid solution, which will now be collected and disposed of via waste collection).

For the Building 98 processes, Mallinckrodt would like to convert the existing SP080 to a PEG discharge point subject to PEG monitoring requirements (40 CFR 439 Subpart C – Chemical Synthesis Products Subcategory). When SP080 was established initially, the Building 98 pilot plant was producing both OCPSF products, as well Pharmaceuticals. Building 98 is exclusively dedicated to Peptides manufacturing. (All OCPSF manufacturing is in Building X (SP905). The Building 98 wastewaters that will be discharged include the Building 98 eductor system, the ammonia acetate buffer solution discussed on May 18th, solutions used for neutralizations and column prep and clean-outs. The Potassium Hydroxide/Hydrofluoric Acid neutralization tank we discussed at the May meeting is located in the outside yard area and the wastewater will also be discharged through SP080. Any wastewaters that may contain PEG pollutants above the limitations will continue to be collected and disposed of via hazardous waste.

New PEG point (proposed Sample Point ~~933~~ 932) - Miscellaneous Pharmaceutical Wastewaters

At our May 18th meeting, I explored the concept of creating a new pharmaceutical discharge point that could be used for miscellaneous pharmaceutical wastewaters subject to 40 CFR 439 Subpart C – Chemical Synthesis Products Subcategory. For the most part, manufacturing buildings at the St. Louis Plant are dedicated to production of similar product groups (same SIC categories). Product groups include Pharmaceuticals, Imaging Compounds, Inorganics and Stearates (OCPSF). The buildings that typically generate pharmaceutical process wastewaters subject to 40 CFR 439 are connected to the central PEG stripper, SP920 and have additional PEG discharge points (SP915-919, 929-930) that are monitored quarterly.

The basis for the current request is to give Mallinckrodt the ability to use under-utilized manufacturing buildings for various types of production in response to business demand. Currently, the use of a manufacturing building that does not a have an identified pharmaceutical discharge point forces Mallinckrodt to collect all the process wastewaters for offsite disposal. In these instances, the wastewater has been tested and is well below the PEG pollutant regulatory limits. Establishing the proposed SP933 would allow Mallinckrodt to discharge the wastewater on site.

Mallinckrodt proposes to establish a system where a new pharmaceutical process wastewater would first be characterized to ensure no treatment is required to meet PEG limits. The "miscellaneous" discharge point would be monitored quarterly (since use would be sporadic, the first discharge would be sampled each quarter).

Draft

The proposed location for the "miscellaneous" pharmaceutical discharge point, SP933 is the truck unloading station near the wastewater neutralization system on the north end of the plant. Wastewaters would be collected in the processing areas in containers or tank trucks and would be transported to this truck unloading station. Sampling would be at the sump. This location ultimately discharges through SP010.

New PEG point (proposed Sample Point ~~934~~ 933) – Building 200W

Building 200W is a manufacturing building located on the south end of what is referred to as Plant 5. It has been dedicated to the manufacture of Imaging compounds. To optimize production schedules, a pharmaceutical product previously manufactured in Building 235 was proposed for 200W. The process uses no PEG pollutants, but the starting material's production did use chloroform. (This is similar to the SP930 which was established for Building 222). Since 200W does not have a PEG discharge point, all process wastewaters were collected and disposed of off-site as waste. Mallinckrodt did sample the wastewaters and found chloroform well below the PEG limits. Mallinckrodt is requesting the establishment of PEG discharge point, SP934. Mallinckrodt intends the primary production in 200W to continue to be Imaging compounds, but may want to run the pharmaceutical process, Noscapine once a quarter. Noscapine production falls under 40 CFR 439 Subpart C – Chemical Synthesis Products Subcategory.

The proposed SP934 is process tank, T2. Essentially, the only process wastewater discharge would be clean-out waters. All the process tanks and equipment will be cleaned with an acid wash and the acid wash would be collected in T2 prior to discharge to the Building neutralization system for pH adjustment. PEG monitoring would be performed only during the Noscapine campaigns and wastewater would be exclusively pharmaceutical.

New PEG point (proposed Sample Point ~~935~~) – Methanol Stripper -Hold off, for now.

Also at the May 18th meeting, we discussed the possibility of establishing a PEG discharge point for the methanol stripper. The Methanol wastewater stripper currently receives wastewaters only from the Imaging buildings. Mallinckrodt's Building 250 produces one pharmaceutical product with wastewater that contains methanol (no PEG compounds). This wastewater meets the PEG limits and could be discharged through the Building's PEG point, SP919, except that the methanol content triggers the Pharma NESHAP which mandates MACT controls. Sending this wastewater to the Methanol stripper is MACT control. The concern was that this wastewater would be mixed with Imaging wastewaters. Your review of the combined wastewater formula indicated that this would not be a problem since the imaging wastewaters are unregulated and not diluant. I need to establish that we could do this under the regulation before Mallinckrodt pursued whether it was technically feasible – compatibilities, material of construction concerns and piping reconfigurations.

Draft

In order to minimize a future permit modification request, this could be established as a PEG discharge point and Mallinckrodt would indicate no pharmaceutical flow until the project was in place to route the wastewater there.

I believe this request covers all the potential permit modification requests, with one exception. There is another under-utilized building on-site, Building 502 (old OCPSF facility) with no pharmaceutical discharge point and while there is no current plan to discharge pharmaceutical wastewaters there, it may be a future consideration. I will be on vacation the week of June 21, returning to the office on Tuesday, June 29 and will call to discuss these issues with you.

Sincerely,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

June 24, 2004

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC.
3600 N. Second Street
St. Louis, MO 63147

RE: INDUSTRIAL USER QUESTIONNAIRE
Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street

Dear Ms. Siebenberger:

The Metropolitan St. Louis Sewer District Wastewater Discharge permit for the above premise expires on March 1, 2005. Under the terms of the permit, you are requested to apply for renewal at least 180 days prior to the expiration date.

Enclosed is an Industrial User Questionnaire along with detailed instructions to assist you in supplying the required information. This questionnaire serves as your permit application. We request that you return the original and yellow copy to the District by October 4, 2004.

After a review, of the completed questionnaire and our existing data, we will prepare a draft permit and send it to you for comment.

Thank you for your cooperation. If you have any question or any specific problem providing the requested information please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosures

pc: Suspense file

cc: Doug Mendoza
Jason Gill
Permit file

tyco
Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P O Box 470158
St Louis, MO 63147

Tele 314 654-2000
Fax 314 654-1251

✓ FC

June 18, 2004

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Ethylene Glycol Release (below RQ) on June 9, 2004
PERMIT NO. 21120596-00

Dear Mr.Grabski,

This letter provides additional data for the above release verbally reported to you on June 9th. The release from the Building 235 chiller system totaled 2487 pounds and began approximately 09:36 a.m... It ended at 10:31 a.m.

Many of the manufacturing buildings have chiller systems that contain ethylene glycol. There are many jacketed tanks that can be either heated or cooled as the process dictates. The tank jackets can contain steam, city water or ethylene glycol solutions. Changing the tank jacket contents generally requires aligning several valves. To minimize potential losses to the sewer, (i.e. not closing the valve to the sewer when switching from city water to ethylene glycol) many building chiller systems have rate of change alarms to alert operators of changes in volume.

The June 9th release was due to an operator misalignment of valve. Concurrently there was electrical work being done which triggered multiple false alarms on the control system. Consequently operators in the control room did not differentiate the rate of change alarm immediately. Building 235 has instituted several corrective actions to prevent recurrence. These include verification of valve alignment by the area foremen before the tank jacket contents are switched. Longer term there will be piping changes.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECEIVED

JUN 2 2 2004

DIVISION OF
ENVIRONMENTAL COMPLIANCE

MALLINCKRODT
21/2-1596-00

5/18/04
MSD Meeting - discussion points - PHARMACEUTICAL ISSUES

1. SP930 data and letter ✓
2. Bldg. 260 –description and data (SP931) – newly "discovered" – not all was going bldg 255's SP919 → Jason to set up SP
3. Bldg. 5 – interpretation ✓
4. Peptides – discussion – Karen to decide what to do w/ wastes – collect for now.
5. Methanol stripper (*) → USED KAREN INFO
6. Unregulated vs. dilutant waters?
7. Sinks, Clean-outs, dryer rooms (B)
8. Off hours phone number ✓ 314-768-6262
9. Reduced testing 6/7 ✓

(*) resolved, mixing 439 @ methanol stripper (wrong) doesn't lower CWF limits.
(*) Karen will let me know if it will be used for 439 wastewater.
(B) Incidental use to clean receptacles JK

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Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P O Box 470158
St Louis, MO 63147

Tele. 314 654-2000
Fax: 314 654-1251

May 18, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: SP930 monitoring requirements
PERMIT NO. 21120596-00

Dear Mr. Mendoza,

This letter is to provide you with analytical results for morphine alkaloid (previously referred to as morphine sulfate) process wastewater from Building 222S at the new sample point 930. Mallinckrodt is also requesting reduced monitoring for pollutants neither used or generated in Building 222S.

Per 40 CFR 439.4, permit limits and compliance monitoring are not required for regulated pollutants neither used or generated at the facility. A determination has been made that regulated pollutants (other than toluene use by the raw material supplier) are neither used or generated. This is based on the assessment of process chemistry of Morphine Alkaloid, products and by-products resulting from the Morphine Alkaloid manufacturing process and a review of all the raw materials used in the building (includes a review of all components of each Material Safety Data Sheet for raw materials used in Building 222S). This determination will be kept with the permit records at Mallinckrodt. Mallinckrodt is requesting approval to perform the annual chemical analysis to reconfirm the non-detect status of each regulated pollutant.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

Partial Report

ANALYTICAL RESULTS

Prepared for:

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis
314-654-8158

Prepared by:
Lanacaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 892842. Samples arrived at the laboratory on Tuesday, Apr 20 2004.
The project for this group is PMI Sampling.

Sample No.	Collected	Client Description
4257837	4/19/04 11:15	SP920 Grab Water Sample Q2/2004 PEG
4257838	4/19/04 13:15	SP930 Grab Water Sample Q2/2004 PEG

1 COPY TO	Mallinckrodt Inc.	Attn: Mr. Joe Howe
1 COPY TO	Mallinckrodt Inc.	Attn: Ms. Karen Siebenberger

Questions? Contact your Client Services Representative
Richard C Entz at (717)656-2300

Respectfully Submitted,

Partial Report

Lancaster Laboratories

Analytical Report

Mallinckrodt Inc.
Project: Q2/2004 PEG

Report Date: 5/4/2004 15:42
Submit Date: 4/20/2004 8:55

Analysis Name	Units	4257837 SP920 Gr Result	MDL	4257838 SP930 Gr Result	MDL
diethylamine	mg/l	N.D.	17.	N.D.	17.
triethylamine	mg/l	N.D.	17.	N.D.	17.
1,2-Dichlorobenzene	ug/l	N.D.	2.0	N.D.	2.5
Isobutyraldehyde	ug/l	N.D.	1.00	N.D.	10.0
Isopropylether	ug/l	N.D.	1.00	N.D.	10.0
Isopropyl acetate	ug/l	N.D.	1.00	N.D.	10.0
4-Methyl-2-pentanone	ug/l	N.D.	1.00	N.D.	10.0
n-Butyl acetate	ug/l	N.D.	1.00	N.D.	10.0
n-Amyl acetate	ug/l	N.D.	1.00	N.D.	10.0
Methyl formate	ug/l	N.D.	5.00	N.D.	50.0
Hexane	ug/l	N.D.	1.00	N.D.	10.0
Ethyl acetate	ug/l	N.D.	1.00	N.D.	10.0
Tetrahydrofuran	ug/l	N.D.	1.00	N.D.	10.0
Heptane	ug/l	N.D.	2.00	N.D.	20.0
m+p-Xylene	ug/l	N.D.	2.00	N.D.	20.0
o-Xylene	ug/l	N.D.	1.00	N.D.	10.0
Methylene Chloride	ug/l	N.D.	6.0	N.D.	7.5
Chloroform	ug/l	N.D.	2.0	N.D.	2.5
Benzene	ug/l	N.D.	2.0	N.D.	2.5
1,2-Dichloroethane	ug/l	N.D.	2.0	N.D.	2.5
Toluene	ug/l	3.2 J	2.0	N.D.	2.5
Chlorobenzene	ug/l	N.D.	2.0	N.D.	2.5
Acetone	ug/l	N.D.	60.	N.D.	75.

ReferenceID: 892842040504154154

Partial Report

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial ID	Analysis Date/Time	Analyst	Dilution
4257837	**SP920 Grab Water Sample**					
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	4/24/04 0455	Tiffany A George	1
02394	ISOTOPE DIL GC/MS FOR PMI VOL	EPA 1666	1	4/23/04 1143	Marc S Neal	1
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	4/26/04 1839	Ryan V Nolt	20
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	4/26/04 1839	Ryan V Nolt	20
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	4/26/04 1839	Ryan V Nolt	20
4257838	**SP930 Grab Water Sample**					
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	4/24/04 0520	Tiffany A George	1
02394	ISOTOPE DIL GC/MS FOR PMI VOL	EPA 1666	1	4/23/04 1215	Marc S Neal	10
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	4/24/04 0547	Ryan V Nolt	25
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	4/24/04 0547	Ryan V Nolt	25
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	4/24/04 0547	Ryan V Nolt	25

Comments

4257837 SP920 Grab Water Sample

02366 PMI DAI-VOCs by 1671
The sample bottle used for analysis was submitted with headspace. Method 1671 has method defined retention time windows for each target compound. The retention time for diethylamine is outside of the method defined retention time windows in the continuing calibration standards. However, the retention times are acceptable for proper peak identification based on statistical windows.

02394 ISOTOPE DIL GC/MS FOR PMI VOLS
The pH of this sample was pH = 4.

03644 EPA Method 524.2 Cont.
The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to sample foaming.

The sample for the GC/MS volatile analysis was received with headspace.

4257838 SP930 Grab Water Sample

02366 PMI DAI-VOCs by 1671
The sample bottle used for analysis was submitted with headspace. Method 1671 has method defined retention time windows for each target compound. The retention time for diethylamine is outside of the method defined retention time windows in the continuing calibration standards. However, the retention times are acceptable for proper peak identification based on statistical windows.

02394 ISOTOPE DIL GC/MS FOR PMI VOLS
The reporting limits for all compounds analyzed by EPA method 1666 were raised due to sample foaming.

The pH of this sample was pH = 7.

03644 EPA Method 524.2 Cont.
The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to sample foaming.

The sample for GC/MS volatiles did not have a pH<2 at the time of analysis. The sample was analyzed outside of the 24 hour holding time for samples with pH>2, but within the 14 day holding time for samples with pH<2. The pH of the sample was pH = 7.

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result falls within the Method Detection Limit (MDL) and Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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3768.01

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HSE Department

Mallinckrodt Inc
3600 North Second Street
P O Box 470158
St Louis, MO 63147

Tele. 314 654-2000
Fax 314 654-1251

May 18, 2004 meeting
Karen Siebenberger – Mallinckrodt
Doug Mendoza - MSD

New PEG point (proposed Sample Point 931) - Building 260

Building 260 is a multi-purpose batch pharmaceutical manufacturing building that is located in the same enclosed compound as Building 250. Equipment consists of reactors, receivers, tanks, filters, centrifuges and dryers. Building 260 is subject to 40 CFR 439 Subpart C – Chemical Synthesis Products Subcategory.

Building 260 does not use any PEG pollutants. A sample obtained on May 5 ,2004 detected ethyl acetate at 2.26 mg/L (ethyl acetate is used in another building that supplies a starting material). The maximum daily discharge limit for ethyl acetate is 20.70 mg/L and the monthly average is 8.2 mg/L. The analytical data is attached. Also note that chloroform was detected at 0.038 mg/L, but net/gross allowance for chloroform in the incoming city water brings that value to ~~0.04~~ 0.004 mg/L. KS 5/18/04

The Building sewers and the scrubber are discharged to a enclosed sump located outside of the east wall of the building. A recirculating pump located on the inside wall of the building pulls from the sump and discharges to a floor drain inside of the building. The proposed sample point is the pump outlet.

Per 40 CFR 439.4, permit limits and compliance monitoring are not required for regulated pollutants neither used or generated at the facility. Mallinckrodt is requesting the reduced monitoring for triethylamine and diethylamine. This is based on the assessment of process chemistry, products and by-products resulting from the manufacturing processes and a review of all the raw materials used in the building (includes a review of all components of each Material Safety Data Sheet for raw materials used in Building 260). This determination will be kept with the permit records at Mallinckrodt. Mallinckrodt is requesting approval to perform the annual chemical analysis to reconfirm the non-detect status of both triethlyamine and diethylamine. Mallinckrodt will perform quarterly monitoring for the other PEG constituents.

Karen Siebenberger

- Nor are amines present in other areas that supply materials to this bldg.
- Per 5/18/04 mtg w/Karen Siebenberger. -DMM

Partial Report

ANALYTICAL RESULTS

Prepared for:

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis
314-654-8158

Prepared by:
Lanacaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 894888. Samples arrived at the laboratory on Thursday, May 6 2004.
The project for this group is PMI Sampling.

Sample No.	Collected	Client Description
4267781	5/5/2004 13:30	260 Grab Water Sample Q2/2004 PEG

0 COPIES TO	Mallinckrodt Inc.	Attn: Mr. Joe Howe
1 COPY TO	Mallinckrodt Inc.	Attn: Ms. Karen Siebenberger

Questions? Contact your Client Services Representative
Richard C Entz at (717)656-2300

Respectfully Submitted,

Partial Report

Lancaster Laboratories

Analytical Report

Mallinckrodt Inc.
Project: Q2/2004 PEG

Report Date: 5/13/2004 16:28
Submit Date: 5/6/2004 9:10

Analysis Name	Units	4267781 260 Grab Result	MDL
diethylamine	mg/l	N.D.	260.
triethylamine	mg/l	N.D.	130.
1,2-Dichlorobenzene	ug/l	N.D.	10.
Isobutyraldehyde	ug/l	N.D.	100.
Isopropylether	ug/l	N.D.	100.
Isopropyl acetate	ug/l	N.D.	100.
4-Methyl-2-pentanone	ug/l	N.D.	100.
n-Butyl acetate	ug/l	N.D.	100.
n-Amyl acetate	ug/l	N.D.	100.
Methyl formate	ug/l	N.D.	500.
Hexane	ug/l	N.D.	100.
Ethyl acetate	ug/l	2,260.	100.
Tetrahydrofuran	ug/l	N.D.	100.
Heptane	ug/l	N.D.	200.
m+p-Xylene	ug/l	N.D.	200.
o-Xylene	ug/l	N.D.	100.
Methylene Chloride	ug/l	N.D.	30.
Chloroform	ug/l	38. J	10.
Benzene	ug/l	N.D.	10.
1,2-Dichloroethane	ug/l	N.D.	10.
Toluene	ug/l	N.D.	10.
Chlorobenzene	ug/l	N.D.	10.
Acetone	ug/l	N.D.	300.

ReferenceID: 894888130504162742

Building 5

Building 5 performs the blending and mixing of bulk pharmaceutical compounds into bulk blends. All starting materials are (dry) finished pharmaceutical products. Building 5 will either mill or blend these finished products. There are no PEG pollutants used. Wastewater is generated when the equipment is cleaned.

"Do the pharmaceutical effluent guidelines 40 CFR 439 apply to Building 5 operations?"

Subpart D – Mixing/Compounding and Formulation Subcategory.

439.40 Applicabilty – this subpart applies to discharges of process wastewater resulting from the manufacture of pharmaceutical products by mixing, compounding and formulating operations.

Yes

439.41 Specialized definitions – for the purposes of this subpart:

(a) The term *mixing, compounding, and formulating operations* means processes that put pharmaceutical products in dosage forms.

NO

Therefore current Building 5 operations are not subject to 40 CFR 439.

***Note: If operations were modified to produce dosage forms, this subpart would apply.**

K Siebenberger
5-17-04

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Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P.O Box 470158
St. Louis, MO 63147

Tele 314 654-2000
Fax 314 654-1251

May 18, 2004 meeting
Karen Siebenberger – Mallinckrodt
Doug Mendoza - MSD

Peptides – Buildings 96 & 98

Peptides are amino acid chains that are biologically active. Peptides are produced in small quantities (grams)in a portion of the Building 96 R&D labs and the Building 98 pilot plant.

Traditional process wastewater is collected in drums and disposed of off site as waste. Infrequent or small discharges have been identified.

1. Building 98 scrubber – each day the scrubber tank pH is tested. This results in 0.5 – 1 liter of solution to sewer. OK
2. Potassium Hydroxide/ Hydroflouric Acid neutralization tank. This tank is located on the north side of Building 96. Once every three to four months (after the pH is insufficient to neutralize HF) the tank contents (pH 7- 9) are discharged to the sewer via a sump. ~200 gal. 439
3. Daily a 0.1% Trifluroacetic acid solution is prepared (20 gallons). There is a Quality expiration time of 24 hours. Whatever has not been used during the day would be discharged to a sink(Building 96). 439
4. Five – ten gallons of a 10mM Ammonia acetate buffer in Building 98 discharged to a sink. 439

Karen Siebenberger

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Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

May 18, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Additional data for reduced testing request SP915, 928 and 929
PERMIT NO. 21120596-00

Dear Mr. Mendoza,

Tthis letter provides additional data for Mallinckrodt's request for reduced testing for the above sample points in Building 6/7/8. After reviewing the tabulated sample point tables Mallinckrodt previously submitted, you had questions about analytical hits for tetrahydrofuran, isobutylaldehyde and xylenes. In all the instances pertaining to isobutylaldehyde and tetrahydrofuran the results should have been flagged with the letter "J" to indicate they were less than the Limit of Quantitation. I have updated the tables and have provided copies of the lab reports for SP916 (now SP929) and SP928 to support this. There were two instances for the old sample point 913 that indicated xylene (June 6, 2002 at 0.362 mg/L and September 25, 2002 at 0.268 mg/L).

+ Xylene on 6/3/03 @ 928

Per 40 CFR 439.4, permit limits and compliance monitoring are not required for regulated pollutants neither used or generated at the facility. A determination has been made that regulated pollutants (other than toluene, chloroform and acetone) are neither used or generated. This is based on the assessment of process chemistry, products and by-products resulting from the manufacturing processes and a review of all the raw materials used in the building (includes a review of all components of each Material Safety Data Sheet for raw materials used in Building 6/7). This determination will be kept with the permit records at Mallinckrodt

With approval, Mallinckrodt will continue quarterly monitoring of SP915, 928 and 929 for toluene, chloroform, xylene and acetone and perform an annual chemical analysis to reconfirm non-detect values for the other PEG regulated pollutants.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

SP916											
				2QTR'02	3QTR'02	4QTR'02	1QTR'03	2QTR'03	3QTR'03	4QTR'03	
PEG Compliance Testing			Date	06/07/02	8/8/2002	10/24/2002	1/9/2003	4/17/2003	7/1/2003	10/22/2003	12/5/2003
			Time	9:00	9:00	6:18		23:45	22:45	13:00	6:40
			Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
439.36 Parameter			Location	7-5							
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	916 - HA Centrifuge							
Acetone	524.2	20.70	8.20	<0.050	<0.05	<0.300	<0.300	0.65	<0.300	<0.030	
Benzene	524.2	3.00	0.70	<0.005	<0.005	<0.010	<0.010	<0.010	<0.010	<0.001	
Chlorobenzene	524.2	3.00	0.70	<0.005	<0.005	<0.010	<0.010	<0.010	<0.010	<0.001	
Chloroform	524.2	0.10	0.03	<0.005	<0.005	<0.010	<0.010	<0.010	<0.010	0.0035J	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.005	<0.005	<0.010	<0.010	<0.010	<0.010	<0.001	
1,2-Dichloroethane	524.2	20.70	8.20	<0.005	<0.005	<0.010	<0.010	<0.010	<0.010	<0.001	
Ethyl Acetate	1666	20.70	8.20	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.001	
n-Hexane	1666	3.00	0.70	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.001	
Methylene chloride	524.2	3.00	0.70	<0.010	<0.010	<0.030	<0.030	<0.030	<0.030	<0.003	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.001	
Tetrahydrofuran	1666	9.20	3.40	<0.200	<0.2	0.033 J	<0.010	0.0598J	<0.010	<0.001	
Toluene	524.2	0.30	0.20	<0.005	0.056	<0.010	<0.010	<0.010	Multiple	0.0065	0.0072
Xylenes	1666	3.00	0.70	<0.050	<0.100	<0.020	<0.020	<0.020	<0.020	<0.002	
Isobutyraldehyde	1666	20.70	8.20	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.001	
n-Amyl acetate	1666	20.70	8.20	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.001	
n-Butyl acetate	1666	20.70	8.20	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.001	
Isopropyl acetate	1666	20.70	8.20	<0.100	<0.100	<0.010	<0.010	<0.010	<0.010	<0.001	
Methyl cellosolve	1671	275.00	59.70	<20	<20	<6.7	<6.7	<6.7	<6.7	deleted	
Isopropyl ether	1666	20.70	8.20	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.001	
n-Heptane	1666	3.00	0.70	<0.100	<0.100	<0.020	<0.020	<0.020	<0.020	<0.002	
Methyl formate	1666	20.70	8.20	<1.000	<1.000	<0.050	<0.050	<0.050	<0.050	<0.005	
Diethyl amine	1671	255.00	100.00	<50	<50	<17.0	<17.0	<17.0	<17.0	<17.0	
Triethyl amine	1671	255.00	100.00	<50	<50	<17.0	<17.0	<17.0	<17.0	<17.0	
	7/1/2003	7/21/03	7/22/03	7/23/2003	7/24/2003	7/25/2003	7/26/2003	7/27/2003	7/28/2003	7/29/2003	7/30/2003
July 2003 toluene	1.5	0.072	0.9867	0.1923	0.084	0.0017	0.0012	0.0036	0.0429	0.07	0.0505

Lancaster Laboratories Sample No. WW 3927804

Collected:10/24/2002 06:18

Account Number: 11112

Submitted: 10/25/2002 09:15
Reported: 11/08/2002 at 17:08
Discard: 11/09/2003
SP916 Grab Water Sample
PEG Q4/2002

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

SP916

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02366	PMI DAI-VOCs by 1671					
02371	diethylamine	109-89-7	N.D.	17.	mg/l	1
02372	methyl cellosolve	109-86-4	N.D.	6.7	mg/l	1
02373	triethylamine	121-44-8	N.D.	17.	mg/l	1
	Method 1671 has method defined retention time windows for each target compound. The retention times for diethylamine and methyl cellosolve are outside of the method defined retention time windows in the continuing calibration standards. However, the retention times are acceptable for proper peak identification based on statistical windows.					
02394	ISOTOPE DIL GC/MS FOR PMI VOLS					
02396	Isobutyraldehyde	78-84-2	N.D.	10.0	ug/l	10
02397	Isopropylether	108-20-3	N.D.	10.0	ug/l	10
02398	Isopropyl acetate	108-21-4	N.D.	10.0	ug/l	10
02399	4-Methyl-2-pentanone	108-10-1	N.D.	10.0	ug/l	10
02401	n-Butyl acetate	123-86-4	N.D.	10.0	ug/l	10
02403	n-Amyl acetate	628-63-7	N.D.	10.0	ug/l	10
02404	Methyl formate	107-31-3	N.D.	50.0	ug/l	10
02409	Hexane	110-54-3	N.D.	10.0	ug/l	10
02410	Ethyl acetate	141-78-6	N.D.	10.0	ug/l	10
02411	Tetrahydrofuran	109-99-9	33.5 J	10.0	ug/l	10
02413	Heptane	142-82-5	N.D.	20.0	ug/l	10
02415	m+p-Xylene	1330-20-7	N.D.	20.0	ug/l	10
02416	o-Xylene	95-47-6	N.D.	10.0	ug/l	10
	The reporting limits for all compounds analyzed by EPA method 1666 were raised due to sample foaming.					
03600	Additional Compounds by 524.2					
03608	Acetone	67-64-1	N.D.	300.	ug/l	100
03643	EPA Method 524.2					

Lancaster Laboratories Sample No. WW 3927804

Collected:10/24/2002 06:18

Submitted: 10/25/2002 09:15
Reported: 11/08/2002 at 17:08
Discard: 11/09/2003
SP916 Grab Water Sample
PEG Q4/2002

Account Number: 11112

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

SP916

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
03405	Methylene Chloride	75-09-2	N.D.	30.	ug/l	100
03408	Chloroform	67-66-3	N.D.	10.	ug/l	100
03411	Benzene	71-43-2	N.D.	10.	ug/l	100
03412	1,2-Dichloroethane	107-06-2	N.D.	10.	ug/l	100
03416	Toluene	108-88-3	N.D.	10.	ug/l	100
03644	EPA Method 524.2 Cont.					
01000	1,2-Dichlorobenzene	95-50-1	N.D.	10.	ug/l	100
03420	Chlorobenzene	108-90-7	N.D.	10.	ug/l	100

The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to sample foaming.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	10/29/2002 21:33	Lisa A Johnson	1
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	10/29/2002 21:59	Lisa A Johnson	1
02394	ISOTOPE DIL GC/MS FOR PMI VOLS	EPA 1666	1	10/30/2002 14:15	Marc S Neal	10
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	10/30/2002 18:27	Ryan V Nolt	100
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	10/30/2002 18:27	Ryan V Nolt	100
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	10/30/2002 18:27	Ryan V Nolt	100

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4032443

Collected:04/17/2003 23:45

Account Number: 11112

Submitted: 04/23/2003 09:05
Reported: 05/08/2003 at 17:03
Discard: 05/08/2004
SP916 Grab Water Sample
PMI Sampling

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

SP916

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
02366	PMI DAI-VOCs by 1671						
02371	diethylamine	109-89-7	N.D.		17.	mg/l	1
02372	methyl cellosolve	109-86-4	N.D.		6.7	mg/l	1
02373	triethylamine	121-44-8	N.D.		17.	mg/l	1
	Method 1671 has method defined retention time windows for each target compound. The retention times for diethylamine and methyl cellosolve are outside of the method defined retention time windows in the continuing calibration standards. However, the retention times are acceptable for proper peak identification based on statistical windows.						
02394	ISOTOPE DIL GC/MS FOR PMI VOLS						
02396	Isobutyraldehyde	78-84-2	N.D.		10.0	ug/l	10
02397	Isopropylether	108-20-3	N.D.		10.0	ug/l	10
02398	Isopropyl acetate	108-21-4	N.D.		10.0	ug/l	10
02399	4-Methyl-2-pentanone	108-10-1	N.D.		10.0	ug/l	10
02401	n-Butyl acetate	123-86-4	N.D.		10.0	ug/l	10
02403	n-Amyl acetate	628-63-7	N.D.		10.0	ug/l	10
02404	Methyl formate	107-31-3	N.D.		50.0	ug/l	10
02409	Hexane	110-54-3	N.D.		10.0	ug/l	10
02410	Ethyl acetate	141-78-6	N.D.		10.0	ug/l	10
02411	Tetrahydrofuran	109-99-9	59.8	J	10.0	ug/l	10
02413	Heptane	142-82-5	N.D.		20.0	ug/l	10
02415	m+p-Xylene	1330-20-7	N.D.		20.0	ug/l	10
02416	o-Xylene	95-47-6	N.D.		10.0	ug/l	10
	The reporting limits for all compounds analyzed by EPA method 1666 were raised due to sample foaming.						
03600	Additional Compounds by 524.2						
03608	Acetone	67-64-1	650.		300.	ug/l	100
03643	EPA Method 524.2						

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4032443

Collected:04/17/2003 23:45

Submitted: 04/23/2003 09:05
Reported: 05/08/2003 at 17:03
Discard: 05/08/2004
SP916 Grab Water Sample
PMI Sampling

Account Number: 11112

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

SP916

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
03405	Methylene Chloride	75-09-2	N.D.	30.	ug/l	100
03408	Chloroform	67-66-3	N.D.	10.	ug/l	100
03411	Benzene	71-43-2	N.D.	10.	ug/l	100
03412	1,2-Dichloroethane	107-06-2	N.D.	10.	ug/l	100
03416	Toluene	108-88-3	N.D.	10.	ug/l	100
03644	EPA Method 524.2 Cont.					
01000	1,2-Dichlorobenzene	95-50-1	N.D.	10.	ug/l	100
03420	Chlorobenzene	108-90-7	N.D.	10.	ug/l	100

The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to sample foaming and the level of non-target compounds.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	04/24/2003 20:03	Lisa A Johnson	1
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	04/24/2003 20:28	Lisa A Johnson	1
02394	ISOTOPE DIL GC/MS FOR PMI VOLS	EPA 1666	1	04/29/2003 18:33	Marc S Neal	10
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	05/01/2003 14:24	Ryan V Nolt	100
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	05/01/2003 14:24	Ryan V Nolt	100
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	05/01/2003 14:24	Ryan V Nolt	100

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lime Press - SP928				Q2-2003	Q3-2003	Q4-2003
PEG Compliance Testing			Date	6/3/2003	7/1/2003	10/9/2003
			Time	2:30	3:10	15:30
			Type	Grab	Grab	Grab
			Est Flow	2200 gpd	2,200	2200
439.36 Parameter			Location	T-		
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly		Result	
Acetone	524.2	20.70	8.20	**<0.060**	**<0.300**	**<0.300**
Benzene	524.2	3.00	0.70	**<0.002**	**<0.010**	**<0.010**
Chlorobenzene	524.2	3.00	0.70	**<0.002**	**<0.010**	**<0.010**
Chloroform	524.2	0.10	0.03	**0.013**	**0.036 J**	**0.023 J**
1,2-Dichlorobenzene	524.2	20.70	8.20	**<0.002**	**<0.010**	**<0.010**
1,2-Dichloroethane	524.2	20.70	8.20	**<0.002**	**<0.010**	**<0.010**
Ethyl Acetate	1666	20.70	8.20	**<0.010**	**<0.010**	**<0.100**
n-Hexane	1666	3.00	0.70	**<0.010**	**<0.010**	**<0.100**
Methylene chloride	524.2	3.00	0.70	**<0.006**	**<0.030**	**<0.030**
4-Methyl-2-pentanone	1666	20.70	8.20	**<0.010**	**<0.010**	**<0.100**
Tetrahydrofuran	1666	9.20	3.40	**<0.010**	**<0.010**	**<0.100**
Toluene	524.2	0.30	0.20	**0.0067**	**0.014 J**	**<0.010**
Xylenes	1666	3.00	0.70	**0.0446 J**	**<0.020**	**<0.200**
Isobutyraldehyde	1666	20.70	8.20	**0.0798 J**	**0.0636 J**	**<0.100**
n-Amyl acetate	1666	20.70	8.20	**<0.010**	**<0.010**	**<0.100**
n-Butyl acetate	1666	20.70	8.20	**<0.010**	**<0.010**	**<0.100**
Isopropyl acetate	1666	20.70	8.20	**<0.010**	**<0.010**	**<0.100**
Methyl cellosolve	1671	275.00	59.70	**<20.0**	**<6.7**	**Deleted**
Isopropyl ether	1666	20.70	8.20	**<0.010**	**<0.010**	**<0.100**
n-Heptane	1666	3.00	0.70	**<0.020**	**<0.020**	**<0.200**
Methyl formate	1666	20.70	8.20	**<0.050**	**<0.050**	**<0.500**
Diethyl amine	1671	255.00	100.00	**<17.0**	**<17.0**	**<17.0**
Triethyl amine	1671	255.00	100.00	**<17.0**	**<17.0**	**<17.0**
Dilution Factor by Lab					1, 10, 100	

J= result is less than reporting limit

*Note SP913 results are attached. SP928 was previously part of SP913.

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4055703

Collected:06/03/2003 02:30

Account Number: 11112

Submitted: 06/04/2003 09:10
Reported: 06/12/2003 at 10:24
Discard: 06/12/2004
EB134LP (SP928) Grab Water Sample
Q2/2003 PEG - MO

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

EB134

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
02366	PMI DAI-VOCs by 1671						
02371	diethylamine	109-89-7	N.D.		17.	mg/l	1
02372	methyl cellosolve	109-86-4	N.D.		20.	mg/l	1
02373	triethylamine	121-44-8	N.D.		17.	mg/l	1

Recovery for the amyl alcohol surrogate is outside the QC limits. Since the recovery is high and no target analytes were detected in the sample, the data is reported.

Method 1671 has method defined retention time windows for each target compound. The retention time for diethylamine is outside of the method defined retention time windows in the continuing calibration standards. However, the retention times are acceptable for proper peak identification based on statistical windows.

02394	ISOTOPE DIL GC/MS FOR PMI VOLS						
02396	Isobutyraldehyde	78-84-2	79.8	J	10.0	ug/l	10
02397	Isopropylether	108-20-3	N.D.		10.0	ug/l	10
02398	Isopropyl acetate	108-21-4	N.D.		10.0	ug/l	10
02399	4-Methyl-2-pentanone	108-10-1	N.D.		10.0	ug/l	10
02401	n-Butyl acetate	123-86-4	N.D.		10.0	ug/l	10
02403	n-Amyl acetate	628-63-7	N.D.		10.0	ug/l	10
02404	Methyl formate	107-31-3	N.D.		50.0	ug/l	10
02409	Hexane	110-54-3	N.D.		10.0	ug/l	10
02410	Ethyl acetate	141-78-6	N.D.		10.0	ug/l	10
02411	Tetrahydrofuran	109-99-9	N.D.		10.0	ug/l	10
02413	Heptane	142-82-5	N.D.		20.0	ug/l	10
02415	m+p-Xylene	1330-20-7	27.8	J	20.0	ug/l	10
02416	o-Xylene	95-47-6	16.8	J	10.0	ug/l	10

The reporting limits for all compounds analyzed by EPA method 1666 were raised due to sample foaming.

03600	Additional Compounds by 524.2						
03608	Acetone	67-64-1	N.D.		60.	ug/l	20
03643	EPA Method 524.2						
03405	Methylene Chloride	75-09-2	N.D.		6.0	ug/l	20

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4055703

Collected:06/03/2003 02:30

Account Number: 11112

Submitted: 06/04/2003 09:10
Reported: 06/12/2003 at 10:24
Discard: 06/12/2004
EB134LP (SP928) Grab Water Sample
Q2/2003 PEG - MO

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

EB134

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
03408	Chloroform	67-66-3	13.	2.0	ug/l	20
03411	Benzene	71-43-2	N.D.	2.0	ug/l	20
03412	1,2-Dichloroethane	107-06-2	N.D.	2.0	ug/l	20
03416	Toluene	108-88-3	6.7 J	2.0	ug/l	20
03644	EPA Method 524.2 Cont.					
01000	1,2-Dichlorobenzene	95-50-1	N.D.	2.0	ug/l	20
03420	Chlorobenzene	108-90-7	N.D.	2.0	ug/l	20

The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to sample foaming.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	06/05/2003 22:45	Lisa A Johnson	1
02394	ISOTOPE DIL GC/MS FOR PMI VOLS	EPA 1666	1	06/04/2003 16:43	Marc S Neal	10
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	06/06/2003 19:28	Ryan V Nolt	20
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	06/06/2003 19:28	Ryan V Nolt	20
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	06/06/2003 19:28	Ryan V Nolt	20

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt Industry file

ACCT #: 21120596-00

FROM: Doug Mendoza DMM

DATE: May 4, 2004

RE: Use of the Combined Wastestream Formula for NESHAP scrubber

---

Mallinckrodt has expressed a desire to send certain pharmaceutical wastestreams to its NESHAP scrubber because those pharmaceutical wastestreams also contain methanol. The NESHAP stripper removes air pollutants, and doesn't currently treat pharmaceutical wastestreams. Mallinckrodt wants to send certain pharmaceutical wastestreams to it because it would be more economical for those wastestreams to be treated at the NESHAP scrubber. If the pharmaceutical wastestreams are sent to the NESHAP scrubber, they would comprise about 20% of the total flow.

My concern was that the combined wastestream formula would need to be used to adjust the pharmaceutical discharge limits, since the NESHAP scrubber would now be a regulated sample point. However, the non-pharmaceutical NESHAP wastestreams can be considered "unregulated" streams, which do not lower the limits. See attached material for details on why they aren't considered "dilute" streams. Basically, dilute streams are predefined. Other streams are considered unregulated, unless the control authority finds need to call them dilute. In this case, the NESHAP wastestreams appear to meet the unregulated requirements.

level as in the regulated wastestream. In some cases, unregulated wastestreams may not actually contain pollutants of concern at a significant level. Even if this is the case, they are still considered unregulated when applying the formula. However, if the Control Authority is concerned that an unregulated stream is actually acting as dilution, a local or state Control Authority can use its own legal authority to establish a limit more stringent than would be derived using the formula in the manner prescribed by the Federal Regulations.

The definition of a dilute wastestream was revised in the May 17, 1984, Federal Register. The current definition defines dilution flow (F_D) as:

> "F_D = the average daily flow (at least a 30-day average) from (a) boiler blowdown streams and noncontact cooling streams; provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, prior to treatment, with an Industrial Users regulated process wastestream(s) will result in a substantial reduction of that pollutant, the Control Authority, upon application of the Industrial User, may exercise its discretion to determine whether such stream(s) should be classified as diluted or unregulated. In its application to the Control Authority, the Industrial User must provide engineering, production, sampling and analysis and such other information so that the Control Authority can make its determination, or (b) sanitary wastestreams where such streams are not regulated by a categorical Pretreatment Standard, or (c) from any process wastestreams which were or could have been entirely exempted from categorical Pretreatment Standards pursuant to paragraph 8 of the NRDC v. Costle Consent Decree (12 ERC 1833) for one or more of the following reasons (see Appendix D):
>
> (1) the pollutants of concern are not detectable in the effluent from the Industrial User (paragraph (8)(a)(iii);
>
> (2) the pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects (paragraph (8)(a)(iii);
>
> (3) the pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator (paragraph (8)(a)(iii); or
>
> (4) the wastestream contains only pollutants which are compatible with the POTW (paragraph (8)(b)(i))."

The industry subcategories listed in Appendix D of 40 CFR Part 403 include several subcategories that fall under: Auto and Other Laundries, Electrical and Electronic Components, Foundries, Gum and Wood Chemicals, Inorganic Chemicals, Leather, Pulp and Paper, Rubber Manufacturing, Soap and Detergent, Textiles, and Timber Products. These subcategories are those which either EPA exempted from national categorical standards based upon a

EPA'S PRODUCTION STDS + COMBINED WASTESTREAM FORMULA MANUAL

MSD 019461

3.2 DEFINITION OF CWF TERMS

Prior to a discussion on the use of the CWF, it is important that Control Authority and industry personnel fully understand the terms for the three types of wastestreams that can exist at an industrial facility: regulated, unregulated and dilute. The terms are best understood by considering a particular pollutant, such as "pollutant X." A regulated wastestream is a wastestream from an industrial process that is regulated by a categorical standard for pollutant X. An unregulated wastestream is a wastestream that is not regulated by a categorical standard for pollutant X and not considered a dilute wastestream as defined below. A dilute wastestream is defined in 40 CFR Part 403 (as amended on May 17, 1984) to include:

- Sanitary wastewater (considered dilute for all pollutants unless stated otherwise in the published categorical pretreatment standard)
- Noncontact cooling water and boiler blowdown (considered dilute for all pollutants except in certain cases as described below)
- Wastestreams listed in Appendix D to 40 CFR Part 403 (considered dilute for all pollutants).

In addition, a non-regulated wastestream is a general term which will be used in this guidance manual for any wastestream which is not regulated (it could be either unregulated or dilute).

A wastestream is considered regulated for purposes of calculating a CWF limit for pollutant X only if (1) the wastestream is produced by a categorical industrial process that has a standard for pollutant X, and (2) the compliance date for that standard has been reached. For example, since the aluminum forming industry has a categorical standard for zinc but not for copper, wastewater from aluminum forming would be considered regulated for zinc but unregulated for copper. Before October 24, 1986, the compliance date for the standards, the wastewater would be considered unregulated for all pollutants including both zinc and copper.

Unregulated wastestreams are those wastestreams that are not covered by categorical pretreatment standards and not classified as dilute wastestreams. An unregulated wastestream could be one for which a categorical standard has been promulgated but for which the compliance deadline has not been reached, one that currently is not subject to a categorical pretreatment standard (whether or not it will be in the future), or one that is not regulated for the pollutant in question although it is regulated for others.

Unregulated streams are presumed, for purposes of using the CWF, to contain pollutants [illegible] at a significant level. In effect, the CWF "gives credit" for pollutants which might be present in the unregulated wastestream. Rather than treating the unregulated flow as dilution, which would result in lowering the allowable concentration of a pollutant, the CWF allows the pollutant to be discharged in the unregulated wastestream at the same concentration as the standard for the regulated wastestream that is being discharged. This is based on the assumption that if pollutants are present in the unregulated wastestream, they will be treated to the same

MSD 019462

From: Doug Mendoza
To: internet:marshall.paul@epa.gov
Date: 4/6/04 10:40AM
Subject: Fwd: Pharmaceutical Wastewater Treatment -Combined Wastestream Formula

Could I get your opinion on the attached. I don't see that there is any way around applying the CWF.

Doug Mendoza
MSD

314-436-8717

913-551-7419

5/3/04 - 1:32pm - left msg - Paul's thoughts?
2:50pm - he called & left msg.
2:58pm - left msg for him.
3:05pm → can consider NESHAP as unregulated for CWF. ←

From: "Jansen, Joe J" <Joe.Jansen@TycoHealthcare.com>
To: "'hund.frank@epa.gov'" <hund.frank@epa.gov>
Date: 4/6/04 10:35AM
Subject: Pharmaceutical Wastewater Treatment -Combined Wastestream Formula

You might recall that during implementation of the Pharmaceutical Manufacturing Category Effluent Limitations Guidelines rule, we conversed and exchanged some e-mails on particular applicability to the operations at the Mallinckrodt St. Louis plant which pretreats pharmaceutical wastewater prior to discharge to the St. Louis MSD (POTW) .

We seem to have found another issue that our plant and the POTW are debating.

Background-
We permitted and installed a central wastewater pretreatment plant (steam stripper) to treat regulated wastewaters from six pharmaceutical production buildings. Later when the NESHAP Pharmaceutical Production rule was finalized that stripper and another new steam stripper were permitted under the wastewater requirements of that rule.
The first steam stripper is designed for removal of 439.36 constituents and Partially Soluble Hazardous Air Pollutants (PSHAPs). The second steam stripper was not receiving any 439.36 constituent wastewaters and was designed to treat Soluble Hazardous Air Pollutants (SHAPs) from NESHAP regulated wastewaters such as methanol.
While we do use chloroform in a few of the pharmaceutical process buildings we have allowances for netting out chloroform from incoming water supply and chloroform is not present in the wastewaters going to the SHAP steam stripper.

Issue
In order to optimized the steam strippers we would like to segregate certain alcohol containing wastewaters from the 439.36 permitted steam stripper feed and send them to the SHAP steam stripper. We plan to permit the SHAP steam stripper as a 439.36 pretreatment plant. The issue that we are having trouble with is the applicability of the combined wastestream formula of 40 CFR 403.6(e). Specifically the SHAP steam stripper would be treating about 80% wastewaters not regulated under 439 and about 20 % wastewaters that do not contain any of the 439.36 constituent but are pharmaceutical wastewaters. If we use the combined wastestream formula we will not be able to demonstrate achievement of the chloroform limit under 439.36 due to the combination of laboratory reporting limits and combined wastestream formula. Even though there is no detectable concentration of 439.36 constituents in the effluent of SHAP steam stripper we would have to use the reporting limit from the laboratory and factor in the combined wastestream formula that would likely indicate an exceedence for the 439.36 limit for chloroform.

Options
Is there some option around using the combined wastestream formula since the wastewaters are dual regulated under the NESHAP wastewater rules? Clearly we are not trying to circumvent treatment or allow any dilution. We are caught in the differences between the definitions in the NESHAP and the 439 rule.

While we could select a surrogate parameter from 439 Appendix A Table 2 of the same treatability class, the remaining choices (toluene and methylene chloride) have only marginally higher reporting limits and regulatory

limits. Is there a petition process that could clarify the intent of the combined wastestream formula to address the lower reporting limits of some of the newer pretreatment standards?

Could you provide any guidance or direct us to a person that could help us with this issue?

Thanks,
Joe Jansen
Tyco Healthcare- Mallinckrodt
Division Environmental Health and Safety
314-654-6032

CC: "Siebenberger, Karen" <Karen.Siebenberger@TycoHealthcare.com>, 'Doug Mendoza' <DMENDOZA@stlmsd.com>

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P O Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax 314 654-1251

FG
SADA

April 28, 2004

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2004 1st Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Grabski:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 1st quarter 2004. As you will note, there is one exceedance at SP928 on January 15, 2004 at 14:15 for toluene (0.58 mg/L). A process team formed to investigate this exceedance determined there was an extraction issue and made process modifications including piping changes. SP928 was resampled on February 17 at 20:00 with toluene results of 0.0036 mg/L. This information was reported by letter to Mr. Doug Mendoza FG

If you have any questions or require more detailed information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	0

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

MJW I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Print/type name of signing official: Mike Wilde

Title: M. J. Wilde Telephone: 314-654-1843

Signature: OPERATIONS MGR Date: 4/28/04

radrpt.doc 2/00

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

A. If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[MJW] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 082

B. If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[MJW] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit .

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

D. If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[MJW] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 915, 929.

E. If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[MJW] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes conveyed by SP 905

F. Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[MJW] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufacturing process subject to Categorical Standards in 40 CFR 439. SP 010, 080, 005, 915, 917, 919, 920, 928 and 929

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____, I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing of the last discharge monitoring report.

B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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DIVISION OF ENVIRONMENTAL COMPLIANCE

Print or type name of signing official: Mike Wilde

Telephone: 314-654-1843

Title: OPERATIONS MANAGER

Date: 4/28/04

Signature: M. J. Wilde

SMF 10/93

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		001					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

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Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) __(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		002					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,800					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED	---->		1/13/2004		1/13/2004		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		7 45		8 15			
PARAMETER	LIMIT	**RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW** G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	27,648	M	11,491	E	16,157	gal/day
Oil & Grease	200	G	3 7	G	24 9	E	(-) 0 000	mg/l
Biochemical Oxygen Demand	****	C	38	C	35	E	~~0 000~~ 10.1	mg/l
Chemical Oxygen Demand	****	C	249	C	418	E	~~0 000~~ 26.8	mg/l
Total Suspended Solids	****	C	75	C	221	E	(-) 0 000	mg/l
Temperature	60	G	16	G	17	E	X N/A	deg C
pH Acidic	5 5	G	7	G	6	E		S U
pH Basic	11 5	G	7	G	7	E	7	S U

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS --->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED --->		1/13/2004		1/13/2004		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED --->		7:45		8:15			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW		E	27648	E	11491	16157	gal/day
Chloromethane		G	≤.01 0.00077	G	ND	ND ≤.001 FG	mg/l
Vinyl Chloride	SP/KP	G	0.011	G	≤.01 0.0005	0.018	mg/l
Bromomethane		G	ND	G	ND	ND	mg/l
Chloroethane		G	ND	G	ND	ND	mg/l
Methylene Chloride		G	ND	G	ND	ND	mg/l
Chloroform	SP/KP	G	≤.01 0.003	G	≤.01 0.0027	0.003	mg/l
1,1-Dichloroethane		G	0.0073	G	0.00005	0.012	mg/l
1,2-Dichloroethane		G	ND	G	ND	ND	mg/l
1,1-Dichloroethene	SP/KP	G	≤.01 0.0036	G	≤.01 0.0005	0.006	mg/l
1,2-Dichloropropane		G	ND	G	ND	ND	mg/l
Carbon Tetrachloride	SP/KP	G	ND	G	ND	ND	mg/l
cis-1,3-Dichloropropene		G	ND	G	ND	ND	mg/l
trans-1,3-Dichloropropene		G	ND	G	ND	ND	mg/l
1,2-Dichloroethene		G	≤.01 0.00086	G	ND	ND ≤.001 FG	mg/l
Dibromochloromethane		G	ND	G	ND	ND	mg/l
Bromodichloromethane		G	ND	G	ND	ND	mg/l
1,1,1-Trichloroethane		G	ND	G	ND	ND	mg/l
1,1,2-Trichloroethane		G	ND	G	ND	ND	mg/l
Benzene	SP/KP	G	≤.01 0.0013	G	ND	0.000 ≤.01	mg/l
Toluene		G	0.00065	G	≤.01 0.00072	0.001	mg/l
Trichloroethene		G	0.028	G	0.00005	0.048	mg/l
Ethylbenzene		G	ND	G	ND	ND	mg/l
1,1,2,2-Tetrachloroethane		G	ND	G	ND	ND	mg/l
Tetrachloroethene		G	ND	G	≤.01 0.00076	ND (-)	mg/l
Chlorobenzene		G	ND	G	ND	ND	mg/l
1,3-Dichlorobenzene	SP/KP	G	ND	G	ND	ND	mg/l
1,2-Dichlorobenzene		G	ND	G	ND	ND	mg/l
1,4-Dichlorobenzene		G	ND	G	ND	ND	mg/l
Bromoform		G	ND	G	ND	ND	mg/l
2-Chloroethylvinylether		G	ND	G	ND	ND	mg/l
Acrolein		G	ND	G	ND	ND	mg/l
Acrylonitrile		G	ND	G	ND	ND	mg/l
Phenol		G	ND	G	ND	ND	mg/l
2-Chlorophenol		G	ND	G	ND	ND	mg/l
2,4-Dimethylphenol		G	ND	G	ND	ND	mg/l
2,4-Dichlorophenol	SP/KP	G	ND	G	ND	ND	mg/l
2-Nitrophenol		G	ND	G	ND	ND	mg/l
4-Nitrophenol		G	ND	G	ND	ND	mg/l
2,4-Dinitrophenol		G	ND	G	ND	ND	mg/l
2,4,6-Trichlorophenol		G	ND	G	ND	ND	mg/l
Pentachlorophenol		G	ND	G	ND	ND	mg/l
4-Chloro-3-methylphenol		G	ND	G	ND	ND	mg/l
2-Methyl-4,6-dinitrophenol		G	ND	G	ND	ND	mg/l
N-nitrosodimethylamine		G	ND	G	ND	ND	mg/l
Bis(2-chloroethyl)ether		G	ND	G	ND	ND	mg/l
Bis(2-chloroisopropyl)ether		G	ND	G	ND	ND	mg/l
N-nitrosodi-n-propylamine		G	ND	G	ND	ND	mg/l
Hexachloroethane		G	ND	G	ND	ND	mg/l
Nitrobenzene	SP/KP	G	ND	G	ND	ND	mg/l

ND = <1 ug/l or 0.001 mg/l FG

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _x_(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED ---->		1/13/2004		1/13/2004		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED ---->		7:45		8:15			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW		E	27648	E	11491	16157	gal/day
Isophorone		G	ND	G	ND	ND	mg/l
Bis(2-chloroethoxy)methane		G	ND	G	ND	ND	mg/l
1,2,4-Trichlorobenzene		G	ND	G	ND	ND	mg/l
Dimethyl phthalate		G	ND	G	ND	ND	mg/l
Hexachlorobutadiene		G	ND	G	ND	ND	mg/l
Hexachlorocyclopentadiene SP/KP		G	ND	G	ND	ND	mg/l
2-Chloronapthalene		G	ND	G	ND	ND	mg/l
2,6-Dinitrotoluene		G	ND	G	ND	ND	mg/l
2,4-Dinitrotoluene SP/KP		G	ND	G	ND	ND	mg/l
4-Chlorophenyl-phenylether		G	ND	G	ND	ND	mg/l
4-Bromophenyl-phenylether		G	ND	G	ND	ND	mg/l
Diethyl phthalate		G	ND	G	ND	ND	mg/l
Hexachlorobenzene SP/KP		G	ND	G	ND	ND	mg/l
N-nitrosodiphenylamine		G	ND	G	ND	ND	mg/l
1,2-Diphenylhydrazine		G	ND	G	ND	ND	mg/l
Di-n-butyl phthalate		G	ND	G	ND	ND	mg/l
3,3-Dichlorobenzidine		G	ND	G	ND	ND	mg/l
Bis(2-ethylhexyl)phthalate SP/KP		G	ND	G	0.093	0.000 (–)	mg/l
Butyl benzyl phthalate		G	ND	G	ND	ND	mg/l
Di-n-octyl-phthalate		G	ND	G	ND	ND	mg/l
Benzidine		G	ND	G	ND	ND	mg/l
Naphthalene SP/KP		G	ND	G	ND	ND	mg/l
Phenanthrene		G	ND	G	ND	ND	mg/l
Fluorene		G	ND	G	ND	ND	mg/l
Anthracene		G	ND	G	ND	ND	mg/l
Acenapthene		G	ND	G	ND	ND	mg/l
Acenaphthylene		G	ND	G	ND	ND	mg/l
Benzo(a)pyrene SP/KP		G	ND	G	ND	ND	mg/l
Chrysene		G	ND	G	ND	ND	mg/l
Fluoranthene		G	ND	G	ND	ND	mg/l
Pyrene		G	ND	G	ND	ND	mg/l
Benzo(a)anthracene		G	ND	G	ND	ND	mg/l
Benzo(b)fluoranthene		G	ND	G	ND	ND	mg/l
Benzo(k)fluoranthene		G	ND	G	ND	ND	mg/l
Dibenzo(a,h)anthracene		G	ND	G	ND	ND	mg/l
Benzo(g,h,i)perylene		G	ND	G	ND	ND	mg/l
Ideno(1,2,3-cd)pyrene		G	ND	G	ND	ND	mg/l
Total Toxic Organics	5.52	--	0.05648	--	0.09828	-- 0.088	mg/l
Shaded cells represent known absent or suspected absent.			0.039 KG		0.043 KG	0.078 KG	

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		005					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		1/13/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		7:55					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	32,000					gal/day
Oil & Grease	200	G	ND					mg/l
Biochemical Oxygen Demand	****	C	10					mg/l
Chemical Oxygen Demand	****	C	116					mg/l
Total Suspended Solids	****	C	12					mg/l
Temperature	60	G	19					deg C
pH Acidic	5.5	G	6					S.U.
pH Basic	11.5	G	7					S.U.
BOD detection limit = 2 mg/l								
TSS detection limit = 1 mg/l								

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _x_(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		005							
DATES ON WHICH SAMPLES WERE COLLECTED	---->		1/13/2004							
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		7:55							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow								UNITS
FLOW		E	32,000							gal/day
Chloromethane (KP)		G	ND							mg/l
Vinyl Chloride (KP)		G	ND							mg/l
Bromomethane (KP)		G	ND							mg/l
Chloroethane		G	ND							mg/l
Methylene Chloride (KP)		G	ND							mg/l
Chloroform (KP)		G		0.0057						mg/l
1,1-Dichloroethane (KP)		G	ND							mg/l
1,2-Dichloroethane		G	ND	E.d						mg/l
1,1-Dichloroethene (KP)		G	ND							mg/l
1,2-Dichloropropane		G	ND							mg/l
Carbon Tetrachloride (KP)		G	ND							mg/l
cis-1,3-Dichloropropene		G	ND							mg/l
trans-1,3-Dichloropropene		G	ND							mg/l
trans-1,2-Dichloroethene		G	ND							mg/l
Dibromochloromethane (KP)		G	ND							mg/l
Bromodichloromethane (KP)		G	ND							mg/l
1,1,1-Trichloroethane (KP)		G	ND							mg/l
1,1,2-Trichloroethane (KP)		G	ND							mg/l
Benzene (KP)		G	ND							mg/l
Toluene (KP)		G	ND							mg/l
Trichloroethene (KP)		G	ND							mg/l
Ethylbenzene (KP)		G	ND							mg/l
1,1,2,2-Tetrachloroethane (KP)		G	ND							mg/l
Tetrachloroethene		G	ND							mg/l
Chlorobenzene (KP)		G	ND							mg/l
1,3-Dichlorobenzene (KP)		G	ND							mg/l
1,2-Dichlorobenzene (KP)		G	ND							mg/l
1,4-Dichlorobenzene (KP)		G	ND							mg/l
Bromoform		G	ND							mg/l
2-Chloroethylvinylether		G	ND							mg/l
Acrolein (KP)		G	ND							mg/l
Acrylonitrile (KP)		G	ND							mg/l
Phenol (KP)		G	ND							mg/l
2-Chlorophenol (KP)		G	ND							mg/l
2,4-Dimethylphenol (KP)		G	ND							mg/l
2,4-Dichlorophenol (KP)		G	ND							mg/l
2-Nitrophenol (KP)		G	ND							mg/l
4-Nitrophenol (KP)		G	ND							mg/l
2,4-Dinitrophenol (KP)		G	ND							mg/l
2,4,6-Trichlorophenol		G	ND							mg/l
Pentachlorophenol		G	ND							mg/l
4-Chloro-3-methylphenol		G	ND							mg/l
2-Methyl-4,6-dinitrophenol		G	ND							mg/l
N-nitrosodimethylamine		G	ND							mg/l
Bis(2-chloroethyl)ether		G	ND							mg/l
Bis(2-chloroisopropyl)ether		G	ND							mg/l
N-nitrosodi-n-propylamine		G	ND							mg/l
Hexachloroethane (KP)		G	ND							mg/l
Nitrobenzene (KP)		G	ND							mg/l

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _x_(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		005					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		1/13/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		7:55					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	32,000					gal/day
Isophorone		G	ND					mg/l
Bis(2-chloroethoxy)methane		G	ND					mg/l
1,2,4-Trichlorobenzene		G	ND					mg/l
Dimethyl phthalate		G	ND					mg/l
Hexachlorobutadiene (SP)		G	ND					mg/l
Hexachlorocyclopentadiene (SP)		G	ND					mg/l
2-Chloronapthalene		G	ND					mg/l
2,6-Dinitrotoluene		G	ND					mg/l
2,4-Dinitrotoluene (SP)		G	ND					mg/l
4-Chlorophenyl-phenylether		G	ND					mg/l
4-Bromophenyl-phenylether		G	ND					mg/l
Diethyl phthalate (SP)		G	ND					mg/l
Hexachlorobenzene (SP)		G	ND					mg/l
N-nitrosodiphenylamine (SP)		G	ND					mg/l
1,2-Diphenylhydrazine		G	ND					mg/l
Di-n-butyl phthalate		G	ND					mg/l
3,3-Dichlorobenzidine		G	ND					mg/l
Bis(2-ethylhexyl)phthalate (LP)		G	0.003					mg/l
Butyl benzyl phthalate		G	ND LOQ					mg/l
Di-n-octyl phthalate		G	ND					mg/l
Benzidine (SP)		G	ND					mg/l
Naphthalene (LP)		G	ND					mg/l
Phenanthrene (LP)		G	ND					mg/l
Fluorene		G	ND					mg/l
Anthracene		G	ND					mg/l
Acenapthene		G	ND					mg/l
Acenaphthylene		G	ND					mg/l
Benzo(a)pyrene (LP)		G	ND					mg/l
Chrysene		G	ND					mg/l
Fluoranthene		G	ND					mg/l
Pyrene		G	ND					mg/l
Benzo(a)anthracene		G	ND					mg/l
Benzo(b)fluoranthene		G	ND					mg/l
Benzo(k)fluoranthene		G	ND					mg/l
Dibenzo(a,h)anthracene		G	ND					mg/l
Benzo(g,h,i)perylene		G	ND					mg/l
Ideno(1,2,3-cd)pyrene		G	ND					mg/l
Total Toxic Organics	5.52	--	≤ 0.01 0.0087					mg/l
Shaded cells represent known absent or suspected absent								

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: X (JAN-MAR) ___(APR-JUNE) ___(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		---->		008				
DATES ON WHICH SAMPLES WERE COLLECTED		---->						
TIMES AT WHICH SAMPLES WERE COLLECTED		---->						
			RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW					
PARAMETER		LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow				UNITS
FLOW			E					gal/day
Oil & Grease		200	G					mg/l
Biochemical Oxygen Demand		****	C					mg/l
Chemical Oxygen Demand		****	C					mg/l
Temperature		60	G					deg C
Total Suspended Solids		****						mg/L
pH Acidic		5.5	G					S.U.
pH Basic		11.5	G					S.U.

*No flow this quarter

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		010		010			
DATES ON WHICH SAMPLES WERE COLLECTED	----->		1/13/2004		3/19/2004			
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:40		10:00			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,860,482					gal/day
Oil & Grease	200	G	113					mg/l
Biochemical Oxygen Demand	****	C	36.9		670			mg/l
Chemical Oxygen Demand	****	C	2180		1070			mg/l
Total Suspended Solids	****	C	572		60			mg/l
Temperature	60	G	16					deg C
pH Acidic	5.5	G	see attached					S.U.
pH Basic	11.5	G	see attached					S.U.
Chromium	5	C	0.0047 B					mg/l
Copper	2.7	C	0.0107 B					mg/l
Nickel	2.3	C	0.0135 B					mg/l
Zinc	3	C	0.0409					mg/l

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

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Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	--->		010					
DATES ON WHICH SAMPLES WERE COLLECTED	--->		1/13/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	--->		8:40					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,860,482	E		E		gal/day
Chloromethane		G	0.00081	G		G		mg/l
Vinyl Chloride SP\KP		G	0.0023	G		G		mg/l
Bromomethane		G	ND	G		G		mg/l
Chloroethane		G	ND	G		G		mg/l
Methylene Chloride		G	ND	G		G		mg/l
Chloroform SP\KP		G	0.0257	G		G		mg/l
1,1-Dichloroethane		G	ND	G		G		mg/l
1,2-Dichloroethane		G	ND	G		G		mg/l
1,1-Dichloroethene KP		G	ND	G		G		mg/l
1,2-Dichloropropane		G	ND	G		G		mg/l
Carbon Tetrachloride KP		G	ND	G		G		mg/l
cis-1,3-Dicholropropene		G	ND	G		G		mg/l
trans-1,3-Dichloropropene		G	ND	G		G		mg/l
trans-1,2-Dichloroethene		G	ND	G		G		mg/l
Dibromochloromethane		G	ND	G		G		mg/l
Bromodichloromethane		G	ND	G		G		mg/l
1,1,1-Trichloroethane		G	ND	G		G		mg/l
1,1,2-Trichloroethane		G	0.0097	G		G		mg/l
Benzene SP\KP		G	ND	G		G		mg/l
Toluene		G	0.0023	G		G		mg/l
Trichloroethene		G	ND	G		G		mg/l
Ethylbenzene		G	ND	G		G		mg/l
1,1,2,2-Tetrachloroethane		G	ND	G		G		mg/l
Tetrachloroethene		G	ND	G		G		mg/l
Chlorobenzene		G	0.00068	G		G		mg/l
1,3-Dichlorobenzene		G	ND	G		G		mg/l
1,2-Dichlorobenzene SP\KP		G	ND	G		G		mg/l
1,4-Dichlorobenzene		G	ND	G		G		mg/l
Bromoform		G	ND	G		G		mg/l
2-Chloroethylvinylether		G	ND	G		G		mg/l
Acrolein		G	ND	G		G		mg/l
Acrylonitrile		G	ND	G		G		mg/l
Phenol		G	ND	G		G		mg/l
2-Chlorophenol		G	ND	G		G		mg/l
2,4-Dimethylphenol SP\KP		G	ND	G		G		mg/l
2,4-Dichlorophenol		G	ND	G		G		mg/l
2-Nitrophenol		G	ND	G		G		mg/l
4-Nitrophenol		G	ND	G		G		mg/l
2,4-Dinitrophenol		G	ND	G		G		mg/l
2,4,6-Trichlorophenol		G	ND	G		G		mg/l
Pentachlorophenol		G	ND	G		G		mg/l
4-Chloro-3-methylphenol		G	ND	G		G		mg/l
2-Methyl-4,6-dinitrophenol		G	ND	G		G		mg/l
N-nitrosodimethylamine		G	ND	G		G		mg/l
Bis(2-chloroethyl)ether		G	ND	G		G		mg/l
Bis(2-chloroisopropyl)ether		G	ND	G		G		mg/l
N-nitrosodi-n-propylamine		G	ND	G		G		mg/l
Hexachloroethane SP\KP		G	ND	G		G		mg/l
Nitrobenzene		G	ND	G		G		mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS --->		010						
DATES ON WHICH SAMPLES WERE COLLECTED --->		1/13/2004						
TIMES AT WHICH SAMPLES WERE COLLECTED --->		8:40						
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,860,482	E		E		gal/day
Isophorone		G	ND	G		G		mg/l
Bis(2-chloroethoxy)methane		G	ND	G		G		mg/l
1,2,4-Trichlorobenzene		G	ND	G		G		mg/l
Dimethyl phthalate		G	ND	G		G		mg/l
Hexachlorobutadiene SP\KP		G	ND	G		G		mg/l
Hexachlorocyclopentadiene		G	ND	G		G		mg/l
2-Chloronapthalene		G	ND	G		G		mg/l
2,6-Dinitrotoluene		G	ND	G		G		mg/l
2,4-Dinitrotoluene SP\KP		G	ND	G		G		mg/l
4-Chlorophenyl-phenylether		G	ND	G		G		mg/l
4-Bromophenyl-phenylether		G	ND	G		G		mg/l
Diethyl phthalate		G	ND	G		G		mg/l
Hexachlorobenzene SP\KP		G	ND	G		G		mg/l
N-nitrosodiphenylamine		G	ND	G		G		mg/l
1,2-Diphenylhydrazine		G	ND	G		G		mg/l
Di-n-butyl phthalate		G	ND	G		G		mg/l
3,3-Dichlorobenzidine		G	ND	G		G		mg/l
Bis(2-ethylhexyl)phthalate KP		G	ND	G		G		mg/l
Butyl benzyl phthalate		G	ND	G		G		mg/l
Di-n-octyl-phthalate		G	ND	G		G		mg/l
Benzidine		G	ND	G		G		mg/l
Naphthalene SP\KP		G	ND	G		G		mg/l
Phenanthrene		G	ND	G		G		mg/l
Fluorene		G	ND	G		G		mg/l
Anthracene		G	ND	G		G		mg/l
Acenapthene		G	ND	G		G		mg/l
Acenaphthylene		G	ND	G		G		mg/l
Benzo(a)pyrene SP\KP		G	ND	G		G		mg/l
Chrysene		G	ND	G		G		mg/l
Fluoranthene		G	ND	G		G		mg/l
Pyrene		G	ND	G		G		mg/l
Benzo(a)anthracene		G	ND	G		G		mg/l
Benzo(b)fluoranthene		G	ND	G		G		mg/l
Benzo(k)fluoranthene		G	ND	G		G		mg/l
Dibenzo(a,h)anthracene		G	ND	G		G		mg/l
Benzo(g,h,i)perylene		G	ND	G		G		mg/l
Ideno(1,2,3-cd)pyrene		G	ND	G		G		mg/l
Total Toxic Organics	5.52	--	~~0.04149~~ 0.0257 FG		0		0	mg/l
Shaded cells represent known absent or suspected absent								

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

Mallinckrodt pH Monitoring for SP010: January 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
01/02/04	10:54:01	4.2		January-04
01/02/04	10:56:01	4.1		January-04
01/02/04	11:06:01	4	6	January-04
01/02/04	11:08:01	4	2	January-04
01/09/04	10:16:01	3.8	2	January-04
01/09/04	10:22:01	4		January-04
01/16/04	10:22:01	4.1		January-04
01/16/04	10:24:01	4	6	January-04
01/16/04	10:30:01	3.9	2	January-04
01/20/04	4:10:01	11.7	2	January-04
01/22/04	12:20:01	3.9		January-04
01/22/04	12:22:01	3.8	4	January-04
01/22/04	12:26:01	4	2	January-04
01/24/04	4:20:01	11.6		January-04
01/24/04	4:22:01	11.6		January-04
01/24/04	4:24:01	11.6		January-04
01/24/04	4:26:01	11.6		January-04
01/24/04	4:28:01	11.6		January-04
01/24/04	4:30:01	11.6	12	January-04
01/29/04	10:28:01	11.8		January-04
01/29/04	10:30:01	11.7	4	January-04
01/29/04	19:42:01	11.6		January-04
01/29/04	19:44:01	11.8		January-04
01/29/04	19:46:01	11.9		January-04
01/29/04	19:48:01	11.9		January-04
01/29/04	19:50:01	11.9		January-04
01/29/04	19:52:01	11.9		January-04
01/29/04	19:54:01	11.9		January-04
01/29/04	19:56:01	11.9		January-04
01/29/04	19:58:01	11.9		January-04
01/29/04	20:00:01	11.8		January-04
01/29/04	20:02:01	11.7	22	January-04
01/30/04	10:56:01	4.3	2	January-04
01/30/04	11:02:01	3.9	2	January-04
01/30/04	11:06:01	11.7		January-04
01/30/04	11:08:01	11.8	4	January-04
01/30/04	13:30:01	4.3	2	January-04
01/30/04	13:34:01	4.5	2	January-04
01/30/04	13:40:01	12.5		January-04
01/30/04	13:42:01	12.4		January-04
01/30/04	13:44:01	12.2		January-04
01/30/04	13:46:01	12.1		January-04
01/30/04	13:48:01	12		January-04
01/30/04	13:50:01	11.9		January-04
01/30/04	13:52:01	11.7		January-04
01/30/04	13:54:01	11.6	16	January-04
01/31/04	2:42:01	5.4		January-04
01/31/04	2:46:01	5		January-04
01/31/04	2:48:01	5.4	6	January-04
		January Total	**98**	

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APR 29 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Mallinckrodt pH Monitoring for SP010: February 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
02/01/04	17:42:01	5.4		February-04
02/01/04	17:44:01	4.5		February-04
02/01/04	17:46:01	5.4		February-04
02/01/04	17:48:01	11.8		February-04
02/01/04	17:50:01	11.8		February-04
02/01/04	17:52:01	11.6	12	February-04
02/03/04	9:38:01	4.5		February-04
02/03/04	9:40:01	3.9	4	February-04
02/12/04	13:00:01	4.1	2	February-04
02/12/04	13:04:01	3.9		February-04
02/19/04	14:06:01	5.1		February-04
02/19/04	14:08:01	4.4	6	February-04
02/19/04	14:14:01	4		February-04
02/19/04	14:16:01	3.9	4	February-04
02/21/04	3:50:01	5.4	2	February-04
02/21/04	4:06:01	5	2	February-04
02/26/04	10:58:01	3.6	2	February-04
02/26/04	11:02:01	3.6	2	February-04
	February Total		**36**	

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Mallinckrodt pH Monitoring for SP010: March 2004

Date	Time	pH	Total for Event in Minutes	Month-Year
03/05/04	10:58:01	4	2	March-04
03/12/04	10:34:01	4.1	2	March-04
03/12/04	10:40:01	3.9	2	March-04
03/12/04	10:46:01	11.9		March-04
03/12/04	10:48:01	11.8		March-04
03/12/04	10:50:01	11.7		March-04
03/12/04	10:52:01	11.6	8	March-04
03/19/04	9:52:01	4.6		March-04
03/19/04	9:54:01	4.8	4	March-04
03/19/04	9:58:01	4.7		March-04
03/19/04	10:00:01	4.1		March-04
03/19/04	10:02:01	4		March-04
03/19/04	10:04:01	3.9	8	March-04
03/20/04	1:00:01	5		March-04
03/20/04	1:02:01	5.2	4	March-04
03/30/04	9:42:01	4.6		March-04
03/30/04	9:44:01	5.1	4	March-04
03/30/04	9:52:01	4.8		March-04
03/30/04	9:54:01	4.1		March-04
03/30/04	9:56:01	4	6	March-04
	March Total		**40**	

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		011					
DATES ON WHICH SAMPLES WERE COLLECTED	----->							
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E						gal/day
Oil & Grease	200	G						mg/l
Biochemical Oxygen Demand	****	C						mg/l
Chemical Oxygen Demand	****	C						mg/l
Total Suspended Solids	****	C						mg/l
Temperature	60	G						deg C
pH Acidic	5.5	G						S.U.
pH Basic	11.5	G						S.U.
No overflow to MSD this quarter								

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		080		081		082	
DATES ON WHICH SAMPLES WERE COLLECTED	---->		1/13/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:25					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=compo		G=grab,C=composite,M=measured flow,E=e				UNITS
FLOW		E	10,775					gal/day
Oil & Grease	200	G	54.9					mg/l
Biochemical Oxygen Demand	****	C	ND → 12					mg/l
Chemical Oxygen Demand	****	C	309.0		56			mg/l
Total Suspended Solids	****	C	78.0					mg/l
Temperature	60	G	18					deg C
pH Acidic	5.5	G						S.U.
pH Basic	11.5	G	7					S.U.
Total Toxic Organics	5.52	G	see attached					mg/l

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METROPOLITAN ST. LOUIS SEWER DISTRICT
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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->			080					
DATES ON WHICH SAMPLES WERE COLLECTED ---->			1/13/2004					
TIMES AT WHICH SAMPLES WERE COLLECTED ---->			8:25					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BEL G=grab,C=composite,M=measured flow,E=e						UNITS
FLOW		E	10,775					gal/day
Chloromethane		G	ND					mg/l
Vinyl Chloride SP\KP		G	ND					mg/l
Bromomethane		G	ND					mg/l
Chloroethane		G	ND					mg/l
Methylene Chloride		G	ND					mg/l
Chloroform SP\KP		G		0.014				mg/l
1,1-Dichloroethane		G	ND					mg/l
1,2-Dichloroethane		G	ND					mg/l
1,1-Dichloroethene SP\KP		G	ND					mg/l
1,2-Dichloropropane		G	ND					mg/l
Carbon Tetrachloride SP\KP		G	ND					mg/l
cis-1,3-Dichloropropene		G	ND					mg/l
trans-1,3-Dichloropropene		G	ND					mg/l
trans-1,2-Dichloroethene		G	ND					mg/l
Dibromochloromethane		G	ND					mg/l
Bromodichloromethane		G	ND					mg/l
1,1,1-Trichloroethane		G	ND					mg/l
1,1,2-Trichloroethane		G	ND					mg/l
Benzene SP\KP		G		0.044				mg/l
Toluene		G	ND					mg/l
Trichloroethene		G	ND					mg/l
Ethylbenzene		G	ND					mg/l
1,1,2,2-Tetrachloroethane		G	ND					mg/l
Tetrachloroethene		G	ND					mg/l
Chlorobenzene		G	ND					mg/l
1,3-Dichlorobenzene SP\KP		G	ND					mg/l
1,2-Dichlorobenzene		G	ND					mg/l
1,4-Dichlorobenzene		G	ND					mg/l
Bromoform		G	ND					mg/l
2-Chloroethylvinylether		G	ND					mg/l
Acrolein		G	ND					mg/l
Acrylonitrile		G	ND					mg/l
Phenol		G	ND					mg/l
2-Chlorophenol		G	ND					mg/l
2,4-Dimethylphenol		G	ND					mg/l
2,4-Dichlorophenol SP\KP		G	ND					mg/l
2-Nitrophenol		G	ND					mg/l
4-Nitrophenol		G	ND					mg/l
2,4-Dinitrophenol		G	ND					mg/l
2,4,6-Trichlorophenol		G	ND					mg/l
Pentachlorophenol		G	ND					mg/l
4-Chloro-3-methylphenol		G	ND					mg/l
2-Methyl-4,6-dinitrophenol		G	ND					mg/l
N-nitrosodimethylamine		G	ND					mg/l
Bis(2-chloroethyl)ether		G	ND					mg/l
Bis(2-chloroisopropyl)ether		G	ND					mg/l
N-nitrosodi-n-propylamine		G	ND					mg/l
Hexachloroethane		G	ND					mg/l
Nitrobenzene SP\KP		G		0.0046				mg/l

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _X___(JAN-MAR) ____(APR-JUNE) ____ (JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->			080				
DATES ON WHICH SAMPLES WERE COLLECTEI ---->			1/13/2004				
TIMES AT WHICH SAMPLES WERE COLLECTED ---->			8:25				
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BEL G=grab,C=composite,M=measured flow,E=e					UNITS
FLOW		E	10,775				gal/day
Isophorone		G	ND				mg/l
Bis(2-chloroethoxy)methane		G	ND				mg/l
1,2,4-Trichlorobenzene		G	ND				mg/l
Dimethyl phthalate		G	ND				mg/l
Hexachlorobutadiene		G	ND				mg/l
Hexachlorocyclopentadiene SR\KP		G	ND				mg/l
2-Chloronapthalene		G	ND				mg/l
2,6-Dinitrotoluene		G	ND				mg/l
2,4-Dinitrotoluene SR\KP		G	ND				mg/l
4-Chlorophenyl-phenylether		G	ND				mg/l
4-Bromophenyl-phenylether		G	ND				mg/l
Diethyl phthalate		G	ND				mg/l
Hexachlorobenzene SR\KP		G	ND				mg/l
N-nitrosodiphenylamine		G	ND				mg/l
1,2-Diphenylhydrazine		G	ND				mg/l
Di-n-butyl phthalate		G	ND				mg/l
3,3-Dichlorobenzidine		G	ND				mg/l
Bis(2-ethylhexyl)phthalate SR\KP		G	0.0048				mg/l
Butyl benzyl phthalate		G	ND				mg/l
Di-n-octyl-phthalate		G	ND				mg/l
Benzidine		G	ND				mg/l
Naphthalene SR\KP		G	ND				mg/l
Phenanthrene		G	ND				mg/l
Fluorene		G	ND				mg/l
Anthracene		G	ND				mg/l
Acenapthene		G	ND				mg/l
Acenaphthylene		G	ND				mg/l
Benzo(a)pyrene SR\KP		G	ND				mg/l
Chrysene		G	ND				mg/l
Fluoranthene		G	ND				mg/l
Pyrene		G	ND				mg/l
Benzo(a)anthracene		G	ND				mg/l
Benzo(b)fluoranthene		G	ND				mg/l
Benzo(k)fluoranthene		G	ND				mg/l
Dibenzo(a,h)anthracene		G	ND				mg/l
Benzo(g,h,i)perylene		G	ND				mg/l
Ideno(1,2,3-cd)pyrene		G	ND				mg/l
Total Toxic Organics	5.52	--	0.0674				mg/l
Shaded cells represent known absent or suspected absent							
			0.056 KG				

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Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 080/082; Building 98

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
				Drummed	1/13/04	n/a	No
Leuprolide							
	Pharmaceutical	1/5/04	1/7/04				
		1/11/04	1/16/04				
		1/20/04	1/26/04				
		1/30/04	1/30/04				
		2/5/04	2/5/04				
		2/9/04	2/13/04				
		2/17/04	2/20/04				
		2/23/04	2/24/04				
		3/1/04	3/4/04				
		3/17/04	3/19/04				
		3/22/04	3/26/04				
Naltrexone		3/29/04	3/31/04				
	Pharmaceutical	3/4/04	3/19/04				
		3/21/04	3/21/04				
		3/22/04	3/22/04				
Oxycodone		3/24/04	3/30/04				
	Pharmaceutical	1/7/04	1/7/04				
		1/26/04	1/26/04				
		2/2/04	2/4/04				

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METROPOLITAN ST. LOUIS SEWER DISTRICT
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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) _____(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->	905			
DATES ON WHICH SAMPLES WERE COLLECT			---->	1/13/2004			
TIMES AT WHICH SAMPLES WERE COLLECTI			---->	10:45			
PARAMETER	LIMIT (ave) (gm/day)	LIMIT (gm/day)	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW M=measured flow			UNITS	Lab results mg/L
FLOW			M	5,544		gal/day	
Chloromethane	52.41	140.56	G	0.210		gm/day	0.01
Vinyl Chloride	46.22	81.96	G	0.210		gm/day	0.01
Chloroethane	52.41	140.56	G	0.210		gm/day	0.01
Methylene Chloride	17.15	81	G	0.105		gm/day	0.005
Chloroform	52.89	154.86	G	0.036		gm/day	0.0017
1,1-Dichloroethane	10.48	28.11	G	0.105		gm/day	0.005
1,2-Dichloroethane	85.77	273.51	G	0.105		gm/day	0.005
1,1-Dichloroethene	10.48	28.59	G	0.105		gm/day	0.005
1,2-Dichloropropane	93.39	378.33	G	0.105		gm/day	0.005
Carbon Tetrachloride	67.66	181.07	G	0.105		gm/day	0.005
cis-1,3-Dichloropropene	93.39	378.33	G	0.105		gm/day	0.005
trans-1,3-Dichloropropene	93.39	378.33	G	0.105		gm/day	0.005
trans-1,2-Dichloroethene	11.91	31.45	G	0.105		gm/day	0.005
1,1,1-Trichloroethane	10.48	28.11	G	0.105		gm/day	0.005
1,1,2-Trichloroethane	15.25	60.51	G	0.105		gm/day	0.005
Benzene	27.16	63.85	G	0.105		gm/day	0.005
Toluene	13.34	35.26	G	0.105		gm/day	0.005
Trichloroethene	12.39	32.88	G	0.105		gm/day	0.005
Ethylbenzene	67.66	181.07	G	0.105		gm/day	0.005
Tetrachloroethene	24.78	78.14	G	0.105		gm/day	0.005
Chlorobenzene	67.66	181.07	G	0.105		gm/day	0.005
1,3-Dichlorobenzene	67.66	181.07	G	0.105		gm/day	0.005
1,2-Dichlorobenzene	93.39	378.33	G	0.105		gm/day	0.005
1,4-Dichlorobenzene	67.66	181.07	G	0.105		gm/day	0.005
2-Nitrophenol	30.97	110.07	G	2.518		gm/day	0.12
4-Nitrophenol	77.19	274.46	G	12.591		gm/day	0.6
2-Methyl-4,6-dinitrophenol	37.17	131.99	G	12.591		gm/day	0.6
Hexachloroethane	93.39	378.33	G	2.518		gm/day	0.12
Nitrobenzene	1065.91	3050.49	G	2.518		gm/day	0.12
1,2,4-Trichlorobenzene	93.39	378.33	G	2.518		gm/day	0.12
Dimethyl phthalate	9.05	22.4	G	2.518		gm/day	0.12
Hexachlorobutadiene	67.66	181.066	G	2.518		gm/day	0.12
Diethyl phthalate	21.92	53.84	G	2.518		gm/day	0.12
Hexachlorobenzene	93.39	378.33	G	2.518		gm/day	0.12
Di-n-butyl phthalate	9.53	20.49	G	2.518		gm/day	0.12
Bis(2-ethylhexyl)phthalate	45.27	122.93	G	2.518		gm/day	0.12
Naphthalene	9.05	22.4	G	2.518		gm/day	0.12
Phenanthrene	9.05	22.4	G	2.518		gm/day	0.12
Fluorene	9.05	22.4	G	2.518		gm/day	0.12
Anthracene	9.05	22.4	G	2.518		gm/day	0.12
Acenapthene	9.05	22.4	G	2.518		gm/day	0.12
Fluoranthene	10.48	25.73	G	2.518		gm/day	0.12
Pyrene	9.53	22.87	G	2.518		gm/day	0.12
Shaded values represent detection limits							
LAB RESULTS							

All lab results were non detect. Reporting or method detection limits were used as lab results.

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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Premise Address: 3600 North Second St., St. Louis, MO 63147

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Samples Collected By: Mallinckrodt Inc

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		912					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		See attached					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	See attached					gal/day
DMAC (daily max)	7091	C	See attached					lb/day
DMAC (monthly average)	5459	C	See attached					lb/day
	*							
* Monitoring requirement only.								

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ENVIRONMENTAL COMPLIANCE

DMAC Analysis and Mass Loadings- SP912
Jan-04

Date	Flow	DMAC			
	(gal/day)	mg/l	lb/day		
1-Jan			0		
2-Jan			0		
3-Jan			0		
4-Jan			0		
5-Jan			0		
6-Jan			0		
7-Jan			0		
8-Jan	74556	7,100	4,423		
9-Jan			0		
10-Jan			0		
11-Jan			0		
12-Jan			0		
13-Jan			0		
14-Jan			0		
15-Jan	74007	1,400	866		
16-Jan			0		
17-Jan			0		
18-Jan			0		
19-Jan			0		
20-Jan			0		
21-Jan			0		
22-Jan	21288	1,900	338		
23-Jan			0		
24-Jan			0		
25-Jan			0		
26-Jan			0		
27-Jan			0		
28-Jan			0		
29-Jan	37616	7,100	2,232		
30-Jan			0		
31-Jan			0		
Avg (weighted):	51867	4,375	1,896		
Max:		7,100	4,423		
Min:		1,400	0		
Monthly Limit:	n/a	n/a	5,459		
Daily Max:	n/a	n/a	7,091		

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DMAC Analysis and Mass Loadings - SP912
Feb-04

SP912 for Bldg. 504

Date	Flow	DMAC	
	(gal/day)	mg/l	lb/day
1-Feb			0
2-Feb			0
3-Feb			0
4-Feb			0
5-Feb	35708	1,700	507
6-Feb			0
7-Feb			0
8-Feb			0
9-Feb			0
10-Feb			0
11-Feb			0
12-Feb	29189	7,000	1,707
13-Feb			0
14-Feb			0
15-Feb			0
16-Feb			0
17-Feb			0
18-Feb			0
19-Feb	39596	3700	1,224
20-Feb			0
21-Feb			0
22-Feb			0
23-Feb			0
24-Feb			0
25-Feb			0
26-Feb	31812	400	106
27-Feb			0
28-Feb			
29-Feb			0
Avg (weighted):	34,076	3,200	911
Max:	39,596	7,000	1,707
Min:	29,189	400	0
Monthly Limit:	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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DMAC Analysis and Mass Loadings - SP912
Mar-04

Date	Flow	DMAC	
	(gal/day)	mg/l	lb/day
1-Mar	41365	3,300	1,141
2-Mar			0
3-Mar			0
4-Mar			0
5-Mar			0
6-Mar			0
7-Mar			0
8-Mar			0
9-Mar			0
10-Mar			0
11-Mar	41626	3,100	1,078
12-Mar			0
13-Mar			0
14-Mar			0
15-Mar			0
16-Mar			0
17-Mar			0
18-Mar	39626	1,600	530
19-Mar			0
20-Mar			0
21-Mar			0
22-Mar			0
23-Mar			0
24-Mar			0
25-Mar	37239	790	246
26-Mar			0
27-Mar			0
28-Mar			0
29-Mar			0
30-Mar			0
31-Mar			0
Avg (weighted):	39,964	2,198	734
Max:	41,626	3,300	1,141
Min:	37,239	790	0
Monthly Limit:	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	__X___(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 915	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	2/19/2004	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	16:22	
SAMPLE TYPE				Grab	
FLOW			E	2,700	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.060	
Benzene	524.2	3.00	0.70	<0.002	
Chlorobenzene	524.2	3.00	0.70	<0.002	
Chloroform	524.2	0.10	0.03	0.0056 J	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.002	
1,2-Dichloroethane	524.2	20.70	8.20	<0.002	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Hexane	1666	3.00	0.70	<0.010	
Methylene chloride	524.2	3.00	0.70	<0.006	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
Tetrahydrofuran	1666	9.20	3.40	<0.010	
Toluene	524.2	0.30	0.20	0.016	
Xylenes	1666	3.00	0.70	<0.020	
Isobutyraldehyde	1666	20.70	8.20	.0441 J	
n-Amyl acetate	1666	20.70	8.20	<0.010	
n-Butyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Isopropyl ether	1666	20.70	8.20	<0.010	
n-Heptane	1666	3.00	0.70	<0.020	
Methyl formate	1666	20.70	8.20	<0.050	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by lab				10, 20	

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

	METROPOLITAN ST. LOUIS SEWER DISTRICT						
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Premise Address:		3600 North Second St., St. Louis, MO 63147					
Monitoring Period:	__X__(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)		
Samples Collected By:		Mallinckrodt Inc					
Analysis Performed By:		Lancaster Labs					
Part II: ANALYTICAL RESULTS OF SELF MONITORING							
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 917			
DATES ON WHICH SAMPLES WERE COLLECTED			----->	1/7/2004			
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	9:50			
SAMPLE TYPE				Grab			
FLOW		E	5000 GPD				
PARAMETER							
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result			
Acetone	524.2	20.70	8.20	<0.030			
Benzene	524.2	3.00	0.70	<0.001			
Chlorobenzene	524.2	3.00	0.70	<0.001			
Chloroform	524.2	0.10	0.03	.0011 J			
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001			
1,2-Dichloroethane	524.2	20.70	8.20	<0.001			
Ethyl Acetate	1666	20.70	8.20	<0.001			
n-Hexane	1666	3.00	0.70	<0.001			
Methylene chloride	524.2	3.00	0.70	<0.003			
4-Methyl-2-pentanone	1666	20.70	8.20	0.0216			
Tetrahydrofuran	1666	9.20	3.40	<0.001			
Toluene	524.2	0.30	0.20	0.019			
Xylenes	1666	3.00	0.70	<0.002			
Isobutyraldehyde	1666	20.70	8.20	<0.001			
n-Amyl acetate	1666	20.70	8.20	<0.001			
n-Butyl acetate	1666	20.70	8.20	<0.001			
Isopropyl acetate	1666	20.70	8.20	<0.001			
Isopropyl ether	1666	20.70	8.20	<0.001			
n-Heptane	1666	3.00	0.70	<0.002			
Methyl formate	1666	20.70	8.20	<0.005			
Diethyl amine	1671	255.00	100.00	<17.0			
Triethyl amine	1671	255.00	100.00	<17.0			
Dilution factor by lab				1, 10			

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ENVIRONMENTAL COMPLIANCE

Mallinckrodt, Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Points 917; Building 97

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Meperidine HCl	Pharmaceutical	01/01/04	01/27/04	MSD (change over cleanouts only HCL/water	1/7/04	No	No
Diphenoxylate HCl	Pharmaceutical	01/01/04	01/26/04	MSD (sends NaOH to MSD in one segment)	1/7/04	No	No
Amphetamines	Pharmaceutical	01/28/04	02/05/03	MSD (cleanouts)		No	No
Meperidine HCl	Pharmaceutical	02/06/04	03/31/04	MSD (change over cleanouts only HCL/water)		No	No
Methylphenidate HCl	Pharmaceutical	01/28/04	02/14/03	MSD (tank cleanouts to MSD or tested mother liquor)		No	No
Nalbuphine HCl	Pharmaceutical	02/16/04	03/05/04	MSD (tank cleanouts HCl/water)		No	No
Amphetamines	Pharmaceutical	02/28/04	03/14/04	MSD (cleanouts)		No	No
Methylphenidate HCl	Pharmaceutical	03/15/04	03/31/04	MSD (tank cleanouts to MSD or tested mother liquor)		No	No

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METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	_X___(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 918		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	N/A		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	N/A		
SAMPLE TYPE						
FLOW			E	0	NO FLOW	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly			
Acetone	524.2	20.70	8.20			
Benzene	524.2	3.00	0.70			
Chlorobenzene	524.2	3.00	0.70			
Chloroform	524.2	0.10	0.03			
1,2-Dichlorobenzene	524.2	20.70	8.20			
1,2-Dichloroethane	524.2	20.70	8.20			
Ethyl Acetate	1666	20.70	8.20			
n-Hexane	1666	3.00	0.70			
Methylene chloride	524.2	3.00	0.70			
4-Methyl-2-pentanone	1666	20.70	8.20			
Tetrahydrofuran	1666	9.20	3.40			
Toluene	524.2	0.30	0.20			
Xylenes	1666	3.00	0.70			
Isobutyraldehyde	1666	20.70	8.20			
n-Amyl acetate	1666	20.70	8.20			
n-Butyl acetate	1666	20.70	8.20			
Isopropyl acetate	1666	20.70	8.20			
Methyl cellosolve	1671	275.00	59.70			
Isopropyl ether	1666	20.70	8.20			
n-Heptane	1666	3.00	0.70			
Methyl formate	1666	20.70	8.20			
Diethyl amine	1671	255.00	100.00			
Triethyl amine	1671	255.00	100.00			
Dilution by lab						

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Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	__X__(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				SP 919		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	1/6/2004		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	15:30		
SAMPLE TYPE			----->	Grabs		
FLOW			E	6,000		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method		Avg Monthly Limit	Result		
Acetone	524.2	20.70	8.20	<0.030		
Benzene	524.2	3.00	0.70	<0.001		
Chlorobenzene	524.2	3.00	0.70	<0.001		
Chloroform	524.2	0.10	0.03	0.0073		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001		
1,2-Dichloroethane	524.2	20.70	8.20	<0.001		
Ethyl Acetate	1666	20.70	8.20	<0.001		
n-Hexane	1666	3.00	0.70	<0.001		
Methylene chloride	524.2	3.00	0.70	<0.003		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001		
Tetrahydrofuran	1666	9.20	3.40	<0.001		
Toluene	524.2	0.30	0.20	<0.001		
Xylenes	1666	3.00	0.70	<0.002		
Isobutyraldehyde	1666	20.70	8.20	<0.001		
n-Amyl acetate	1666	20.70	8.20	<0.001		
n-Butyl acetate	1666	20.70	8.20	<0.001		
Isopropyl acetate	1666	20.70	8.20	<0.001		
Isopropyl ether	1666	20.70	8.20	<0.001		
n-Heptane	1666	3.00	0.70	<0.002		
Methyl formate	1666	20.70	8.20	<0.005		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by Lab				1, 10		

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	_X__(JAN-MAR) ____(APR-JUN) __(JULY-SEP) ____(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		----->	SP 920
DATES ON WHICH SAMPLES WERE COLLECTE		----->	2/20/2004
TIMES AT WHICH SAMPLES WERE COLLECTED		----->	13:00
SAMPLE TYPE			Grabs
FLOW		E	24,000

		PARAMETER Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result
1	22	Diethyl amine	1671	255.00	100.00	<17
3	23	Triethyl amine	1671	255.00	100.00	<17
4	14	Isobutyraldehyde	1666	20.70	8.20	<0.001
5	19	Isopropyl ether	1666	20.70	8.20	<0.001
6	17	Isopropyl acetate	1666	20.70	8.20	<0.001
7	10	4-Methyl-2-pentanone	1666	20.70	8.20	<0.001
8	16	n-Butyl acetate	1666	20.70	8.20	<0.001
9	15	n-Amyl acetate	1666	20.70	8.20	<0.001
10	21	Methyl formate	1666	20.70	8.20	<0.005
11	8	n-Hexane	1666	3.00	0.70	<0.001
12	7	Ethyl Acetate	1666	20.70	8.20	<0.001
13	11	Tetrahydrofuran	1666	9.20	3.40	<0.001
14	20	n-Heptane	1666	3.00	0.70	<0.002
15	13	Xylenes	1666	3.00	0.70	<0.002
16	1	Acetone	524.2	20.70	8.20	<0.030
17	9	Methylene chloride	524.2	3.00	0.70	<0.003
18	4	Chloroform	524.2	0.10	0.03	<0.001
19	2	Benzene	524.2	3.00	0.70	<0.001
20	6	1,2-Dichloroethane	524.2	20.70	8.20	<0.001
21	12	Toluene	524.2	0.30	0.20	0.018
22	5	1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001
23	3	Chlorobenzene	524.2	3.00	0.70	<0.001
		Dilution by lab				1,10

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Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:		_X__(JAN-MAR)	____(APR-JUN)	____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP927	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	1/5/2004	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	13:45	
SAMPLE TYPE				Grab	
FLOW			E	2,200	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.150	
Methylene chloride	524.2	3.00	0.70	<0.015	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Dilution by lab				10, 50	

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METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

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Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	_X_(JAN-MAR) ___(APR-JUN) ___(JULY-SEP) ___(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

NEW DATA PUT IN BOMS VIA 3/3/04 REPORT. FG

MSD SAMPLE POINT REFERENCE NUMBERS				---->	SP928	
DATES ON WHICH SAMPLES WERE COLLECTED				---->	1/5/2004	2/17/2004
TIMES AT WHICH SAMPLES WERE COLLECTED				---->	14:15	20:00
SAMPLE TYPE					Grab	
FLOW				E	2,200	
PARAMETER						
		Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
16	1	Acetone	524.2	20.70	8.20	<0.300	
19	2	Benzene	524.2	3.00	0.70	<0.010	
23	3	Chlorobenzene	524.2	3.00	0.70	<0.010	
18	4	Chloroform	524.2	0.10	0.03	0.02	
22	5	1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
20	6	1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
12	7	Ethyl Acetate	1666	20.70	8.20	<0.010	
11	8	n-Hexane	1666	3.00	0.70	<0.010	
17	9	Methylene chloride	524.2	3.00	0.70	<0.030	
7	10	4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
13	11	Tetrahydrofuran	1666	9.20	3.40	<0.010	
21	12	Toluene	524.2	0.30	0.20	0.58	.0036 J
15	13	Xylenes	1666	3.00	0.70	<0.020	
4	14	Isobutyraldehyde	1666	20.70	8.20	0.138	
9	15	n-Amyl acetate	1666	20.70	8.20	<0.010	
8	16	n-Butyl acetate	1666	20.70	8.20	<0.010	
6	17	Isopropyl acetate	1666	20.70	8.20	<0.010	
5	19	Isopropyl ether	1666	20.70	8.20	<0.010	
14	20	n-Heptane	1666	3.00	0.70	<0.020	
10	21	Methyl formate	1666	20.70	8.20	<0.050	
1	22	Diethyl amine	1671	255.00	100.00	<17.0	
3	23	Triethyl amine	1671	255.00	100.00	<17.0	
		Dilution				1, 10, 100	20

IN BOMS VIA 3/2/04 REPORT FG

SEE FTC 3/16/04 NOV FG

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METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

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Permit No.:		21120596-00		
Premise Address:		3600 North Second St., St. Louis, MO 63147		
Monitoring Period:		_X__(JAN-MAR)	____(APR-JUN)	____(JULY-SEP) ____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc		
Analysis Performed By:		Lancaster Labs		
Part II: ANALYTICAL RESULTS OF SELF MONITORING				
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP929
DATES ON WHICH SAMPLES WERE COLLECTED			----->	3/30/2004
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	14:00
SAMPLE TYPE				Grab √
FLOW			E	2,200
PARAMETER				
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result
Acetone	524.2	20.70	8.20	0.18
Benzene	524.2	3.00	0.70	<0.002
Chlorobenzene	524.2	3.00	0.70	<0.002
Chloroform	524.2	0.10	0.03	<0.002
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.002
1,2-Dichloroethane	524.2	20.70	8.20	<0.002
Ethyl Acetate	1666	20.70	8.20	<0.010
n-Hexane	1666	3.00	0.70	<0.010
Methylene chloride	524.2	3.00	0.70	<0.006
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010
Tetrahydrofuran	1666	9.20	3.40	.0151 J
Toluene	524.2	0.30	0.20	<0.002
Xylenes	1666	3.00	0.70	<0.020
Isobutyraldehyde	1666	20.70	8.20	<0.010
n-Amyl acetate	1666	20.70	8.20	<0.010
n-Butyl acetate	1666	20.70	8.20	<0.010
Isopropyl acetate	1666	20.70	8.20	<0.010
Isopropyl ether	1666	20.70	8.20	<0.010
n-Heptane	1666	3.00	0.70	<0.020
Methyl formate	1666	20.70	8.20	<0.050
Diethyl amine	1671	255.00	100.00	<17.0
Triethyl amine	1671	255.00	100.00	<17.0
Dilution				1, 10, 20

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DIVISION OF
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tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele 314 654-2000
Fax: 314 654-1251

April 5, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Reduced testing for SP915, 928 and 929
PERMIT NO. 21120596-00

Dear Mr. Mendoza,

This letter is in follow-up to Mallinckrodt's request for reduced testing for the above sample points in Building 6/7/8. Per 40 CFR 439.4 permit limits and compliance monitoring are not required for regulated pollutants neither used or generated at the facility. A determination has been made that regulated pollutants (other than chloroform, toluene and acetone) are neither used or generated in Building 6/7/8. This is based on the assessment of process chemistry, products and by-products resulting from the manufacturing process and a review of all the raw materials used in the building (includes a review of all components of each Material Safety Data Sheet for raw materials used in Building 6/7/8). A record of this determination and copies of the Material Safety Data Sheets will be kept with the permit records at Mallinckrodt.

Additionally, I am submitting a copy of the analytical reports for these sample points from the 4th quarter 2003 for your review (note that SP916 represents the new SP929, without carbon treatment). Lancaster Laboratories has been using the method Detection Limit as the Reporting Limit.

With approval, Mallinckrodt will continue quarterly monitoring of SP915, 928 and 929 for toluene, chloroform and acetone and perform an annual chemical analysis to reconfirm non-detect values for the other PEG regulated pollutants.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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Analysis Report

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147
314-654-8158

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 872666. Samples arrived at the laboratory on Wednesday, October 29, 2003.

Client Description	Lancaster Labs Number
SP916 Grab Water Sample	4153027

1 COPY TO	Mallinckrodt Inc.	Attn: Ms. Karen Siebenberger
ELECTRONIC COPY TO	Mallinckrodt Inc.	Attn: Mr. Joe Howe

Questions? Contact your Client Services Representative
Richard C Entz at (717) 656-2300.

Respectfully Submitted,

Robert E. Mellinger
Sr Chemist/Coordinator

* Please note that this point has initiated carbon treatment to become SP929.
Karen Siebenberger 4/5/04

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4153027

SP916 Grab Water Sample
Q4/2003 PEG

Collected:10/22/2003 13:00

Submitted: 10/29/2003 09:15
Reported: 11/06/2003 at 10:11
Discard: 11/06/2004

SP916

Account Number: 11112

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Units	Dilution Factor
02366	PMI DAI-VOCs by 1671						
02371	diethylamine	109-89-7	N.D.		17.	mg/l	1
02373	triethylamine	121-44-8	N.D.		17.	mg/l	1
02394	ISOTOPE DIL GC/MS FOR PMI VOLS						
02396	Isobutyraldehyde	78-84-2	N.D.		1.00	ug/l	1
02397	Isopropylether	108-20-3	N.D.		1.00	ug/l	1
02398	Isopropyl acetate	108-21-4	N.D.		1.00	ug/l	1
02399	4-Methyl-2-pentanone	108-10-1	N.D.		1.00	ug/l	1
02401	n-Butyl acetate	123-86-4	N.D.		1.00	ug/l	1
02403	n-Amyl acetate	628-63-7	N.D.		1.00	ug/l	1
02404	Methyl formate	107-31-3	N.D.		5.00	ug/l	1
02409	Hexane	110-54-3	N.D.		1.00	ug/l	1
02410	Ethyl acetate	141-78-6	N.D.		1.00	ug/l	1
02411	Tetrahydrofuran	109-99-9	N.D.		1.00	ug/l	1
02413	Heptane	142-82-5	N.D.		2.00	ug/l	1
02415	m+p-Xylene	1330-20-7	N.D.		2.00	ug/l	1
02416	o-Xylene	95-47-6	N.D.		1.00	ug/l	1
03600	Additional Compounds by 524.2						
03608	Acetone	67-64-1	N.D.		30.	ug/l	10
03643	EPA Method 524.2						
03405	Methylene Chloride	75-09-2	N.D.		3.0	ug/l	10
03408	Chloroform	67-66-3	3.5	J	1.0	ug/l	10
03411	Benzene	71-43-2	N.D.		1.0	ug/l	10
03412	1,2-Dichloroethane	107-06-2	N.D.		1.0	ug/l	10
03416	Toluene	108-88-3	6.5		1.0	ug/l	10
03644	EPA Method 524.2 Cont.						
01000	1,2-Dichlorobenzene	95-50-1	N.D.		1.0	ug/l	10

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4153027

SP916 Grab Water Sample
Q4/2003 PEG

Collected:10/22/2003 13:00

Submitted: 10/29/2003 09:15
Reported: 11/06/2003 at 10:11
Discard: 11/06/2004

SP916

Account Number: 11112

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
03420	Chlorobenzene	108-90-7	N.D.	1.0	ug/l	10

The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to the matrix of the sample.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	10/30/2003 19:09	Lisa A Johnson	1
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	10/30/2003 19:35	Lisa A Johnson	1
02394	ISOTOPE DIL GC/MS FOR PMI VOLS	EPA 1666	1	10/29/2003 23:27	Marc S Neal	1
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	10/30/2003 21:47	Ryan V Nolt	10
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	10/30/2003 21:47	Ryan V Nolt	10
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	10/30/2003 21:47	Ryan V Nolt	10

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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: Mallinckrodt Inc. Group Number: 872666
Reported: 11/06/03 at 10:11 AM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 033030025A	Sample number(s): 4153027							
diethylamine	N.D.	17.	mg/l	110	110	70-130	0	30
triethylamine	N.D.	17.	mg/l	100	110	68-168	10	30
Batch number: O033011BB	Sample number(s): 4153027							
Isobutyraldehyde	N.D.	1.00	ug/l	116		63-180		
Isopropylether	N.D.	1.00	ug/l	83		70-129		
Isopropyl acetate	N.D.	1.00	ug/l	94		70-150		
4-Methyl-2-pentanone	N.D.	1.00	ug/l	99		70-165		
n-Butyl acetate	N.D.	1.00	ug/l	87		70-130		
n-Amyl acetate	N.D.	1.00	ug/l	86		70-130		
Methyl formate	N.D.	5.00	ug/l	99		14-171		
Hexane	N.D.	1.00	ug/l	86		70-157		
Ethyl acetate	N.D.	1.00	ug/l	97		57-160		
Tetrahydrofuran	N.D.	1.00	ug/l	96		28-221		
Heptane	N.D.	2.00	ug/l	84		70-164		
m+p-Xylene	N.D.	2.00	ug/l	91		70-130		
o-Xylene	N.D.	1.00	ug/l	85		70-130		
Batch number: S033032AA	Sample number(s): 4153027							
1,2-Dichlorobenzene	N.D.	0.1	ug/l	95		70-130		
Methylene Chloride	N.D.	0.3	ug/l	97		70-130		
Chloroform	N.D.	0.1	ug/l	97		70-130		
Benzene	N.D.	0.1	ug/l	103		70-130		
1,2-Dichloroethane	N.D.	0.1	ug/l	101		70-130		
Toluene	N.D.	0.1	ug/l	94		70-130		
Chlorobenzene	N.D.	0.1	ug/l	94		70-130		
Acetone	N.D.	3.0	ug/l	103		70-130		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 033030025A	Sample number(s): 4153027								
diethylamine	0*	0*	70-130	0	30				
triethylamine	0*	0*	68-168	0	30				
Batch number: S033032AA	Sample number(s): 4153027								
1,2-Dichlorobenzene	106	103	70-130	3	30				
Methylene Chloride	106	102	70-130	4	30				
Chloroform	110	106	70-130	3	30				
Benzene	119	116	70-130	3	30				
1,2-Dichloroethane	109	108	70-130	1	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: Mallinckrodt Inc.
Reported: 11/06/03 at 10:11 AM

Group Number: 872666

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Toluene	110	107	70-130	2	30				
Chlorobenzene	105	103	70-130	1	30				
Acetone	101	96	70-130	5	30				

Surrogate Quality Control

Analysis Name: PMI DAI-VOCs by 1671
Batch number: 033030025A

	t-butanol	Amyl Alcohol
4153027	113	112
Blank	98	112
LCS	95	109
LCSD	97	110
MS	99	116
MSD	109	112
Limits:	50-150	50-150

Analysis Name: Additional Compounds by 524.2
Batch number: S033032AA

	4-Bromofluorobenzene	1,2-Dichlorobenzene-d4
4153027	84	85
Blank	88	89
LCS	105	110
MS	105	113
MSD	105	110
Limits:	80-120	80-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4143873

SP928 Grab Water Sample
Q4/2003 PEG

Collected:10/09/2003 15:30

Submitted: 10/15/2003 09:30
Reported: 10/24/2003 at 11:01
Discard: 10/24/2004

O-928

Account Number: 11112

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02366	PMI DAI-VOCs by 1671					
02371	diethylamine	109-89-7	N.D.	17.	mg/l	1
02373	triethylamine	121-44-8	N.D.	17.	mg/l	1
02394	ISOTOPE DIL GC/MS FOR PMI VOLS					
02396	Isobutyraldehyde	78-84-2	N.D.	100.	ug/l	100
02397	Isopropylether	108-20-3	N.D.	100.	ug/l	100
02398	Isopropyl acetate	108-21-4	N.D.	100.	ug/l	100
02399	4-Methyl-2-pentanone	108-10-1	N.D.	100.	ug/l	100
02401	n-Butyl acetate	123-86-4	N.D.	100.	ug/l	100
02403	n-Amyl acetate	628-63-7	N.D.	100.	ug/l	100
02404	Methyl formate	107-31-3	N.D.	500.	ug/l	100
02409	Hexane	110-54-3	N.D.	100.	ug/l	100
02410	Ethyl acetate	141-78-6	N.D.	100.	ug/l	100
02411	Tetrahydrofuran	109-99-9	N.D.	100.	ug/l	100
02413	Heptane	142-82-5	N.D.	200.	ug/l	100
02415	m+p-Xylene	1330-20-7	N.D.	200.	ug/l	100
02416	o-Xylene	95-47-6	N.D.	100.	ug/l	100
	The reporting limits for all compounds analyzed by EPA method 1666 were raised due to sample foaming.					
03600	Additional Compounds by 524.2					
03608	Acetone	67-64-1	N.D.	300.	ug/l	100
03643	EPA Method 524.2					
03405	Methylene Chloride	75-09-2	N.D.	30.	ug/l	100
03408	Chloroform	67-66-3	23. J	10.	ug/l	100
03411	Benzene	71-43-2	N.D.	10.	ug/l	100
03412	1,2-Dichloroethane	107-06-2	N.D.	10.	ug/l	100
03416	Toluene	108-88-3	N.D.	10.	ug/l	100
03644	EPA Method 524.2 Cont.					

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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

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ENVIRONMENTAL COMPLIANCE

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4143873

SP928 Grab Water Sample
Q4/2003 PEG

Collected:10/09/2003 15:30

Submitted: 10/15/2003 09:30
Reported: 10/24/2003 at 11:01
Discard: 10/24/2004

O-928

Account Number: 11112

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01000	1,2-Dichlorobenzene	95-50-1	N.D.	10.	ug/l	100
03420	Chlorobenzene	108-90-7	N.D.	10.	ug/l	100

The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to sample foaming.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	10/16/2003 21:35	Lisa A Johnson	1
02394	ISOTOPE DIL GC/MS FOR PMI VOLS	EPA 1666	1	10/16/2003 05:52	Marc S Neal	100
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	10/18/2003 21:02	Ryan V Nolt	100
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	10/18/2003 21:02	Ryan V Nolt	100
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	10/18/2003 21:02	Ryan V Nolt	100

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: Mallinckrodt Inc.
Reported: 10/24/03 at 11:01 AM

Group Number: 870888

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 032890023A	Sample number(s): 4143873-4143875							
diethylamine	N.D.	17.	mg/l	87	84	70-130	4	30
triethylamine	N.D.	17.	mg/l	110	110	68-168	0	30
Batch number: 0032871BB	Sample number(s): 4143872-4143875							
Isobutyraldehyde	N.D.	1.00	ug/l	125		63-180		
Isopropylether	N.D.	1.00	ug/l	41*		70-129		
Isopropyl acetate	N.D.	1.00	ug/l	94		70-150		
4-Methyl-2-pentanone	N.D.	1.00	ug/l	97		70-165		
n-Butyl acetate	N.D.	1.00	ug/l	88		70-130		
n-Amyl acetate	N.D.	1.00	ug/l	88		70-130		
Methyl formate	N.D.	5.00	ug/l	95		14-171		
Hexane	N.D.	1.00	ug/l	80		70-157		
Ethyl acetate	N.D.	1.00	ug/l	95		57-160		
Tetrahydrofuran	N.D.	1.00	ug/l	95		28-221		
Heptane	N.D.	2.00	ug/l	86		70-164		
m+p-Xylene	N.D.	2.00	ug/l	90		70-130		
o-Xylene	N.D.	1.00	ug/l	84		70-130		
Batch number: S032911AA	Sample number(s): 4143872-4143875							
1,2-Dichlorobenzene	N.D.	0.1	ug/l	93		70-130		
Methylene Chloride	N.D.	0.3	ug/l	99		70-130		
Chloroform	N.D.	0.1	ug/l	105		70-130		
Benzene	N.D.	0.1	ug/l	107		70-130		
1,2-Dichloroethane	N.D.	0.1	ug/l	105		70-130		
Toluene	N.D.	0.1	ug/l	100		70-130		
Chlorobenzene	N.D.	0.1	ug/l	98		70-130		
Acetone	N.D.	3.0	ug/l	96		70-130		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 032890023A	Sample number(s): 4143873-4143875								
diethylamine	76	81	70-130	6	30				
triethylamine	100	100	68-168	0	30				
Batch number: S032911AA	Sample number(s): 4143872-4143875								
1,2-Dichlorobenzene	99	99	70-130	0	30				
Methylene Chloride	105	103	70-130	2	30				
Chloroform	110	108	70-130	1	30				
Benzene	114	114	70-130	0	30				
1,2-Dichloroethane	110	107	70-130	3	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: Mallinckrodt Inc.
Reported: 10/24/03 at 11:01 AM

Group Number: 870888

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Toluene	97	96	70-130	1	30				
Chlorobenzene	103	104	70-130	1	30				
Acetone	100	102	70-130	2	30				

Surrogate Quality Control

Analysis Name: PMI DAI-VOCs by 1671
Batch number: 032890023A

	t-butanol	Amyl Alcohol
4143873	96	100
4143874	98	98
4143875	94	91
Blank	94	99
LCS	93	101
LCSD	90	101
MS	95	98
MSD	96	99
Limits:	50-150	50-150

Analysis Name: Additional Compounds by 524.2
Batch number: S032911AA

	4-Bromofluorobenzene	1,2-Dichlorobenzene-d4
4143872	92	93
4143873	90	91
4143874	91	90
4143875	93	92
Blank	92	90
LCS	102	105
MS	101	106
MSD	102	107
Limits:	80-120	80-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

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Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4153044

SP915 Grab Water Sample
Q4/2003 PEG

Collected:10/23/2003 16:22

Account Number: 11112

Submitted: 10/29/2003 09:15
Reported: 11/06/2003 at 10:12
Discard: 11/06/2004

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

SP915

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
02366	PMI DAI-VOCs by 1671					
02371	diethylamine	109-89-7	N.D.	85.	mg/l	5
02373	triethylamine	121-44-8	N.D.	85.	mg/l	5
	Due to the nature of the sample matrix(dark with sediment), a reduced aliquot was used for analysis. The reporting limits were raised accordingly.					
02394	ISOTOPE DIL GC/MS FOR PMI VOLS					
02396	Isobutyraldehyde	78-84-2	N.D.	100.	ug/l	100
02397	Isopropylether	108-20-3	N.D.	100.	ug/l	100
02398	Isopropyl acetate	108-21-4	N.D.	100.	ug/l	100
02399	4-Methyl-2-pentanone	108-10-1	N.D.	100.	ug/l	100
02401	n-Butyl acetate	123-86-4	N.D.	100.	ug/l	100
02403	n-Amyl acetate	628-63-7	N.D.	100.	ug/l	100
02404	Methyl formate	107-31-3	N.D.	500.	ug/l	100
02409	Hexane	110-54-3	N.D.	100.	ug/l	100
02410	Ethyl acetate	141-78-6	N.D.	100.	ug/l	100
02411	Tetrahydrofuran	109-99-9	N.D.	100.	ug/l	100
02413	Heptane	142-82-5	N.D.	200.	ug/l	100
02415	m+p-Xylene	1330-20-7	N.D.	200.	ug/l	100
02416	o-Xylene	95-47-6	N.D.	100.	ug/l	100
	The reporting limits for all compounds analyzed by EPA method 1666 were raised due to sample foaming. Analysis of the sample at a lower dilution may have caused the sample to foam over into the instrument which would have invalidated the data and caused major instrumental problems.					
03600	Additional Compounds by 524.2					
03608	Acetone	67-64-1	N.D.	300.	ug/l	100
03643	EPA Method 524.2					
03405	Methylene Chloride	75-09-2	N.D.	30.	ug/l	100
03408	Chloroform	67-66-3	N.D.	10.	ug/l	100
03411	Benzene	71-43-2	N.D.	10.	ug/l	100

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2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 4153044

SP915 Grab Water Sample
Q4/2003 PEG

Collected:10/23/2003 16:22

Submitted: 10/29/2003 09:15
Reported: 11/06/2003 at 10:12
Discard: 11/06/2004

Account Number: 11112

Mallinckrodt Inc.
P.O. Box 470158
3600 N. Second Street
St. Louis MO 63147

SP915

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
03412	1,2-Dichloroethane	107-06-2	N.D.	10.	ug/l	100
03416	Toluene	108-88-3	N.D.	10.	ug/l	100
03644	EPA Method 524.2 Cont.					
01000	1,2-Dichlorobenzene	95-50-1	N.D.	10.	ug/l	100
03420	Chlorobenzene	108-90-7	N.D.	10.	ug/l	100

The reporting limits for all compounds analyzed by EPA method 524.2 were raised due to sample foaming. Analysis of the sample at a lower dilution may have caused the sample to foam over into the instrument which would have invalidated the data and caused major instrumental problems.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	10/30/2003 19:35	Lisa A Johnson	5
02366	PMI DAI-VOCs by 1671	EPA Method 1671, rev A	1	10/30/2003 20:01	Lisa A Johnson	5
02394	ISOTOPE DIL GC/MS FOR PMI VOLS	EPA 1666	1	10/29/2003 22:55	Marc S Neal	100
03600	Additional Compounds by 524.2	EPA 524.2 Rev. 4.1	1	10/30/2003 22:14	Ryan V Nolt	100
03643	EPA Method 524.2	EPA 524.2 Rev. 4.1	1	10/30/2003 22:14	Ryan V Nolt	100
03644	EPA Method 524.2 Cont.	EPA 524.2 Rev. 4.1	1	10/30/2003 22:14	Ryan V Nolt	100

MEMBER ACIL

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: Mallinckrodt Inc.
Reported: 11/06/03 at 10:12 AM

Group Number: 872669

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 033030025A	Sample number(s): 4153044-4153045							
diethylamine	N.D.	17.	mg/l	110	110	70-130	0	30
triethylamine	N.D.	17.	mg/l	100	110	68-168	10	30
Batch number: O033011BB	Sample number(s): 4153044-4153045							
Isobutyraldehyde	N.D.	1.00	ug/l	116		63-180		
Isopropylether	N.D.	1.00	ug/l	83		70-129		
Isopropyl acetate	N.D.	1.00	ug/l	94		70-150		
4-Methyl-2-pentanone	N.D.	1.00	ug/l	99		70-165		
n-Butyl acetate	N.D.	1.00	ug/l	87		70-130		
n-Amyl acetate	N.D.	1.00	ug/l	86		70-130		
Methyl formate	N.D.	5.00	ug/l	99		14-171		
Hexane	N.D.	1.00	ug/l	86		70-157		
Ethyl acetate	N.D.	1.00	ug/l	97		57-160		
Tetrahydrofuran	N.D.	1.00	ug/l	96		28-221		
Heptane	N.D.	2.00	ug/l	84		70-164		
m+p-Xylene	N.D.	2.00	ug/l	91		70-130		
o-Xylene	N.D.	1.00	ug/l	85		70-130		
Batch number: S033032AA	Sample number(s): 4153044-4153045							
1,2-Dichlorobenzene	N.D.	0.1	ug/l	95		70-130		
Methylene Chloride	N.D.	0.3	ug/l	97		70-130		
Chloroform	N.D.	0.1	ug/l	97		70-130		
Benzene	N.D.	0.1	ug/l	103		70-130		
1,2-Dichloroethane	N.D.	0.1	ug/l	101		70-130		
Toluene	N.D.	0.1	ug/l	94		70-130		
Chlorobenzene	N.D.	0.1	ug/l	94		70-130		
Acetone	N.D.	3.0	ug/l	103		70-130		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 033030025A	Sample number(s): 4153044-4153045								
diethylamine	0*	0*	70-130	0	30				
triethylamine	0*	0*	68-168	0	30				
Batch number: S033032AA	Sample number(s): 4153044-4153045								
1,2-Dichlorobenzene	106	103	70-130	3	30				
Methylene Chloride	106	102	70-130	4	30				
Chloroform	110	106	70-130	3	30				
Benzene	119	116	70-130	3	30				
1,2-Dichloroethane	109	108	70-130	1	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Quality Control Summary

Client Name: Mallinckrodt Inc.
Reported: 11/06/03 at 10:12 AM

Group Number: 872669

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Toluene	110	107	70-130	2	30				
Chlorobenzene	105	103	70-130	1	30				
Acetone	101	96	70-130	5	30				

Surrogate Quality Control

Analysis Name: PMI DAI-VOCs by 1671
Batch number: 033030025A

	t-butanol	Amyl Alcohol
4153044	100	58
4153045	101	93
Blank	98	112
LCS	95	109
LCSD	97	110
MS	99	116
MSD	109	112
Limits:	50-150	50-150

Analysis Name: Additional Compounds by 524.2
Batch number: S033032AA

	4-Bromofluorobenzene	1,2-Dichlorobenzene-d4
4153044	85	89
4153045	85	85
Blank	88	89
LCS	105	110
MS	105	113
MSD	105	110
Limits:	80-120	80-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

MEMBER ACIL
Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

tyco / Healthcare / Mallinckrodt

Facsimile Communication

To: Mr. Doug Mendoza
Company: MSD
Fax Number: 314-436-8753
Date: 3/25/04

Number of Pages *(including cover sheet)*: 8

- ☐ For your information
- x Please respond
- ☐ Urgent
- ☐ Confidential

Comments:

Dear Mr. Mendoza,

Attached is a summary of permit modifications Mallinckrodt has requested for consideration.

Please call me at 654-1920 if you need any further information.

Thank-you, Karen Siebenberger

Karen Siebenberger

DISCUSSED MY NOTES VIA 3/30/04 PHONECALL. -DMM

Dear Mr. Mendoza, March 25, 2004 FAX

There were several next steps resulting from our meeting on 3/1/04. Following is a summary of Mallinckrodt's requests:

1. Bldg 6 – SP916 modified by carbon treatment. This becomes SP929. MSD has approved the work instruction proposed by Mallinckrodt and the location (see attachments SP929-1 and SP929-2). MSD Inspector, Jason Gill visited the site on 3/18/04
   a. MSD issued the revised pages March 25, 2004.

2. Bldg 222S – creation of SP930 for morphine sulfate production. MSD has approved the sampling procedure and the sample log sheet (see SP930-1,2,and3). MSD Inspector, Jason Gill visited the site on 3/18/04.
   a. It is estimated that Morphine sulfate will be produced one month per quarter and generate approximately 60,000 gallons of process wastewater or approximately 2,000 gpd during the month it is running. This flow on an annualized basis is approximately 650 gpd.
   b. Mallinckrodt will provide results for the all regulated pollutants with the second quarter report. Mallinckrodt then requests monitoring be reduced for pollutants that are neither used or generated in Building 222S. Toluene is the only pollutant that is anticipated to be potentially present. Other regulated parameters would be analyzed for annually to reconfirm their absence.

4/14/04 - only 2.4 failures so will resample within 2 wks. → do right away!

NEED MORE COMPLETE DATA TOO.

Must say others not present per rev. wat. - (see 40 CFR 439.4)

3. Surrogate testing at SP920 – PEG column.
   a. Mallinckrodt requests monitoring of the stripper for the surrogate parameters toluene (high strippability class) and tetrahydrofuran (medium strippability class) as per 40 CFR 439 Table 2.

4. Reduced testing at the building 6/7 sample points - SP915, 928 and 929 – Mallinckrodt requests monitoring requirements be reduced to quarterly for regulated pollutants used or generated in Building 6/7 (toluene and chloroform)or that have been detected above the reporting limit in the past (acetone once for SP916, now to become SP929). Please note the lab used by Mallinckrodt, Lancaster Labs has been using the method detection limit as the reporting limit and not the LOQ.
   a. Other regulated pollutants would be analyzed once annually to reconfirm non-detected status.
   b. Additionally, copies of all MSDS from Bldg 6/7 will be maintained.

5. R&D/Pilot plant discussions. – Mallinckrodt will provide additional details.

4/2/04 - Will send to 439 PE's. - but if not done by end of quarter (6/30), then need to contain.

Thank-you,
Karen Siebenberger

Karen Siebenberger

– Also need methanol stripper/WW treatment sys/CWS info. from 3/1/04 mtg.

6. resolved 5/4/04 - DMM - see memo.

Draft 2/9/04
Work Instruction No.: XX-XXX-XX

Title: Operation of Activated Carbon Units for Sample Point 929

Description:
The 7-4 centrifuge discharges mother liquor to the sewer at approximately 400 gallons per day. The mother liquor and corresponding water rinse contain sufficient amounts of organic contaminants, i.e. toluene to warrant treatment before discarding to the sewer. Two activated carbon units (55 gal ea.) are placed in series at the discharge of the 7-4 centrifuge and are designed to reduce toluene content of the sewer discharge to the required regulatory limit (0.2 ppm monthly average, 0.3 ppm daily max). The effluent from the carbon unit will be sampled and tested on a regular basis to insure that the system is operating as designed.

Sampling:
Change out frequency for the carbon units will be based on routine testing. The manufacturer of the carbon unit states that it should last at least 6 months given the toluene loading in the SP929 waste stream. Mallinckrodt will monitor at valve 20 which is after the first carbon bed, but before the second carbon unit to determine when to change out the carbon units. The monitoring results at valve 20 will be recorded in the SP929 Logbook. Initially the testing frequency will be once per month for the first six months and then will be scaled back to quarterly if data shows effective removal of toluene. Once the toluene level reaches 0.1 ppm (50% of the monthly average max.) as measured at sample pt. 20, carbon unit 1 will be removed from the system. Carbon unit 2 will then be moved to the "primary" position. A new carbon unit will be placed in the "secondary" position.

1. At the scheduled sampling time obtain a waste water sample from point 20.
2. Collect the sample in a 250 ml bottle and label with Time, Date, Lot Number, Operator Clock Number.
3. Record the Date, Time, and Lot Number in the SP929 Logbook.
4. Give the sample to the Facilitator who in turn will notify the HSE Engineer or Process Engineer that the sample is ready to be sent out for testing.
5. Once results are received initiate the following actions based on the results.
    a. If the toluene concentration is less that 0.1ppm, take no action.
    b. If the toluene concentration is greater than 0.1 ppm then execute the drum replacement procedure outlined in the "Carbon Unit Installation" section.

Note: Drain valves 18 and 26 are to remain closed unless draining for unit replacement is taking place. The valves are to be locked in the closed position while not it use.

The final discharge at SP929 (after passing through both carbon units) will be tested once every three months to demonstrate compliance.

Carbon Unit Operation:

1. Open valves 1, 29.
2. Make sure valves 4, 8, 18, 20, 26, and 28 are closed.
3. Begin filling sump and start pumps 3, and 30.
4. Monitor flow rate at points 11 and 33. Flow rate should not exceed 10 gpm.
5. Monitor pressure at points 12 and 21. Pressure should not exceed 10 psi.
6. Monitor sump level throughout processing the batch, be careful not to overflow sump.
7. When batch is complete (including water rinse) shut off pumps 3 and 30.
8. Close valves 1, 29.

Draft 2/9/04

Note: The mother liquor from processing Recovery Hydrocodone Alkaloid should not be sent through the carbon units. This stream should be pumped to drums and sent to PEG. Use the bypass at points 4 and 5 to drum out the mother liquor and water rinse.

Note: Valves 32 and 6 have been set to achieve a specific flowrate for the system and should remain open at all times.

Carbon Unit Installation:

Once a carbon unit is determined to spent per the sampling procedure it will need to be removed from the system. Follow the instructions below for replacing the carbon units. Physical removal/installation of the drums is to be performed by maintenance.

Back flushing

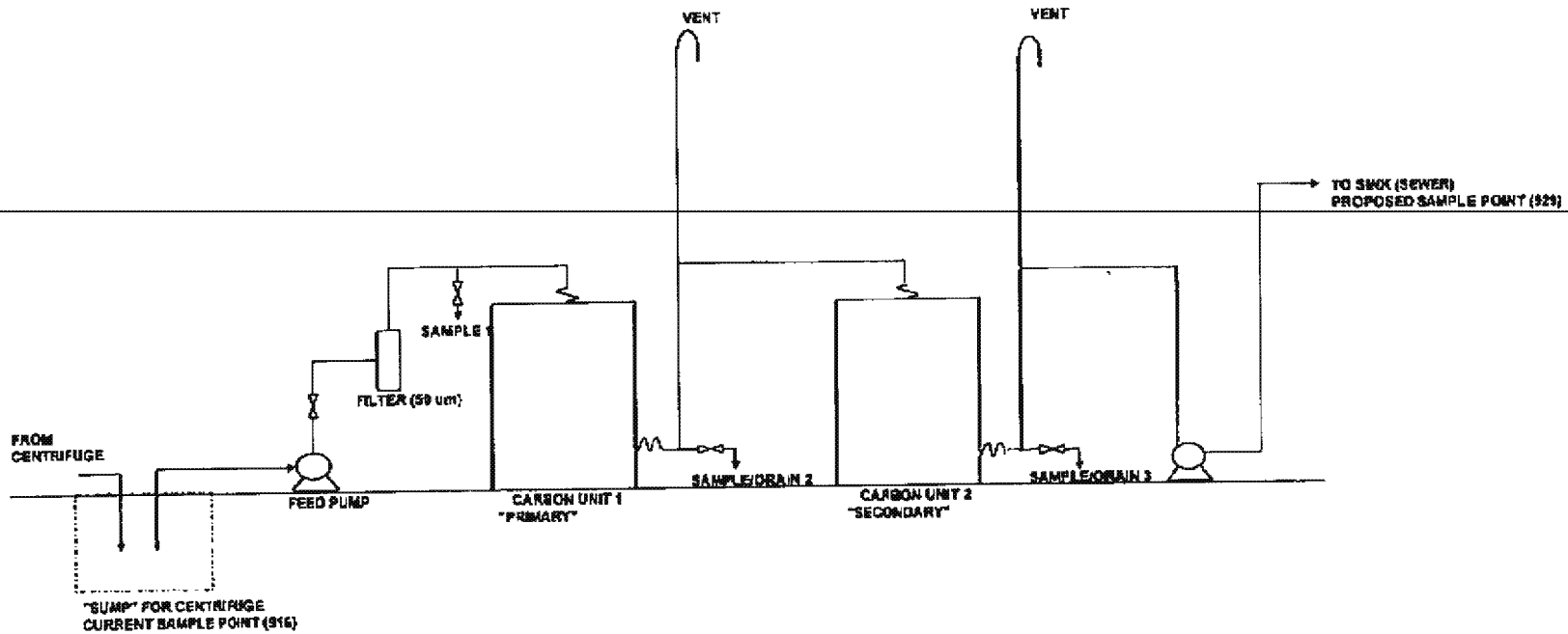
1. Open valves 1, 29.
2. Make sure valves 4, 8, 18, 20, 26, and 28 are closed.
3. Begin filling sump with clean water and start pumps 3, and 30.
4. Monitor flow rate at points 11 and 33. Flow rate should not exceed 10 gpm.
5. Monitor pressure at points 12 and 21. Pressure should not exceed 10 psi.
6. Monitor sump level throughout flushing, add clean water as needed.
7. After flushing the drums for 20 minutes, shut off pumps 3 and 30.
8. Close valves 1, 29.

Draining (Steps 1, 2, 3, 6, 7 are Maintenance Tasks)

1. Disconnect the hose at point 13.
2. Connect a hose to point 19 and place the outlet of the hose into the sump.
3. Connect a hose to point 5 and place the outlet of the hose into an empty 55 gal drum.
4. Open valves 4, 18 and start pump 3.
5. Continue to drain the carbon unit and pump out of the sump into the 55 gal drum until the sump is empty. The contents of the 55 gal drum should be pumped to the PEG system.
6. Once the primary drum is empty, remove it from the system and replace it with the secondary drum.
7. Install a new drum in the secondary position. The drums are now ready for operation.

S1'929-2

DIAGRAM FOR CARBON UNIT INSTALLATION AT SAMPLE POINT 929



SAMPLING/CHANGEOUT PROCEDURE

-CHANGE OUT FREQUENCY FOR THE CARBON UNITS WILL BE BASED ON ROUTINE TESTING (Monthly for the 1st six months, then quarterly if <half the limit) AT SAMPLE PT. 2

-ONCE THE TOLUENE LEVEL REACHES 0.1 PPM (50% OF MTHLY AVG MAX) AS MEASURED AT SAMPLE PT 2, CARBON UNIT 1 WILL BE REMOVED FROM THE SYSTEM. CARBON UNIT 2 WILL THEN BE MOVED TO THE "PRIMARY" POSITION. A NEW CARBON UNIT WILL THEN BE PLACED IN THE "SECONDARY" POSITION.

REMOVAL RATES QUOTED FROM THE CARBON UNIT MANUFACTURE (CALGON) INDICATE TOLUENE CONTENT REDUCED TO < 5 PPB, GIVEN INPUT CONCENTRATION OF 4 PPM THIS RATE APPLIES TO ONE CARBON UNIT. A SECONDARY UNIT HAS BEEN ADDED TO PROVIDE FURTHER PROTECTION. IN ADDITION, THE CHANGE OUT FREQUENCY IS DESIGNED SUCH THAT THE SECONDARY UNIT IS ALWAYS THE FRESHER OF THE TWO UNITS WHICH FURTHER REDUCES THE PROBABILITY OF FAILURE

SP930 -1

Building 222S Sampling Log Sheet
(to be kept on file with the Quarterly reports)

Sample Point Number: _____

Date: _____ **Time:** _____

Sample ID:_____

Location: Sample port inside Building 222S in NW corner identified by tag "SP930".

Sampler (HSE or process engineer):_____

Sampling conditions: The process engineer will verify that the wastewater discharge (including sump conditions) sampled is solely pharmaceutical process wastewater and not mixed with non contact cooling water or other discharges.

Describe process discharge and sump conditions:_____
_____
_____
___

Sample (describe color, solids, foam etc):_____

Sample collection: Fill 9 x 40mL glass screw cap VOA vials with teflon lined silicone septa by the following steps:

1. Open the sample line and allow to flush for one minute.
2. Gently introduce the liquids into the vials, reducing any agitation which may drive off volatile compounds. Fill the vials completely, so that when the septum cap is fitted and sealed and the vial inverted, no headspace is visible.
3. Cool and store samples to 4 degrees C until analysis.
4. Note: VOA vials should not be filled near a running motor or any type of exhaust fumes.

Revised 3-17-2004

SP930-2

Tyco Healthcare/ Mallinckrodt
Building 222S
Wastewater Sampling Procedure

Background: Manufacturing a product subject to the Pharmaceutical Effluent Guidelines (PEG) under the Clean Water Act requires wastewaters compliance demonstration. A sample point must be identified where all process wastewaters discharge. Samples must be collected and analyzed to demonstrate compliance with the PEG limits.

Reason for Change: The product that is transferred from Bldg 235 to Bldg 222S is subject to the PEG limits.

Change Request Date: March 17, 2004

General Process Wastewater Flow:
Wastewaters are discharged from process tanks in Bldg 222S into the floor sump. The floor sump is located on the southeast corner of the building and is designated as "A" in the attached drawing. The sump pump pumps the wastewater overhead to the sample point designated as "B" in the attached drawing.

The process tanks have the capability of cooling or heating the contents in the tank. This is done by using tower water or by steam in the tank jackets. The non-contact wastewaters are manually discharged to the sump, designated as "A" in the attached drawing. The sump pump pumps the wastewater overhead to the sample point designated as "B" in the attached drawing.

Sampling Protocol:

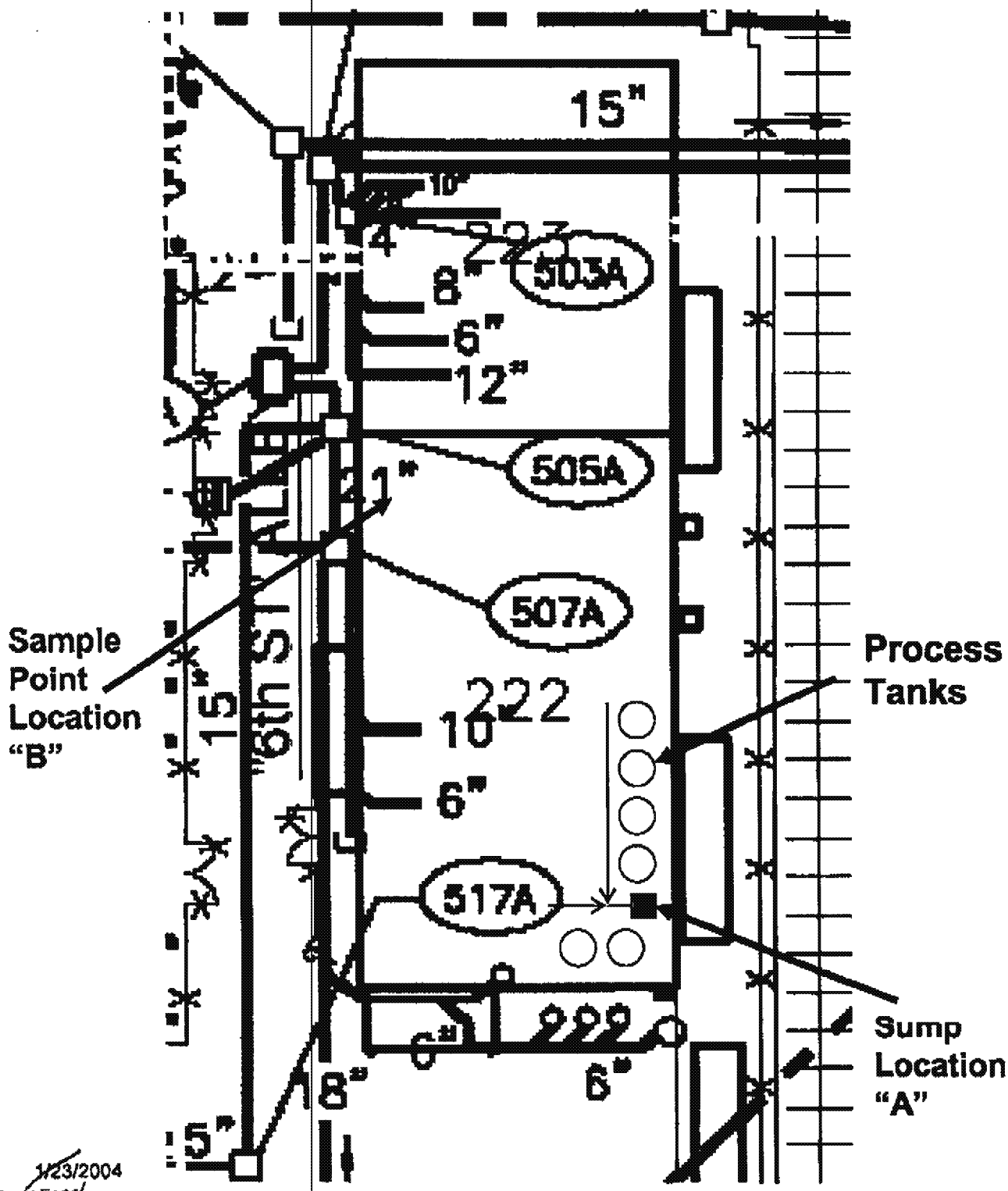
1. Before any sampling occurs, the HSE Field Engineer will notify the Bldg 222S Process Engineer of the sampling event. If the Process Engineer is not available, the HSE will notify the Bldg 222S Supervisor.
2. Since both process wastewater and non-contact cooling waters discharge to the same sample point, the Process Engineer will verify that only process wastewaters are being discharged during the collection of the sample. There will be no Non-Contact wastewaters being discharged at the time of sample collection.
3. Wastewater samples will be collected a sample port inside of Bldg 222S near the NW corner. The sample point will be labeled as SP930. The HSE Engineer or designee will collect the wastewater sample according to the PEG sampling requirements.
4. Sample collection, handling, shipping and testing will comply with the established PEG requirements.

B.Hoffmeister
S:\HSE\Sitewide\Drug Chemicals\Bldg 222\Wastewater\222S PEG Sampling Procedure.doc
Revised 3-17-2004

SP930 -3

Tyco Healthcare/Mallinckrodt

3600 N. Second Street
St. Louis, MO 63147



1/23/2004
Revised 3-17-04

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt Industrial File - 3600 N. Second St.

FROM: Doug Mendoza DW

DATE: March 24, 2004

RE: Meeting to discuss permit/operational changes wanted by Mallinckrodt

---

On 3/1/04, I met with Karen Siebenberger of Mallinckrodt. This was a follow up to earlier meetings. We discussed the attached items.

Notes regarding the 9 items are listed below, and include my follow up research on the items too:

1. Okay to change sample point 916 to 929. Jason Gill will need to verify new SP and get description. I then will give okay to self-monitor at 929, with permit modification retroactive to date of my letter.

2. Mallinckrodt needs to resubmit sampling procedure to include phrase "including all sump contents." Then we can add new 930. Jason Gill will need to verify new SP and get description. 918 will stay, since other materials may flow through it. They also will need to submit a written request to sample pollutants annually (but keep toluene quarterly).

3. MSD agrees that bldg 222/223's products can remain excluded from 40 CFR 439, since less than 50% have an end use as pharmaceutical products.

4, 5 & 6. Mallinckrodt wants to reduce sampling to annually for those pollutants that are not present and haven't been detected in prior sampling - for 915, 916/929 and 928. All are in bldg 6/7. Problem occurred when reviewing data sheets. A number of pollutants were detected in the past that Mallinckrodt wishes to reduce. Mallinckrodt will check with lab on these (were they lab problems?). Also some pollutants were marked with "J" with a note that they were "less than reporting limit." I explained that while these were "not quantifiable," the "J" still means that they were detected - just below the quantification level. However, later research on my part showed that 40 CFR 439 defines non-detect as below the minimum level, and defines minimum level as the level at which an analytical system gives recognizable signals and an acceptable calibration point. Recognizable signals is the MDL, but adding the acceptable calibration point raises non-detect to mean the practical quantification limit. So the "J" results may be considered non-detect. Mallinckrodt will check with the lab to see just how they define "J" and "reporting limit."

Karen then tried to have each sample point treated separately for reduced sampling. In the 2/4/03 meeting, it was presented as bldg 6/7 would be considered a "facility" for reduced monitoring - since it was a distinct bldg, and materials etc. move around in it. Later research by me, including previous correspondence relating to "facility" definition with EPA, supports MSD's position. Mallinckrodt agreed, and bldg 6/7 in its entirety will be considered a facility.

7. At 920, the steam stripper sample point, Mallinckrodt wishes to use toluene and tetrahydrofuran for surrogate pollutants, as allowed under 40 CFR 439. This is acceptable to MSD, and Mallinckrodt will submit a request.

8. MSD agrees that bldg 96/98 peptides third rinse and beyond can be discharged (not considered pharmaceutical). Main waste and first two rinses are drummed and hauled away. For lab 202 in bldg 250, there was a question of if the saleable products should be considered regulated by 40 CFR 439. It's a "research lab," located within a research facility discharging low volumes. I checked with EPA (Paul Marshall, Region VII Pretreatment Coordinator) for his thoughts. He said what mattered is the lab's purpose. If the purpose is to sell material, then it's not R&D and is regulated. If the purpose is research/pilot plant, and they just happen to produce material that can be sold, then it's not regulated. (See attached e-mail.) So Mallinckrodt will provide me with more details. Karen from Mallinckrodt told me on the phone that she thought the work started as R&D, but then stayed there with products for sale after the R&D part was done.

9. Methanol stripper column for NESHAP - Mallinckrodt would like to reroute some pharmaceutical wastewater to this stripper that currently goes to 920 (approx. 1000 GPD added to the 10,000 GPD non-pharmaceutical wastewater that already goes there). Mallinckrodt thinks that all would be under 40 CFR 439, since its a wastewater treatment system. I don't see how that matters, and the combined wastestream rule would apply - which would reduce the limits greatly and could cause problems getting detection limits low enough. Mallinckrodt will produce supporting info (or it's going to go with the CWF).

MALLINCKRODT CHEMICAL

3/1/04

From the desk of...
Karen Siebenberger
Bldg. Z-1
Ext. 1920

Summary of Requested Changes

1. SP916 modified to SP929
2. New sample point (SP930?) at Bldg 222 for Morphine Sulfate prdcn (annual verification?)
3. No other products in Bldg 222/223
4. Reduced testing SP915
5. Reduced testing SP928
6. Reduced testing SP929
8. R+D discussions
9. Methanol column discussions.
7. Surrogate testing at SP920

Tyco Healthcare/ Mallinckrodt
Building 222S
Wastewater Sampling Procedure

Background: Manufacturing a product subject to the Pharmaceutical Effluent Guidelines (PEG) under the Clean Water Act requires wastewaters compliance demonstration. A sample point must be identified where all process wastewaters discharge. Samples must be collected and analyzed to demonstrate compliance with the PEG limits.

Reason for Change: The product that is transferred from Bldg 235 to Bldg 222S is subject to the PEG limits.

Change Request Date: January 23, 2004

General Process Wastewater Flow:
Wastewaters are discharged from process tanks in Bldg 222S into the floor sump. The floor sump is located on the southeast corner of the building and is designated as "A" in the attached drawing. The sump pump pumps the wastewater overhead to the sample point designated as "B" in the attached drawing.

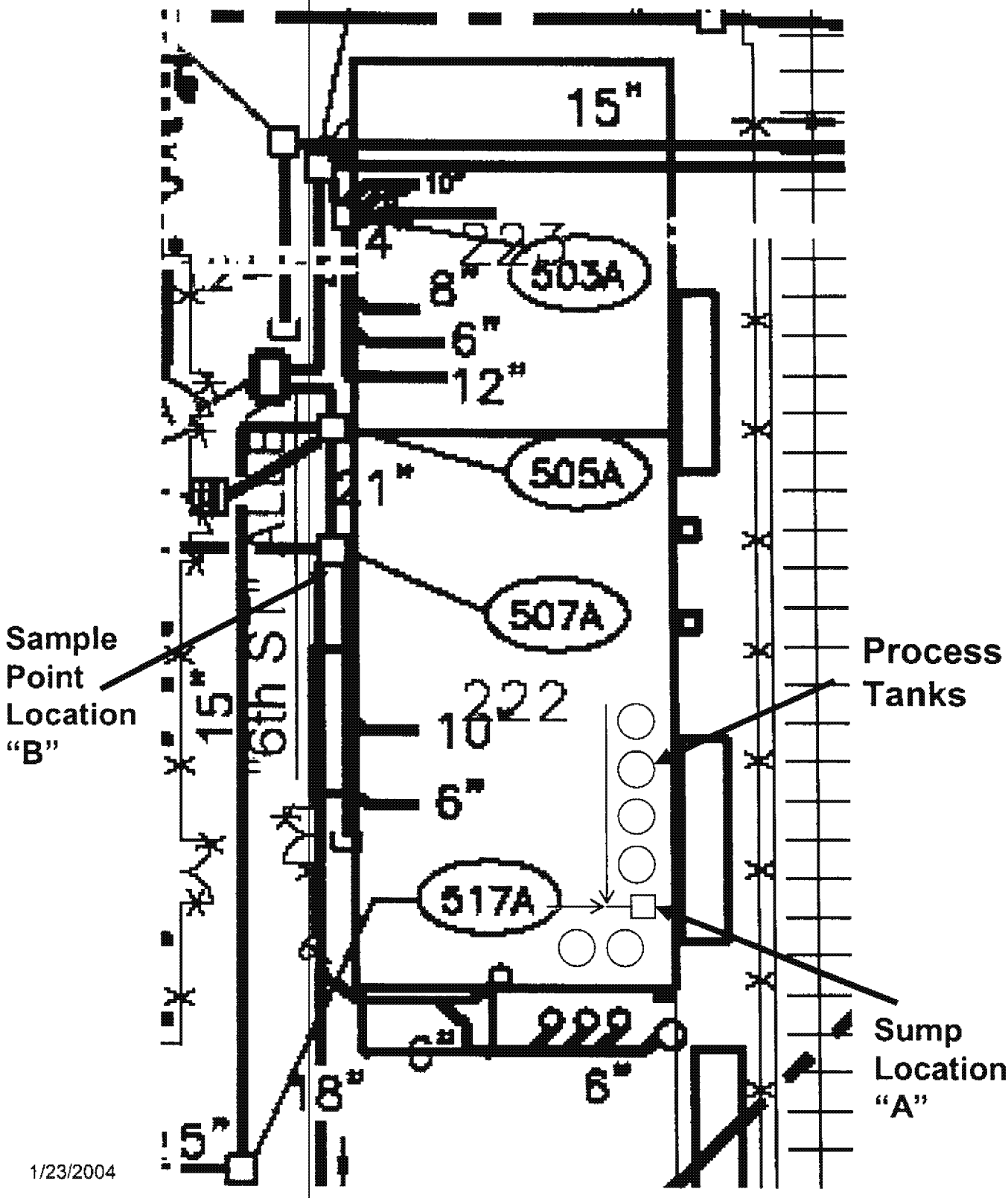
The process tanks have the capability of cooling or heating the contents in the tank. This is done by using tower water or by steam in the tank jackets. The non-contact wastewaters are manually discharged to the sump, designated as "A" in the attached drawing. The sump pump pumps the wastewater overhead to the sample point designated as "B" in the attached drawing.

Sampling Protocol:

1. Before any sampling occurs, the HSE Field Engineer will notify the Bldg 222S Process Engineer of the sampling event. If the Process Engineer is not available, the HSE will notify the Bldg 222S Supervisor.
2. Since both process wastewater and non-contact cooling waters discharge to the same sample point, the Process Engineer will verify that only process wastewaters are being discharged during the collection of the sample. There will be no Non-Contact wastewaters being discharged at the time of sample collection.
3. Wastewater samples will be collected at the discharge pipe north of Bldg 222S MCC room. The sample can be obtained by opening the screw plug in the pipe that is penetrating through the Bldg 222S west wall and discharging into the sewer. Note: The sample point will be labeled. MSD will issue a number to identify the sample point.
4. The HSE Engineer or designee will collect the wastewater sample according to the PEG sampling requirements.
5. Sample collection, handling, shipping and testing will comply with the established PEG requirements.

Tyco Healthcare/Mallinckrodt

3600 N. Second Street
St. Louis, MO 63147



1/23/2004

222S – establishment of new PEG sampling point

Issue – Process (morphine sulfate) transferred from Building 235 (SP918 or hooked to central stripper SP920). Building 222 has no PEG discharge monitoring point.

Mallinckrodt has submitted testing data showing toluene at very low levels (0.007 mg/L), a diagram indicating process area and proposed sample location – pipe at end of trench and a process wastewater sampling plan to sample the process effluent exclusively. Rationale as follows:

439.1 (d) – the term in plant monitoring point means a location within a plant, where an individual process effluent can be exclusively monitored before it is diluted or mixed with other process wastewaters enroute to the end of pipe.

Most of Mallinckrodt's processing buildings are batch operations and not continuous dedicated processes. In these manufacturing buildings, equipment – tanks, centrifuges, piping, hoses and wastewater collection systems (trenches, pipes or tanks) may be used for many different process liquors or wastewaters including process wastewaters or non contact cooling waters. In order to ensure the integrity of the sample, be it product, intermediate, waste or wastewater, Mallinckrodt controls the sampling procedure through various means. For building 222S, Mallinckrodt will use the following controls – a wastewater sampling plan where the process engineer is responsible for ensuring the wastewater sample is not mixed with other non contact waters or process liquors at the time of discharge. Mallinckrodt has provided a proposed work instruction for this sampling. While it is not feasible to designate a dedicated process wastewater collection system, Mallinckrodt will place controls to obtain a representative sample.

2/24/04 Update

The attached sample log sheet will be completed by the either the building process engineer or HSE engineer to ensure the wastewater discharge sampled is solely Morphine Sulfate process wastewater.

Annual Verification

Building 222S Sampling Log Sheet
(to be kept on file with the Quarterly reports)

Sample Point Number: _____

Date: _____ **Time:** _____

Sample ID: _____

Location: Screw plug in pipe exiting the Bldg 222S west wall and discharging to the sewer.

Sampler (HSE or process engineer): _____

INCLUDING ALL SUMP CONTENTS

Sampling conditions: The process engineer will verify that the wastewater discharge sampled is solely pharmaceutical process wastewater and not mixed with non contact cooling water or other discharges.

Describe process discharge: _____

Sample (describe color, solids, foam etc): _____

Sample collection: Fill 9 x 40mL glass screw cap VOA vials with teflon lined silicone septa by the following steps:

1. Open the sample line and allow to flush for one minute.
2. Gently introduce the liquids into the vials, reducing any agitation which may drive off volatile compounds. Fill the vials completely, so that when the septum cap is fitted and sealed and the vial inverted, no headspace is visible.
3. Cool and store samples to 4 degrees C until analysis.
4. Note: VOA vials should not be filled near a running motor or any type of exhaust fumes.

(3)

Mallinckrodt Meeting

RE: Review of PEG applicability to Building 222/223
Permit No. 21120596-00

In January, Mallinckrodt sent a request to MSD to establish a pharmaceutical monitoring point at Building 222S for the discharge of a pharmaceutical wastewater from a newly transferred product, Morphine Sulfate. This issue is being followed up under separate correspondence.

At our meeting on February 3rd, I wanted to review the applicability of PEG to the other products manufactured in Building 222/223. I reviewed the products manufactured at the time of the Baseline Monitoring Report and development of the PEG treatment options (See Table 1). These products are all inorganic products included under SIC 2819 and manufactured under standard acid/base chemistries, with no use of any PEG pollutants. Mallinckrodt's Treatment Plan for PEG compliance submitted to MSD in October, 1999 indicated no control required due to the absence of regulated pollutants in the building.

It was agreed that I would do further data collection to support the exclusion of Building 222/223 products from PEG monitoring requirements based on final product use.

Data collected from marketing indicates there are multiple end-uses of the products. While the majority are sold to the pharmaceutical industry, only 35% are as the pharmaceutically active ingredient.

In summary:

- The products are inorganic chemicals in SIC 2819 ,and
- no organic chemistry or solvents used, and
- 65% not active pharmaceutical ingredients

The table 1 Bldg 222/223 process wastewaters should remain non-regulated discharges.

✓ MSD agrees -DMM

Table 1

Bismuth Subcarbonate	Potassium Phosphate	Sodium Acetate
Bismuth Subnitrate	Potassium Iodide	Sodium Thiosulfate
Bismuth Trioxide	Potassium Chloride	Sodium Phosphate
Magnesium citrate	Ferric Subsulfate	Sodium Sulfate
Manganese Nitrate	Zinc Sulfate	

Mallinckrodt 2/24/04

(4)(5)(6)

Request for reduced testing for SP915, SP916 (changing to SP929) and SP928

Mallinckrodt is requesting MSD allow the above mentioned sample locations perform reduced (annual as opposed to quarterly) monitoring PEG parameters listed in Building 6/7 No Use/NonDetect table. These pollutants have not been detected in the 9 quarters monitored (data attached). Additionally, Mallinckrodt has reviewed the 60+ MSDS' for all raw materials used in the building to ensure that none of requested reduced testing parameters are ingredients in any of the raw materials used in Building 6/7.

Mallinckrodt will continue quarterly monitoring at the sample points, but will only request one analytical method (as opposed to the three methods currently required for testing the entire list. The method 524.2 analysis will capture all the PEG pollutants used in the building.

Building 6/7 has a dedicated list of products and not subject to change.

From: PAUL MARSHALL <MARSHALL.PAUL@epamail.epa.gov>
To: HMPTN.BP(DMMEND)
Date: 2/17/99 3:46pm
Subject: DEFINITION OF "FACILITY" UNDER PHARMACEUTICAL RULE (40 CFR 439) -Reply

I would say that the term "facility" applies only to regulated processes covered by the respective standard. If the pollutant is sufficiently regualted under another standard I don't see that the pharmaceutical regs (439) need to be espanded to cover pesticide (455) processes.

- This actually would mean all 439 processes at Mallinckrodt's entire site.

- But I would use BPJ to say bldg 6/7 by itself is okay (but not individual processes within 6/7).

→ 3/5/04 - Discussed w/Karen Mallinckrodt → she agrees.

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From: DOUG MENDOZA
To: internet:marshall.paul@epamail.epa.gov
Date: 2/17/99 2:26pm
Subject: DEFINITION OF "FACILITY" UNDER PHARMACEUTICAL RULE (40 CFR 439)

Paul,

We have an industry (maybe more) that is subject to 40 CFR 439 part D and 40 CFR 455. They do not use any of the 439 regulated pollutants in their pharmaceutical processes, but they do use methylene chloride in the 455 process (it is not discharged).

The company would like to use the certification option under 40 CFR 439.4 to say they don't use regulated pollutants. However, the rule says "neither used nor generated at the **facility**.

My question is: what would we consider the facility? Is it the entire site, or can we use judgement to see if we think operations are sufficiently separated (ie. in separate buildings, etc)?

Please let me know!

Doug Mendoza

§ 439.4 Monitoring requirements.

Permit limits and compliance monitoring are required for each regulated pollutant generated or used at a pharmaceutical manufacturing facility, except where the regulated pollutant is monitored as a surrogate parameter. Permit limits and compliance monitoring are not required for regulated pollutants that are neither used nor generated at the facility. Except for cyanide, for which an alternate monitoring requirement is established in subparts A and C of this part a determination that regulated pollutants are neither used nor generated should be based on a review of all raw materials in use, and an assessment of the process chemistry, products and by-products resulting from each of the manufacturing processes. This determination along with recommendation of any surrogate must be submitted with permit applications for approval by the permitting authority, and reconfirmed by an annual chemical analysis of wastewater from each monitoring location, and the measurement of a non-detect value for each regulated pollutant or its surrogate. Permits shall specify that such determinations will be maintained in the facility's permit records with their discharge monitoring reports and will be available to regulatory authorities upon request.

[63 FR 50425, Sept. 21, 1998]

Subpart A—Fermentation Products Subcategory

§ 439.10 Applicability.

This subpart applies to discharges of process wastewater resulting from the manufacture of pharmaceutical products by fermentation.

[63 FR 50426, Sept. 21, 1998]

§ 439.11 Specialized definitions.

For the purpose of this subpart:

(a) The term *fermentation* means process operations that utilize a chemical change induced by a living organism or enzyme, specifically, bacteria, or the microorganisms occurring in unicellular plants such as yeast, molds, or fungi to produce a specified product.

(b) The term *product* means pharmaceutical products derived from fermentation processes.

[63 FR 50426, Sept. 21, 1998]

§ 439.12 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the application of BPT:

(a) The average monthly effluent limitation for BOD_5, expressed as mass loading (pounds, kilograms) per day, must reflect not less than 90 percent reduction in the long-term average daily BOD_5 load of the raw (untreated) process wastewater, multiplied by a variability factor of 3.0.

(1) The long-term average daily BOD_5 load of the raw process wastewater (i.e., the base number to which the percent reduction is applied) is defined as the average daily BOD_5 load during any calendar month, over 12 consecutive months within the most recent 36 months, and must include one or more periods during which production was at a maximum.

(2) To assure equity in the determination of NPDES permit limitations regulating discharges subject to this subpart, calculation of the long-term average daily BOD_5 load in the influent to the wastewater treatment system must exclude any portion of the load associated with separable mycelia and solvents, except for residual amounts of mycelia and solvents remaining after the practices of recovery and/or separate disposal or reuse. These residual amounts may be included in the calculation of the average influent BOD_5 loading.

(3) The practices of recovery, and/or separate disposal or reuse include: physical separation and removal of separable mycelia; recovery of solvents from waste streams; incineration of concentrated solvent wastestreams (including tar still bottoms); and concentration of broth for disposal other than to the treatment system. This part does not prohibit the inclusion of such wastes in raw waste loads in fact, nor does it mandate any specific practice, but rather describes the rationale for determining NPDES permit limitations. The effluent limitation for BOD_5 may be achieved by any of several, or a combination, of these practices.

(b) The average monthly effluent limitation for TSS, expressed as mass loading (pounds, kilograms) per day, must be calculated as 1.7 times the BOD_5 limitation determined in paragraph (a) of this section.

(c) Except as provided in paragraph (d) of this section, the effluent limitations for COD and pH are as follows:

Regulated parameter	Effluent limitation [1]	
	Maximum daily discharge	Average monthly discharge must not exceed
COD	1675	856
pH	(2)	(2)

[1] Mg/L (ppm).
[2] Within the range 6.0 to 9.0.

(d) If the average monthly COD concentrations in paragraph (c) of this section are higher than concentration values reflecting a reduction in the long-term average daily COD load in the raw (untreated) process wastewater of 74 percent multiplied by a variability factor of 2.2, then the average monthly effluent limitations for COD corresponding to the lower concentration values must be applied.

(e) The effluent limitations for cyanide are as follows:

Regulated parameter	Effluent limitation [1]	
	Maximum daily discharge	Average monthly discharge must not exceed
Cyanide (T)	33.5	9.4

[1] Mg/L (ppm).

(f) When monitoring for cyanide at the end-of-pipe is impractical because of dilution by other process wastewaters, compliance with the cyanide effluent limitations in paragraph (e) of this section must be demonstrated at in-plant monitoring points pursuant to 40 CFR 122.44(i) and 122.45(h). Under the same provisions, the permitting authority may impose monitoring requirements on internal wastestreams for any other parameter(s) regulated by this section.

(g) Compliance with the limitation in paragraph (e) or (f) of this section may be achieved by certifying to the permit issuing authority that the facility's manufacturing processes neither use nor generate cyanide.

[63 FR 50426, Sept. 21, 1998]

§ 439.13 Effluent limitations attainable by the application of the best conventional pollutant control technology (BCT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the application of BCT: Limitations for BOD_5, TSS and pH are the same as the corresponding limitations in § 439.12.

[63 FR 50426, Sept. 21, 1998]

§ 439.14 Effluent limitations attainable by the application of best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the application of BAT:

	Regulated parameter	Effluent limitations [1]	
		Maximum daily discharge	Average monthly discharge must not exceed
1	Ammonia (as N)	84.1	29.4
2	Acetone	0.5	0.2
3	4-Methyl-2-pentanone (MIBK)	0.5	0.2
4	Isobutyraldehyde	1.2	0.5
5	n-Amyl acetate	1.3	0.5
6	n-Butyl acetate	1.3	0.5
7	Ethyl acetate	1.3	0.5
8	Isopropyl acetate	1.3	0.5
9	Methyl formate	1.3	0.5
10	Amyl alcohol	10.0	4.1
11	Ethanol	10.0	4.1

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Water Act and the regulations thereunder (i.e., biochemical oxygen demand (BOD_5), total suspended solids (TSS), oil and grease, fecal coliform and pH).

CWA—Clean Water Act. The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251 *et seq.*), as amended, *inter alia*, by the Clean Water Act of 1977 (Pub. L. 95–217) and the Water Quality Act of 1987 (Pub. L. 100–4).

Daily discharge—The discharge of a pollutant measured during any calendar day or any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Direct discharger—A facility that discharges or may discharge treated or untreated process wastewaters, non-contact cooling waters, or non-process wastewaters (including stormwater runoff) into waters of the United States.

Effluent—Wastewater discharges.

Effluent limitation—Any restriction, including schedules of compliance, established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

Emission—Passage of air pollutants into the atmosphere via a gas stream or other means.

EOP effluent—Final plant effluent discharged to waters of the United States or to a POTW.

EOP treatment—End-of-pipe treatment facilities or systems used to treat process wastewaters, non-process wastewaters (including stormwater runoff) after the wastewaters have left the process area of the facility and prior to discharge. End-of-pipe treatment generally does not include facilities or systems where products or by-products are separated from process wastewaters and returned to the process or directed to air emission control devices.

EPA—The U.S. Environmental Protection Agency.

General Provisions—General Provisions for national emission standards for hazardous air pollutants and other regulatory requirements pursuant to section 112 of the Clean Air Act, as amended November 15, 1990. The General Provisions, located in subpart A of part 63 of title 40 of the Code of Federal Regulations, codify procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the 189 chemicals listed as hazardous air pollutants in section 112(b) of the Clean Air Act as amended in 1990. EPA published the NESHAP General Provisions in the **Federal Register** on March 16, 1993 (59 FR 12408). The term General Provisions also refers to the General Provisions for the effluent limitations guidelines and standards proposed today, to be located at 40 CFR part 439.

Fermentation—A chemical change induced by a living organism or enzyme, specifically bacteria or the microorganisms occurring in unicellular plants such as yeast, molds, or fungi. Process operations that utilize fermentation to manufacture pharmaceutically active ingredients define subcategory A (40 CFR Part 439, subpart A).

HAP—Hazardous Air Pollutant. Any of the 189 chemicals listed under section 112(b) of the Clean Air Act.

HON—Hazardous Organic NESHAP. As used in this document, it refers to the standard published by EPA for the Synthetic Organic Chemical Manufacturing Industry (SOCMI) on April 22, 1994 (59 FR 19402).

Incinerator—An enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas.

Indirect discharger—A facility that discharges or may discharge wastewaters into a publicly owned treatment works.

In-plant Control Technologies—These include controls or measures applied within the manufacturing process to reduce or eliminate pollutant and hydraulic loadings; these also include technologies, such as steam stripping and cyanide destruction, applied directly to wastewater generated by manufacturing processes.

IU—Industrial User. Synonym for "Indirect Discharger."

Junction box—A manhole access point to a wastewater sewer system or a lift station.

LTA—Long-term average. For purposes of proposed effluent limitations guidelines and standards, average pollutant levels achieved over a period of time by a plant, subcategory, or technology option. LTAs were used in developing the limitations and standards in today's proposed regulation.

MACT—Maximum Achievable Control Technology. Technology basis for the national emission standards for hazardous air pollutants.

Major source—As defined in section 112(a) of the Clean Air Act, major source is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

Maximum daily discharge limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling.

Mg—Megagram. One million (10^6) grams, or one metric ton.

Metric ton—One thousand (10^3) kilograms (abbreviated as kkg), or one megagram. A metric ton is equal to 2,204.5 pounds.

Minimum level—The level at which an analytical system gives recognizable signals and an acceptable calibration point.

Mixing/Compounding/Formulating—Processes through which pharmaceutically active ingredients are put in dosage forms. Processes involving mixing/compounding/formulating define subcategory D (40 CFR part 439, subpart D).

NESHAP—National Emission Standard for Hazardous Air Pollutants. Emission standard promulgated that has been or will be promulgated under section 112(d) of the Clean Air Act for hazardous air pollutants listed in section 112(b) of the Clean Air Act.

New Source—As defined in 40 CFR 122.2, 122.29, and 403.3(k), a new source is any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced (1) for purposes of compliance with New Source Performance Standards, after the promulgation of such standards being proposed today under CWA section 306; or (2) for the purposes of compliance with Pretreatment Standards for New Sources, after the publication of proposed standards under CWA section 307(c), if such standards are thereafter promulgated in accordance with that section.

Nitrification—Nitrification is the oxidation of ammonium salts to nitrites (via nitrosomonas bacteria) and the further oxidation of nitrite to nitrate via nitrobacter bacteria. Nitrification can be accomplished in either a single or two-stage activated sludge system. Indicators of nitrification capability are (1) biological monitoring for ammonia oxidizing bacteria (AOB) and nitrite oxidizing bacteria (NOB) to determine if nitrification is occurring, and (2) analysis of the nitrogen balance to determine if nitrifying bacteria reduce the amount of ammonia and increase the amount of nitrite and nitrate.

Nonconventional pollutants—Pollutants that are neither conventional pollutants nor toxic pollutants.

Non-detect value—A concentration-based measurement reported below the minimum level that can reliably be measured by the analytical method for the pollutant.

Non-water quality environmental impact—An environmental impact of a control or treatment technology, other than to surface waters.

NPDES—The National Pollutant Discharge Elimination System authorized under section 402 of the CWA. The Clean Water Act requires NPDES permits for discharge of pollutants from any point source into waters of the United States.

NRDC—Natural Resources Defense Council.

NSPS—New Source Performance Standards. As used in this notice, this term refers to standards for new sources under section 306 of the CWA.

OMB—Office of Management and Budget.

Outfall—The mouth of conduit drains and other conduits from which a plant discharges effluent into receiving waters.

Pharmaceutically active ingredient—Any substance considered to be an active ingredient by Food and Drug Administration regulations (21 CFR 210.3(6)(7)).

Pilot-scale operation—The trial operation of processing equipment, which is the intermediate stage between laboratory experimentation and full-scale operation in the development of a new process or product.

(a) The general definitions, abbreviations and methods of analysis in 40 CFR part 401 shall apply.

(b) The term *bench-scale operation* means the laboratory testing of materials, methods, or processes on a small scale, such as on a laboratory worktable.

(c) The term *cyanide (T)* means the parameter total cyanide.

(d) The term *in-plant monitoring point* means a location within a plant, where an individual process effluent can be exclusively monitored before it is diluted or mixed with other process wastewaters enroute to the end-of-pipe.

(e) The term *minimum level* means the level at which an analytical system gives recognizable signals and an acceptable calibration point.

i.e. PQL

(f) The term *nitrification capability* means the capability of a POTW treatment system to oxidize ammonia or ammonium salts initially to nitrites (via *Nitrosomonas* bacteria) and subsequently to nitrates (via *Nitrobacter* bacteria). Criteria for determining the nitrification capability of a POTW treatment system are: bioassays confirming the presence of nitrifying bacteria; and analyses of the nitrogen balance demonstrating a reduction in the concentration of ammonia or ammonium salts and an increase in the concentrations of nitrites and nitrates.

(g) The term *non-detect (ND)* means a concentration value below the minimum level that can be reliably measured by the analytical method.

(h) The term *pilot-scale operation* means processing equipment being operated at an intermediate stage between laboratory-scale and full-scale operation for the purpose of developing a new product or manufacturing process.

(i) The term *POTW* means publicly owned treatment works (40 CFR 403.3).

(j) The term *process wastewater*, as defined at 40 CFR 122.2 and for the purposes of this part, does not include the following:

(1) Trimethyl silanol, any active anti-microbial materials, process wastewater from imperfect fermentation batches, and process area spills. Discharges containing such materials are not subject to the limitations and standards of this part.

(2) Non-contact cooling water, utility wastewaters, general site surface runoff, groundwater (e.g., contaminated groundwaters from on-site or off-site groundwater remediation projects), and other non-process water generated on site. Discharges of such waters and wastewaters are not subject to the limitations and standards of this part.

(k) The term *non-conventional pollutants* means parameters that are neither conventional pollutants (40 CFR 401.16), nor "toxic" pollutants (40 CFR 401.15).

(l) The term *surrogate pollutant* means a regulated parameter that, for the purpose of compliance monitoring, is allowed to serve as a surrogate for a group of specific regulated parameters. Plants would be allowed to monitor for a surrogate pollutant(s), when the other parameters for which it stands are receiving the same degree of treatment as the surrogate pollutant(s) and all of the parameters discharged are in the same treatability class(es) as their respective surrogate pollutant(s). Treatability classes have been identified in Appendix A to this part for both steam stripping and biological treatment technologies, which are the respective technology bases for PSES/PSNS and BAT/NSPS limitations controlling the discharge of regulated organic parameters.

(m) The term *xylenes* means a combination of the three isomers: o-xylene, p-xylene, and m-xylene.

(n) The abbreviation Mg/L means milligrams per liter or parts per million (ppm).

[63 FR 50425, Sept. 21, 1998; 64 FR 48104, Sept. 2, 1999]

§439.2 Monitoring requirements.

Unless otherwise noted, self-monitoring will be conducted at the final effluent discharge point.

§439.3 General pretreatment standards.

Any source subject to this part that introduces process wastewater pollutants into a publicly owned treatment works (POTW) must comply with 40 CFR part 403.

[63 FR 50425, Sept. 21, 1998]

§439.4 Monitoring requirements.

Permit limits and compliance monitoring are required for each regulated pollutant generated or used at a pharmaceutical manufacturing facility, except where the regulated pollutant is monitored as a surrogate parameter. Permit limits and compliance monitoring are not required for regulated pollutants that are neither used nor generated at the facility. Except for cyanide, for which an alternate monitoring requirement is established in subparts A and C of this part a determination that regulated pollutants are neither used nor generated should be based on a review of all raw materials in use, and an assessment of the process chemistry, products and by-products resulting from each of the manufacturing processes. This determination along with recommendation of any surrogate must be submitted with permit applications for approval by the permitting authority, and reconfirmed by an annual chemical analysis of wastewater from each monitoring location, and the measurement of a non-detect value for each regulated pollutant or its surrogate. Permits shall specify that such determinations will be maintained in the facility's permit records with their discharge monitoring reports and will be available to regulatory authorities upon request.

[63 FR 50425, Sept. 21, 1998]

Subpart A—Fermentation Products Subcategory

§439.10 Applicability.

This subpart applies to discharges of process wastewater resulting from the manufacture of pharmaceutical products by fermentation.

[63 FR 50426, Sept. 21, 1998]

§439.11 Specialized definitions.

For the purpose of this subpart:

(a) The term *fermentation* means process operations that utilize a chemical change induced by a living organism or enzyme, specifically, bacteria, or the microorganisms occurring in unicellular plants such as yeast, molds, or fungi to produce a specified product.

(b) The term *product* means ceutical products derived f mentation processes.

[63 FR 50426, Sept. 21, 1998]

§439.12 Effluent limitations by the application of the l ticable control technology available (BPT).

Except as provided in 40 C through 125.32, any existi source subject to this subp achieve the following effluen tions representing the appli BPT:

(a) The average monthly limitation for BOD_5, expresse loading (pounds, kilograms) must reflect not less than 9 reduction in the long-term daily BOD_5 load of the raw (u process wastewater, multipl variability factor of 3.0.

(1) The long-term average d load of the raw process w (i.e., the base number to whic cent reduction is applied) is the average daily BOD_5 load d calendar month, over 12 co months within the most months, and must include on periods during which producti a maximum.

(2) To assure equity in t mination of NPDES permit li regulating discharges subjec subpart, calculation of the l average daily BOD_5 load in th to the wastewater treatmen must exclude any portion of associated with separable my solvents, except for residual of mycelia and solvents after the practices of recove separate disposal or reuse. Th ual amounts may be includ calculation of the average BOD_5 loading.

(3) The practices of recove separate disposal or reuse physical separation and remo arable mycelia; recovery of from waste streams; incine concentrated solvent wastest cluding tar still bottoms); centration of broth for disp than to the treatment syst part does not prohibit the in such wastes in raw waste loa

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www.epa.gov/npdes/pubs/owm0014.pdf

Calibration standards: the lowest calibration standard should be less than 5x the MDL, preferably within 3x the MDL. The highest calibration standard should be near the upper linear range of the analytical system. The middle calibration standard should be midway between the highest and lowest calibration standard.

"Laboratories that wish to practice a method on a routine basis should be required to demonstrate that they can measure pollutants at the **MDL** or detection limit specified in the method."

Initial Precision and Recovery; 4 aliquots of reagent water spiked with analyte at 1 to 5 times the ML. This should be performed before the analyst runs samples to confirm the instrument meets the method requirements.

Blanks: Instruments require initial or continuing calibration blanks to be run just after the calibration check standard to show absence of carryover. Non-calibrated instruments require blanks. Both blanks contain all reagents (or preservatives) that a sample would have in it.

Lowest Calibration Std.

1-3 times MDL is best

1-5 times " " OK

QTR'02	4QTR'02	1QTR'03	2QTR'03	3QTR'03	4Qtr'03
7/2002	10/16/2002	1/9/2003	4/14/2003	7/1/2003	10/23/2003
14:30	14:30		17:45	19:50	16:22
				2700 gpd	2700 gpd
Grab	Grab	Grab	Grab	Grab	Grab
*					
[illegible]	[illegible]	[illegible]	.410 J	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[redacted]	[illegible]	[illegible]	<0.010	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	[illegible]	[illegible]
[redacted]	[illegible]	[illegible]	<0.010	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[illegible]	[illegible]	[illegible]	0.0016 J	<0.010	<0.010
[redacted]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	0.0114 J	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[redacted]	<25.0	<6.7	<34	<6.7	Deleted
[illegible]	[illegible]	[illegible]	<0.010	<0.010	[illegible]
[redacted]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[redacted]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	<65	<17	[illegible]
<17	<17.0	[illegible]	<65	<17	[illegible]

)0 dilution

methyl formate were below detection levels, but
ove compliance limits. These results do not indicate

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(5)

Lime Press - SP928				Q2-2003	Q3-2003	Q4-2003
PEG Compliance Testing			Date	6/3/2003	7/1/2003	10/9/2003
			Time	2:30	3:10	15:30
			Type	Grab	Grab	Grab
			Est Flow	2200 gpd	2,200	2200
439.36 Parameter			Location	T-		
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly		Result	
Acetone	524.2	20.70	8.20	<0.060	<0.300	<0.300
Benzene	524.2	3.00	0.70	<0.002	<0.010	<0.010
Chlorobenzene	524.2	3.00	0.70	<0.002	<0.010	<0.010
Chloroform	524.2	0.10	0.03	0.013	0.036 J	0.023 J
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.002	<0.010	<0.010
1,2-Dichloroethane	524.2	20.70	8.20	<0.002	<0.010	<0.010
Ethyl Acetate	1666	20.70	8.20	<0.010	<0.010	<0.100
n-Hexane	1666	3.00	0.70	<0.010	<0.010	<0.100
Methylene chloride	524.2	3.00	0.70	<0.006	<0.030	<0.030
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	<0.010	<0.100
Tetrahydrofuran	1666	9.20	3.40	<0.010	<0.010	<0.100
Toluene	524.2	0.30	0.20	0.0067	0.014 J	<0.010
Xylenes	1666	3.00	0.70	0.0446	<0.020	<0.200
* Isobutyraldehyde	1666	20.70	8.20	0.0798	0.0636 J	<0.100
* n-Amyl acetate	1666	20.70	8.20	<0.010	<0.010	<0.100
n-Butyl acetate	1666	20.70	8.20	<0.010	<0.010	<0.100
Isopropyl acetate	1666	20.70	8.20	<0.010	<0.010	<0.100
Methyl cellosolve	1671	275.00	59.70	<20.0	<6.7	Deleted
Isopropyl ether	1666	20.70	8.20	<0.010	<0.010	<0.100
n-Heptane	1666	3.00	0.70	<0.020	<0.020	<0.200
Methyl formate	1666	20.70	8.20	<0.050	<0.050	<0.500
Diethyl amine	1671	255.00	100.00	<17.0	<17.0	<17.0
Triethyl amine	1671	255.00	100.00	<17.0	<17.0	<17.0
Dilution Factor by Lab					1, 10, 100	
J= result is less than reporting limit						

*Note SP913 results are attached. SP928 was previously part of SP913.

PEG Compliance Testing
SP913 replaced by 928

439.36 Parameter
Average flow (estimated) 5400 GPD

Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Q1-2002	Q2-2002	Q3-2002	Q4-2002	Q4-2002	Q4-2002
Date				03/19/02	06/06/02	9/25/2002	10/22/2002	10/30/2002	11/6/2002
Time				16:45	16:45	12:15	11:00	1:00	13:00
Type				Composite	Composite	Grab	Grab	Grab	Grab
Location				6-1	6-1				
				Result	Result	Result	Result	Result	Result
Acetone	524.2	20.70	8.20	<0.075	<0.50	<0.500	<0.300	<0.300	
Benzene	524.2	3.00	0.70	<0.0025	<0.050	<0.050	<0.010	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.0025	<0.050	<0.050	<0.010	<0.010	
Chloroform	524.2	0.10	0.03	0.260	0.140	0.043*	0.139	<0.010	0.047*
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.0025	<0.050	<0.050	<0.010	<0.10	
1,2-Dichloroethane	524.2	20.70	8.20	<0.0025	<0.050	<0.050	<0.010	<0.010	
Ethyl Acetate	1666	20.70	8.20	0.205 J	<0.100	<0.100		<0.100	
n-Hexane	1666	3.00	0.70	<0.100	<0.100	<0.100		<0.100	
Methylene chloride	524.2	3.00	0.70	<0.0075	<0.100	<0.100	<0.030	<0.030	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100	<0.100	<0.100		<0.100	
Tetrahydrofuran	1666	9.20	3.40	<0.100	<0.200	<0.200		<0.100	
Toluene	524.2	0.30	0.20	0.500	<0.05	<0.050	0.035	1.3	<0.050
Xylenes	1666	3.00	0.70	<0.200	0.362	0.268		<0.200	
Isobutyraldehyde	1666	20.70	8.20	<0.100	<0.100	<0.100		0.124J	
n-Amyl acetate	1666	20.70	8.20	<0.100	<0.050	<0.050		<0.100	
n-Butyl acetate	1666	20.70	8.20	<0.100	<0.050	<0.050		<0.100	
Isopropyl acetate	1666	20.70	8.20	<0.100	<0.100	<0.100		<0.100	
Methyl cellosolve	1671	275.00	59.70	<670	<20	<20		<34	
Isopropyl ether	1666	20.70	8.20	<0.100	<0.050	<0.050		<0.100	
n-Heptane	1666	3.00	0.70	<0.200	<0.100	<0.100		<0.200	
Methyl formate	1666	20.70	8.20	<0.500	<1.000	<1.00		<0.500	
Diethyl amine	1671	255.00	100.00	<1700	<50	<50		<85	
Triethyl amine	1671	255.00	100.00	<1700	<50	<50		<85	

Dilution Factor by Lab
J= result is less than reporting limit

MSD 019542

Q4-2002	Q4-2002	Q1-2003
12/4/2002	12/4/2002	1/9/2003
0:15	22:35	4:00
Grab	Grab	Grab
Result	Result	Result
		<0.300
		<0.010
		<0.010
0.024 J	0.009J	0.026 J
		<0.010
		<0.010
		<0.010
		<0.010
		<0.030
		<0.010
		<0.010
<0.010	0.022	0.017 J
		<0.020
		0.0826 J
		<0.010
		<0.010
		<0.010
		<6.7
		<0.010
		<0.020
		<0.050
		<17.0
		<17.0

QTR'02	1QTR'03	2QTR'03	3QTR'03	4QTR'03	
/24/2002	1/9/2003	4/17/2003	7/1/2003	10/22/2003	12/5/2003
6:18		23:45	22:45	13:00	6:40
Grab	Grab	Grab	Grab	Grab	Grab
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	<0.010	[illegible]	[illegible]	[illegible]	
<0.010	<0.010	<0.010	Multiple	0.0065	0.0072
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
7/25/2003	7/26/2003	7/27/2003	7/28/2003	7/29/2003	7/30/2003
0.0017	0.0012	0.0036	0.0429	0.07	0.0505

SP920 – PEG stripper – Surrogate Monitoring Request

40 CFR 439 allows for indirect dischargers utilizing steam stripping treatment technology to monitor for surrogate parameters. Mallinckrodt's SP920 is the discharge from the PEG steam stripper. Mallinckrodt requests to monitor a surrogate parameter from each of the treatability classes listed in Table 2.

High strippability: Toluene

Medium strippability: Tetrahydrofuran

PEG Compliance Testing CY2002				Q1-2002	Q2-2002	Q3-2002	Q4-2002	Q1-2003	Q2-2003			Q3-2003	Q4-2003
			Date	03/28/02	06/27/02	SP 920	SP 920	SP 920	4/14/2003	5/15/2003	6/27/2003	7/2/2003	10/14/2003
			Time	13:10		9/16/2002	11/14/2002	1/21/2003	9:30	8:00	14:00	13:30	10:00
			Type	Composite	Composite	15:00-15:00	11:30	16:00	Grabs			Grabs	Grabs
439.36 Parameter			Location	512-14	512	Grabs	Grabs	Grabs					24,000
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Pretreated Effluent	Pretreated Effluent		36,000	36,000	Result			Result	Result
Acetone	524.2	20.70	8.20	<0.500	<0.50	<0.05	<0.300	<0.300	<0.300			<0.030	<0.300
Benzene	524.2	3.00	0.70	<0.050	ND	<0.005	<0.010	<0.010	<0.010			<0.001	<0.010
Chloroben:	524.2	3.00	0.70	0.05	ND	<0.005	<0.010	<0.010	<0.010			<0.001	<0.010
Chloroform	524.2	0.10	0.03	0.59	ND	<0.005	<0.010	<0.010	<0.010	<0.010		<0.001	<0.010
1,2-Dichlor	524.2	20.70	8.20	0.05	ND	<0.005	<0.010	<0.010	<0.010			<0.001	<0.010
1,2-Dichlor	524.2	20.70	8.20	<0.050	ND	<0.005	<0.010	<0.010	<0.010			<0.001	<0.010
Ethyl Aceta	1666	20.70	8.20	<1.000	ND	<0.10	<0.010	<0.010	<0.010			<0.001	<0.010
n-Hexane	1666	3.00	0.70	<1.000	ND	<0.10	<0.010	<0.010	<0.010			<0.001	<0.010
Methylene	524.2	3.00	0.70	<0.100	ND	<0.010	<0.030	<0.030	<0.030			<0.003	<0.030
4-Methyl-2	1666	20.70	8.20	<1.000	ND	<0.100	<0.010	<0.010	0.0715			<0.001	<0.010
Tetrahydro	1666	9.20	3.40	<2.000	ND	<0.200	<0.010	<0.010	<0.010			<0.001	<0.010
Toluene	524.2	0.30	0.20	0.17	0.11	<0.005	<0.010	<0.010	0.99	0.17	0.028	0.012	<0.010
Xylenes	1666	3.00	0.70	<1.000	ND	<0.100	<0.020	<0.020	<0.020			<0.002	<0.020
Isobutyrald	1666	20.70	8.20	<1.000	ND	<0.010	<0.010	<0.010	<0.010			<0.001	<0.010
n-Amyl ace	1666	20.70	8.20	<0.500	ND	<0.05	<0.010	<0.010	<0.010			<0.001	<0.010
n-Butyl ace	1666	20.70	8.20	<0.500	ND	<0.05	<0.010	<0.010	<0.010			<0.001	<0.010
Isopropyl a	1666	20.70	8.20	<1.000	ND	<0.100	<0.010	<0.010	<0.010			<0.001	<0.010
Methyl cell	1671	275.00	59.70	<20.000	ND	<20	<6.7	<6.7	<6.7			18 J	eliminated
Isopropyl e	1666	20.70	8.20	<0.500	ND	<0.05	<0.010	<0.010	<0.010			<0.001	<0.010
n-Heptane	1666	3.00	0.70	<1.000	ND	<0.100	<0.020	<0.020	<0.020			<0.002	<0.020
Methyl forn	1666	20.70	8.20	<10.000	<1.0	<1.0	<0.050	<0.050	<0.050			<0.005	<0.050
Diethyl am	1671	255.00	100.00	<50.00	ND	<50	<17	<17	<17			<17	<17
Triethyl am	1671	255.00	100.00	<50.00	ND	<50	<17	<17	<17			<17	<17
Dilution Factor by Lab									<17				

J= result is less than reporting limit

MSD 019546

(8)

RE: Pharmaceutical Effluent Guideline Applicability to Lab 202 in Bldg 250

Following are PEG regulatory citations regarding pilot plant operations, with pertinent sections highlighted. The background documents state that EPA has decided to let permit writers use best professional judgement (BPJ) when dealing with these types of operations. The PEG regulations do not use the saleable product language and actually states in the May 2, 1995 proposal that initially Subcategory E was limited to bench-scale research and not intended to cover pilot-plant development operations. The September 21, 1998 final regulation however allows for pilot-plant operations to be included in the Subcategory E –Research

BPJ is for direct discharge. For us, it would be to use local limits

In regards to Lab 202, the fact that it is a research lab, located within a research facility, using lab type equipment and discharging low volumes of wastewater supports inclusion under Subcategory E – Research Subcategory. Actual process wastewaters are estimated to be in the less than 50 liter range per batch, with cleanouts producing higher quantities (perhaps 50 – 100 gallons) of low concentrations of PEG chemicals in the wastewater. (?)

Peptides – Bldg 96/98

With regards to Peptides, the majority of wastewater is collected in drums and only the third rinse or beyond is discharged, which should be absent of PEG regulated pollutants. Currently, these final rinses are commingled with discharges from other research labs before being discharged directly into an MSD sewer at one of two locations (one along Salisbury Street for Bldg 96 portions, and one in the 98 yard for Bldg 98 portions). I would like to gain MSD's concurrence that these points can continue as discharge monitoring locations subject to the ordinance limits only. ✓OK

http://www.epa.gov/EPA-WATER/1998/September/Day-21/w21027.htm

IV. The Final Clean Water Act Regulation

This section discusses the applicability of the final rule, regulatory options considered and the rationale for the selected options for BPT, BCT, BAT, PSES, PSNS and NSPS.

A. Applicability and Scope of the Final Rule

Today's final effluent limitations guidelines and standards are intended to cover pollutants in process wastewater discharges from existing and new pharmaceutical manufacturing facilities. Based on comments, EPA has revised the proposed scope of the rule. This final rule contains revisions to the effluent limitations guidelines and standards in four subcategories (A thru D) of the pharmaceutical manufacturing point source category, EPA is not revising the scope of the applicability for the fifth subcategory (Subcategory E-Research).

With regard to subcategory E facilities, EPA proposed to revise the description of the research subcategory in the applicability section of the existing subcategory E regulations to exclude pilot or full-scale operations that generate wastewater using fermentation, extraction,

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chemical synthesis or mixing, compounding and formulating from the scope of subpart E, and these operations were proposed to be covered by the appropriate subcategory A through D. After considering the comments received concerning the regulation of wastewaters from pilot-scale operations, EPA has decided not to change the existing description of the research subcategory in the applicability section. EPA believes that it does not have sufficient information concerning subcategory E generated wastewaters to change the existing description. Subpart E facilities remain subject to the BPT limitations in the existing guidelines. If pilot scale operations occur at either stand alone research facilities or during operations at manufacturing facilities, then BAT and BCT limits for these wastewaters can be determined by permit writers on a best professional judgment (BPJ) basis, or similarly, such wastewater generated at indirect discharging facilities may be addressed by the regulations found at 40 CFR 403.5 and by local limits on a case-by-case basis.

From the technical development document -
http://www.epa.gov/waterscience/guide/pharm/techdev/ch4.pdf
4-1

SECTION 4
INDUSTRY SUBCATEGORIZATION
4.1 Introduction

The purpose of subcategorization is to group together facilities of similar characteristics so that
effluent limitations guidelines and standards representative of each group can be developed. This
provides each subcategory with a uniform set of effluent limitations guidelines which take into
account technological achievability and economic impacts unique to that subcategory.
For this final rulemaking, EPA considered the following factors in the subcategorization of the
pharmaceutical manufacturing industry:

Manufacturing processes;
Wastewater characteristics and treatability;
Product types;
Raw materials;
Plant size;
Plant age;
Plant location;
Nonwater quality environmental impacts; and
Treatment costs and energy requirements.

After evaluating the above factors, the Agency determined that subcategorization of the pharmaceutical manufacturing industry is necessary. The results of these evaluations are presented in the following sections

4.2 discusses the regulatory background of subcategorization in the

pharmaceutical manufacturing industry;
4.3 presents the final subcategorization basis; and
4.4 presents conclusions.

4.2 Background

The original subcategorization scheme for the pharmaceutical manufacturing industry was published in the November 17, 1976 Federal Register.(1) This subcategorization scheme was based on the operations listed below:

Subcategory A - Fermentation Operations
Subcategory B - Biological and Natural Extraction Operations
Subcategory C - Chemical Synthesis Operations
Subcategory D - Mixing, Compounding, or Formulating Operations
Subcategory E - Pharmaceutical Research Operations.

Subsequently, EPA published proposed effluent limitations guidelines and standards for the pharmaceutical manufacturing industry in November 1982. As discussed in the preamble to the 1982 regulation, EPA proposed to combine Subcategories A through D above into a single subcategory.(2) Along with comments on the November 1982 proposal, EPA received additional influent and effluent conventional and nonconventional pollutant data. EPA statistically analyzed both new and existing influent and effluent conventional and nonconventional pollutant data for all direct dischargers to determine if the proposed change to create a single subcategory was appropriate. A detailed discussion of the data sources and the statistical comparisons used is presented in IV of the 1983 Final Development Document (3), and is summarized below.

The statistical comparisons of conventional pollutants and the nonconventional pollutant COD indicated that the subcategorization scheme should separate fermentation and chemical synthesis operations (Subcategory A and C) from extraction and mixing, compounding, or formulating operations (Subcategory B and D). The analyses showed that the influent and effluent conventional pollutant and COD concentrations, as well as discharge flows, of facilities with Subcategory A and C operations are similar and that these same characteristics are similar between facilities with Subcategory B and D operations. These characteristics are different,

however, between the Subcategory A and C facility group and the Subcategory B and D facility group. These differences indicated that different effluent discharge levels of conventional pollutants and COD would be expected when facilities in both groups used the same control

4-3

technology. However, because the existing separate subcategories accommodated these differences and because permitting authorities and the regulated industry were familiar with that scheme, EPA decided to maintain the existing subcategorization scheme at that time.

In the May 2, 1995 proposal, EPA proposed to continue to maintain the existing subcategorization scheme. As part of this proposal, EPA also indicated that Subcategory E (research) was limited to bench-scale research operations and was not intended to cover pilotplant development operations. The majority of commenters on the May 2, 1995 proposal supported the continuation of the existing subcategorization scheme. Several industry commenters, however, opposed limitations on the types of wastewaters included in the Subcategory E group and argued that pilot-plant operations have been and should continue to be included under the Subcategory E definition.

After considering the comments received concerning the regulation of wastewaters from pilotscale operations, EPA has decided not to change the existing description of the research subcategory in the applicability section. EPA concluded that it did not have sufficient information concerning Subcategory E generated wastewaters to change the existing description. If pilotscale manufacturing operations occur at stand-alone research facilities or during research operations at manufacturing facilities, then BAT and BCT limits for these wastewaters can be determined by permit writers on a best professional judgment (BPJ) basis. Similarly, such wastewater generated at indirect discharging facilities may be addressed by the regulations found at 40 CFR 403.5 and by local limits on a case-by-case basis.

EPA has reviewed the additional characterization data collected since the 1983 final rulemaking to determine if the previous subcategorization scheme is still appropriate. The results of that review are described in 4.3.

source reduction" (Sec. 6604; 42 U.S.C. 13103(b)(2). This directive led the Agency to implement a pilot project called the Source Reduction Review Project that would facilitate the integration of source reduction in the Agency's regulations, including the technology-based effluent guidelines and standards.

In the preamble to the proposed regulations, EPA discussed the possible pollution prevention alternatives available in pharmaceutical manufacturing. At that time, EPA indicated that pollution prevention opportunities were limited in the active ingredient manufacturing subcategories (namely, fermentation, natural extraction and chemical synthesis) but the use of water-based coatings in the formulation subcategory operations was a viable pollution prevention approach which eliminates the need for solvents in tablet coating operations. This approach may only be applicable to some and not most tablet coating operations, however. Since the proposal, EPA has received two suggestions for incorporating pollution prevention into the final regulations which were discussed in the August 8, 1997 Notice of Availability at 62 FR 42720. One suggestion presented to the Agency was that Subcategories B and D dischargers that incorporate best management practices (BMPs), which reduce their discharge of any of the regulated pollutants should not have to monitor for the specific regulated pollutants, and possibly only monitor for the conventional pollutants and COD. This pollution prevention approach is similar to the one adopted in the Pesticide Formulators, Packagers and Repackagers (PFPR) final regulation which was published in the **Federal Register** on November 6, 1996 at 61 FR 57518. (It should be noted that PFPR facilities that use the promulgated pollution prevention option have to assess their wastewater and may be required to treat wastewater prior to discharge.) EPA evaluated this suggestion and decided that since EPA is not promulgating BAT limitations for specific organic pollutants, this pollution prevention suggestion was not relevant to compliance by subcategory B and D direct dischargers with final BAT limitations. For PSES, EPA believes the suggestion may be workable for indirect dischargers, since standards for specific organic pollutants are contained in the final rule; however, no information was submitted to identify the pollution prevention practices that would be incorporated into the rule, and EPA has been unable to identify any.

Another pollution prevention approach suggested to EPA was that Subcategories A and C facilities that can demonstrate a reduction in the use of a regulated pollutant and resultant lowered air emissions or water discharges should receive a higher effluent discharge limitation. As suggested, the higher effluent discharge limitation would be directly proportional to the amount of reduction achieved in the use of the regulated pollutant. Along with this suggestion, the commenters provided examples of how this pollution prevention suggestion could work in individual instances.

In evaluating this suggestion including the examples provided, EPA was concerned about the amount and type of process information that would have to be obtained from facilities and the methodology for estimating the pollutant reductions as the result of any pollution prevention practices. Another concern of the Agency had to do with the determination of when, in the new product development phase of work, the practice represents a pollution prevention activity or is just part of normal process development work in bringing a new product process to full scale production. EPA was also concerned that pollutant discharge or emission reductions achieved in the bench scale or pilot scale product development activities may not be realized during full scale production operations. In the period following publication of the NOA, the Agency did not receive sufficient information relative to these concerns to enable it to develop a viable pollution prevention alternative based on this suggestion.

C. Updated Profile of the Industry

The pharmaceutical manufacturing industry covered by this rulemaking is made up of 566 facilities located in 39 states, Puerto Rico and the Virgin Islands. EPA estimates that 304 of these facilities could be affected by today's final rule. The major concentrations of manufacturing facilities are located in the Northeast, the Midwest and Puerto Rico.

The pharmaceutical manufacturing industry is defined by four types of manufacturing operations or processes. These activities result in subcategorization for purposes of this rulemaking. The four subcategories are referred to as:

- Subcategory A: Fermentation
- Subcategory B: Natural Extraction
- Subcategory C: Chemical Synthesis
- Subcategory D: Formulating, Mixing and Compounding

A complete discussion of each subcategory's manufacturing operations and wastewater characteristics may be found in Sections 3 and 5 of the final Technical Development Document (TDD), "Development Document for Final Effluent Limitations Guidelines and Standards for the Pharmaceutical Manufacturing Point Source Category" (EPA 821–R–98–005).

A fifth subcategory, Subcategory E: Research, was excluded from regulation beyond the existing BPT regulation promulgated on October 27, 1983 at 48 FR 49808. The Research subcategory is defined by bench-scale activities or operations related to the research on and development of pharmaceutical products. BAT/BCT limitations for this subcategory are determined on a case by case best professional judgment (BPJ) basis. For indirect dischargers, the general prohibition in 40 CFR part 403 apply; in addition POTWs will establish local pretreatment limits on a case by case basis as necessary.

D. Existing and Proposed Rules

EPA promulgated interim final BPT regulations for the pharmaceutical manufacturing point source category on November 17, 1976 (41 FR 50676; 40 CFR Part 439, Subparts A through E). The five subcategories of the pharmaceutical manufacturing industry (40 CFR part 439) were defined at that time as:

- Subpart A—Fermentation Products Subcategory
- Subpart B—Extraction Products Subcategory
- Subpart C—Chemical Synthesis Subcategory
- Subpart D—Mixing, Compounding, and Formulating Subcategory
- Subpart E—Research Subcategory

The 1976 BPT regulations set monthly limitations for biochemical oxygen demand (BOD_5) and chemical oxygen demand (COD) based on percent removal for all subcategories. No daily maximum effluent limitations were established for these parameters. The pH was set within the range of 6.0 to 9.0 standard units. The regulations also set maximum 30 day average concentration-based limitations for total suspended solids (TSS) for subcategories B, D and E. No TSS limitations were established for subcategories A and C. Subpart A was amended (42 FR 6813) on February 4, 1977, to improve the language referring to separable mycelia and solvent recovery. The amendment also allowed the inclusion of spent beers (broths) in the calculation of raw waste loads for Subpart A in those instances where the spent beer is actually treated in the wastewater treatment system.

Water Act and the regulations thereunder (i.e., biochemical oxygen demand (BOD_5), total suspended solids (TSS), oil and grease, fecal coliform and pH).

CWA—Clean Water Act. The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251 *et seq.*), as amended, *inter alia*, by the Clean Water Act of 1977 (Pub. L. 95–217) and the Water Quality Act of 1987 (Pub. L. 100–4).

Daily discharge—The discharge of a pollutant measured during any calendar day or any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day.

Direct discharger—A facility that discharges or may discharge treated or untreated process wastewaters, non-contact cooling waters, or non-process wastewaters (including stormwater runoff) into waters of the United States.

Effluent—Wastewater discharges.

Effluent limitation—Any restriction, including schedules of compliance, established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

Emission—Passage of air pollutants into the atmosphere via a gas stream or other means.

EOP effluent—Final plant effluent discharged to waters of the United States or to a POTW.

EOP treatment—End-of-pipe treatment facilities or systems used to treat process wastewaters, non-process wastewaters (including stormwater runoff) after the wastewaters have left the process area of the facility and prior to discharge. End-of-pipe treatment generally does not include facilities or systems where products or by-products are separated from process wastewaters and returned to the process or directed to air emission control devices.

EPA—The U.S. Environmental Protection Agency.

General Provisions—General Provisions for national emission standards for hazardous air pollutants and other regulatory requirements pursuant to section 112 of the Clean Air Act, as amended November 15, 1990. The General Provisions, located in subpart A of part 63 of title 40 of the Code of Federal Regulations, codify procedures and criteria to implement emission standards for stationary sources that emit (or have the potential to emit) one or more of the 189 chemicals listed as hazardous air pollutants in section 112(b) of the Clean Air Act as amended in 1990. EPA published the NESHAP General Provisions in the **Federal Register** on March 16, 1993 (59 FR 12408). The term General Provisions also refers to the General Provisions for the effluent limitations guidelines and standards proposed today, to be located at 40 CFR part 439.

Fermentation—A chemical change induced by a living organism or enzyme, specifically bacteria or the microorganisms occurring in unicellular plants such as yeast, molds, or fungi. Process operations that utilize fermentation to manufacture pharmaceutically active ingredients define subcategory A (40 CFR Part 439, subpart A).

HAP—Hazardous Air Pollutant. Any of the 189 chemicals listed under section 112(b) of the Clean Air Act.

HON—Hazardous Organic NESHAP. As used in this document, it refers to the standard published by EPA for the Synthetic Organic Chemical Manufacturing Industry (SOCMI) on April 22, 1994 (59 FR 19402).

Incinerator—An enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas.

Indirect discharger—A facility that discharges or may discharge wastewaters into a publicly owned treatment works.

In-plant Control Technologies—These include controls or measures applied within the manufacturing process to reduce or eliminate pollutant and hydraulic loadings; these also include technologies, such as steam stripping and cyanide destruction, applied directly to wastewater generated by manufacturing processes.

IU—Industrial User. Synonym for "Indirect Discharger."

Junction box—A manhole access point to a wastewater sewer system or a lift station.

LTA—Long-term average. For purposes of proposed effluent limitations guidelines and standards, average pollutant levels achieved over a period of time by a plant, subcategory, or technology option. LTAs were used in developing the limitations and standards in today's proposed regulation.

MACT—Maximum Achievable Control Technology. Technology basis for the national emission standards for hazardous air pollutants.

Major source—As defined in section 112(a) of the Clean Air Act, major source is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

Maximum daily discharge limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24 hour period that reasonably represents a calendar day for purposes of sampling.

Mg—Megagram. One million (10^6) grams, or one metric ton.

Metric ton—One thousand (10^3) kilograms (abbreviated as kkg), or one megagram. A metric ton is equal to 2,204.5 pounds.

Minimum level—The level at which an analytical system gives recognizable signals and an acceptable calibration point.

Mixing/Compounding/Formulating—Processes through which pharmaceutically active ingredients are put in dosage forms. Processes involving mixing/compounding/formulating define subcategory D (40 CFR part 439, subpart D).

NESHAP—National Emission Standard for Hazardous Air Pollutants. Emission standard promulgated that has been or will be promulgated under section 112(d) of the Clean Air Act for hazardous air pollutants listed in section 112(b) of the Clean Air Act.

New Source—As defined in 40 CFR 122.2, 122.29, and 403.3(k), a new source is any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced (1) for purposes of compliance with New Source Performance Standards, after the promulgation of such standards being proposed today under CWA section 306; or (2) for the purposes of compliance with Pretreatment Standards for New Sources, after the publication of proposed standards under CWA section 307(c), if such standards are thereafter promulgated in accordance with that section.

Nitrification—Nitrification is the oxidation of ammonium salts to nitrites (via nitrosomonas bacteria) and the further oxidation of nitrite to nitrate via nitrobacter bacteria. Nitrification can be accomplished in either a single or two-stage activated sludge system. Indicators of nitrification capability are (1) biological monitoring for ammonia oxidizing bacteria (AOB) and nitrite oxidizing bacteria (NOB) to determine if nitrification is occurring, and (2) analysis of the nitrogen balance to determine if nitrifying bacteria reduce the amount of ammonia and increase the amount of nitrite and nitrate.

Nonconventional pollutants—Pollutants that are neither conventional pollutants nor toxic pollutants.

Non-detect value—A concentration-based measurement reported below the minimum level that can reliably be measured by the analytical method for the pollutant.

Non-water quality environmental impact—An environmental impact of a control or treatment technology, other than to surface waters.

NPDES—The National Pollutant Discharge Elimination System authorized under section 402 of the CWA. The Clean Water Act requires NPDES permits for discharge of pollutants from any point source into waters of the United States.

NRDC—Natural Resources Defense Council.

NSPS—New Source Performance Standards. As used in this notice, this term refers to standards for new sources under section 306 of the CWA.

OMB—Office of Management and Budget.

Outfall—The mouth of conduit drains and other conduits from which a plant discharges effluent into receiving waters.

Pharmaceutically active ingredient—Any substance considered to be an active ingredient by Food and Drug Administration regulations (21 CFR 210.3(6)(7)).

Pilot-scale operation—The trial operation of processing equipment, which is the intermediate stage between laboratory experimentation and full-scale operation in the development of a new process or product.

Point of Determination—The location where the process wastewater stream exits the pharmaceutical process equipment.

Point source category—A category of sources of water pollutants that are included within the definition of "point source" in section 502(14) of the Clean Water Act.

Pollutant (to water)—Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, certain radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. See CWA section 502(6); 40 CFR 122.2.

POTW or POTWs—Publicly owned treatment works, as defined at 40 CFR 403.3(o).

Pretreatment standard—A regulation specifying industrial wastewater effluent quality required for discharge to a POTW.

Primary fuel—The fuel that provides the principal heat input to a combustion device. To be considered primary, the fuel must be able to sustain operation of the combustion device without the addition of other fuels.

Priority pollutants—The toxic pollutants listed in 40 CFR part 403, Appendix A (printed immediately following 40 CFR 423.17).

Process changes—Alterations in process operating conditions, equipment, or chemical use that reduce the formation of chemical compounds that are pollutants and/or pollutant precursors.

Process unit—A piece of equipment, such as a chemical reactor or fermentation tank, associated with pharmaceutical manufacturing operations.

Process wastewater—Any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Process wastewater includes surface runoff from the immediate process area that has the potential to become contaminated.

(1) For purposes of this part, the following materials are excluded from the definition of process wastewater:

1. Trimethyl silanol;
2. Any active anti-microbial materials;
3. Wastewater from imperfect fermentation batches; and
4. Process area spills

(2) For purposes of this part, the following waters and wastewaters are excluded from the definition of process wastewater: noncontact cooling water, utility wastewaters, general site surface runoff, groundwater (e.g., contaminated groundwaters from on-site or off-site groundwater remediation projects), and other water generated on site that are not process wastewaters.

The discharge of such waters and wastewaters must be regulated separately.

Process wastewater collection system—A piece of equipment, structure, or transport mechanism used in conveying or storing a process wastewater stream. Examples of process wastewater collection system equipment include individual drain systems, wastewater tanks, surface impoundments, and containers.

Process wastewater stream—When used in connection with CAA obligations, any HAP-containing liquid that results from either direct or indirect contact of water with organic compounds.

Process water—Water used to dilute, wash, or carry raw materials or any other materials used in pharmaceutical manufacturing processes.

PSES—Pretreatment standards for existing sources of indirect discharges, under section 307(b) of the CWA.

PSNS—Pretreatment standards for new sources of indirect discharges, under sections 307© of the CWA.

RCRA—Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, *et seq.*).

Research—Bench-scale activities or operations used in research and/or product development of a pharmaceutical product. The Research operations define subcategory E (40 CFR part 439, Subpart E).

SIC—Standard Industrial Classification. A numerical categorization system used by the U.S. Department of Commerce to denote segments of industry. An SIC code refers to the principal product, or group of products, produced or distributed, or to services rendered by an operating establishment. SIC codes are used to group establishments by the primary activity in which they are engaged.

Source Category—A category of major or area sources of hazardous air pollutants.

Source Reduction—The reduction or elimination of waste generation at the source, usually within a process. A source reduction practice is any practice that (1) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and (2) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

Stationary source—Any building, structure, facility, or installation that emits or may emit any air pollutant. See CAA section 111(a)(3).

Toxic pollutants—the pollutants designated by EPA as toxic in 40 CFR 401.15.

Variability factor—The daily variability factor is the ratio of the estimated 99th percentile of the distribution of daily values divided by the expected value, or mean, of the distribution of the daily data. The monthly variability factor is the estimated 95th percentile of the monthly averages of the data divided by the expected value of the monthly averages.

VOC—Any organic pollutant with a Henry's Law Constant greater than or equal to 3.97×10^{-7} atm/gmole/m^3.

Waters of the United States—the same meaning set forth in 40 CFR 122.2.

Zero discharge (ZD)—No discharge of pollutants to waters of the United States or to a POTW.

List of Subjects

40 CFR Part 136

Environmental protection, Incorporation by reference, Reporting and recordkeeping requirements, Water pollution control.

40 CFR Part 439

Environmental protection, Pharmaceutical manufacturing pollution prevention, Waste treatment and disposal, Water pollution control.

Dated: July 30, 1998.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 136—[AMENDED]

1. The authority citation for part 136 continues to read as follows:

Authority: Secs. 301, 304(h), 307, and 501(a) Pub. L. 95-217, Stat. 1566, *et seq.* (33 U.S.C. 1251, *et seq.*) (The Federal Water Pollution Control Act Amendments of 1972 as amended by the Clean Water Act of 1977).

2. Section 136.3 is amended by revising paragraph (a) introductory text and by adding a new Table IF in numerical order to the end of paragraph (a) and revising paragraph (b) introductory text and adding paragraph (b)(40) to read as follows:

§ 136.3 Identification of test procedures.

(a) Parameters or pollutants, for which methods are approved, are listed together with test procedure descriptions and references in Tables IA, IB, IC, ID, IE, and IF. The full text of the referenced test procedures are incorporated by reference into Tables IA, IB, IC, ID, IE, and IF. The references and the sources which are available are given in paragraph (b) of this section. These test procedures are incorporated as they exist on the day of approval and a notice of any change in these test procedures will be published in the **Federal Register**. The discharge parameter values for which reports are required must be determined by one of the standard analytical test procedures incorporated by reference and described in Tables IA, IB, IC, ID, IE, and IF, or by any alternate test procedure which has been approved by the Administrator under the provisions of paragraph (d) of this section and §§ 136.4 and 136.5. Under certain circumstances (paragraph (b) or (c) of this section or 40 CFR 401.13) other test procedures may be used that may be more advantageous when such other test procedures have been previously approved by the Regional Administrator of the Region in which the discharge occur, and providing the Director of the State in which such discharge will occur does

1995 Dev. Doc.

(8)

that the influent and effluent conventional pollutant and COD concentrations, as well as discharge flows, of facilities with Subcategory A and C operations are similar and that these same characteristics are similar between facilities with Subcategory B and D operations. These characteristics are different, however, between the Subcategory A and C facility group and the Subcategory B and D facility group. These differences indicated that different effluent discharge levels of conventional pollutants and COD would be expected when facilities in both groups used the same control technology. However, because the existing separate subcategories accommodated these differences and because permitting authorities and the regulated industry were familiar with that scheme, EPA decided to maintain the existing subcategorization scheme at that time.

Pharmaceutical research (Subcategory E) does not fall within SIC Codes 2831, 2833, or 2834 (designated to be studied by EPA in the Settlement Agreement) and does not have wastewater characteristics warranting the development of a national regulation. EPA is proposing to limit this exclusion to bench-scale research operations. Therefore, EPA excluded Subcategory E bench-scale research from development of further regulations beyond the 1983 BPT limitations. For the same reasons, Subcategory E bench-scale research is not addressed by these proposed regulations.

EPA has reviewed the additional characterization data collected since the 1983 final rulemaking to determine if the previous subcategorization scheme is still appropriate. The results of that review are described in Section 4.3.

4.3 Proposed Subcategorization Basis

For this rulemaking, EPA is proposing the following four subcategories:

1) Subcategory A - Fermentation Operations;

2) Subcategory B - Biological and Natural Extraction Operations;

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employed where possible to reduce unit operating costs and the number of certification analyses.

Fermentation and chemical synthesis processes are generally conducted on a batch basis. Fermentation usually involves large batches, while the batch size tends to vary considerably for chemical synthesis processes. Chemical synthesis involving several steps is usually conducted using the campaign operation method. Biological extraction and product mixing and formulation processes are generally carried out continuously.

The use of differing production approaches not only affects wastewater characteristics on a plant-by-plant basis but also affects the wastewater characteristics of individual plants on a day-to-day basis. The effect of this induced variability on wastewater characteristics and the resulting influence on treatment efficiency can be ameliorated to some extent by flow equalization prior to treatment.

C. SELECTED SUBCATEGORIES

The pharmaceutical industry subcategories selected and established for data analysis are:

Subcategory A - Fermentation
Subcategory B - Biological Extraction
Subcategory C - Chemical Synthesis, and
Subcategory D - Mixing, Compounding, and Formulation

These are identical to four of the subcategories established in the original BPT rulemaking (41 FR 50676). An additional subcategory (Subcategory E - Research) was identified earlier in the 1976 Development Document. However, since research does not fall within SIC Codes 2831, 2833, or 2834 (designated to be studied by EPA in the Settlement Agreement) and does not have wastewater characteristics warranting the development of a national regulation, it is not included in this study.

D. SUBCATEGORY CHARACTERISTICS

There are discernable differences among the subcategories when viewed in terms of effluent concentration averages or ranges and wastewater flow rates. These differences support the identification and use of these subcategories for regulatory purposes.

1. Fermentation is the basic processing method used in the production of most antibiotics and steroids. The steps employed are (a) preparation of a seed, (b) innoculation of the nutrient batch, (c) fermentation of the nutrient raw materials, and (d) recovery of the product by such means as extraction, precipitation, or ion exchange.

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MSD 019555

(8)

eral industry categories. The 32 llutants are listed in Appendix C to this notice along with the particular reason for excluding them from regulation. The two remaining toxic pollutants detected in the effluent of direct discharging pharmaceutical plants are cyanide and methylene chloride. EPA is establishing BPT and BAT limitations and NSPS controlling the discharge of cyanide. For the reasons discussed above, EPA is not regulating the discharge of methylene chloride from direct discharging pharmaceutical plants.

Paragraph 8(b)(ii) of the Settlement Agreement authorizes the Administrator to exclude from nationally applicable pretreatment standards a subcategory or category if the toxicity and amount of incompatible pollutants (taken together) introduced by such point sources into POTWs is so insignificant as not to justify developing a national pretreatment regulation. EPA has reviewed available data from indirect dischargers and is excluding the 123 toxic pollutants listed in Appendices D and E from nationally applicable pretreatment standards. Appendix D lists those toxic pollutants not detected in the effluents of indirect dischargers. Appendix E lists those toxic pollutants which, although detected, were not significant enough in terms of toxicity and amount of incompatible pollutants (taken together) to justify nationally applicable pretreatment standards. EPA is establishing PSES and PSNS controlling the discharge of cyanide. For the reasons discussed previously, EPA is not establishing nationally applicable pretreatment standards for methylene chloride or chloroform.

B. Subcategories Excluded

The Settlement Agreement did not require EPA to regulate the entire pharmaceutical industry. Subcategory E, Pharmaceutical Research, is not mentioned in the Settlement Agreement. Since pharmaceutical research does not involve production and wastewater generation in appreciable quantities on a regular basis, EPA now considers this subcategory outside the province of ordinary industrial guidelines development. Therefore, facilities which conduct pharmaceutical research only are specifically excluded from all limitations and standards in this regulation other than the BPT limitations. Research activities conducted at mixed and single subcategory plants (A, B, C, and D only) will be covered by this regulation because the wastewaters from these activities were studied as part of the technical development of this regulation. However, these activities contribute a very small portion of wastewater to the final effluent of the average production facility.

VIII. Non-Water Quality Aspects of Pollution Control

Eliminating or reducing one form of pollution may cause other environmental problems. Sections 304(b) and 306 of the Act require EPA to consider the non-water quality environmental impacts (including energy requirements) of certain regulations. In compliance with these provisions, EPA has considered the effect of these regulations on air pollution, solid waste generation, and energy consumption. This regulation was reviewed by EPA personnel responsible for non-water quality programs. While it is difficult to balance pollution problems against each other and against energy use, EPA believes that this regulation will best serve often competing national goals.

The following non-water quality environmental impacts (including energy requirements) are associated with the final regulations. The Administrator has determined that the impacts identified below are justified by the benefits associated with compliance with the limitations and standards.

A. Solid Waste

EPA estimates that the total solid waste generated to attain the new BPT TSS limitations will be approximately 138,000 additional pounds per year of wastewater treatment sludge. This is equal to an incremental increase of about 0.3 percent over that currently generated by the pharmaceutical industry to meet existing BPT BOD5 limitations. The solid wastes generated through wastewater treatment at pharmaceutical plants have not been listed as hazardous in regulations promulgated by the Agency under Subtitle C of the Resource Conservation and Recovery Act (RCRA) (see 45 FR 33066, May 19, 1980). Accordingly, it does not appear likely that the wastewater sludges generated by pharmaceutical plants under the new BPT TSS limitations will be subject to the comprehensive RCRA program establishing requirements for persons handling, transporting, treating, storing, and disposing of hazardous wastes. The Agency's estimates of the costs of this regulation include the cost of handling these sludges as a non-hazardous waste.

No sludge will be generated as a result of complying with the final pretreatment standards, NSPS, or the BPT and BAT effluent limitations for cyanide.

B. Air Pollution

EPA does not believe that cyanide removal mechanisms will cause the generation of air pollutants; additionally, we do not anticipate that compliance with the modified and new BPT TSS limitations will result in the generation of additional air pollution from pharmaceutical plants.

C. Energy Requirements

EPA estimates that the achievement of the cyanide and the new modified TSS BPT effluent limitations will increase energy consumption by approximately 0.01 percent of present facility use for all plants. We estimate that compliance with PSES to control cyanide discharges to POTWs will increase over-all energy use by 0.07 percent at the affected indirect discharging pharmaceutical plant. Because BAT limitations and NSPS for cyanide are identical to BPT cyanide limitations and because PSNS are identical to PSES, there will be no incremental increase in energy usage resulting from compliance with BAT effluent limitations, NSPS, or PSNS.

IX. Best Management Practices

Section 304(e) of the Clean Water Act authorizes the Administrator to prescribe what have been termed "best management practices" (BMPs). The Agency is not promulgating BMPs for the pharmaceutical industry at this time. However, the existing BPT regulation requires that separable mycelia and solvents not be included in the raw waste load calculations that form the basis of determinations of BPT effluent limitations for BOD5 and COD. (*See* 40 CFR Part 439; 41 FR 50676, November 17, 1976). This rulemaking does not change this requirement.

X. Upset and Bypass Provisions

A recurring issue of concern has been whether industry guidelines should include provisions authorizing noncompliance with effluent limitations during periods of "upset" or "bypass." An upset, sometimes called an "excursion," is an unintentional noncompliance occurring for reasons beyond the reasonable control of the permittee. It has been argued that an upset provision is necessary in EPA's effluent limitations because such upsets will inevitably occur even in properly operated control equipment. Because technology-based limitations are to require only what technology can achieve, it is claimed that liability for such situations is improper. When confronted with this issue, courts have disagreed on whether an explicit upset

(a) The general definitions, abbreviations and methods of analysis in 40 CFR part 401 shall apply.

(b) The term *bench-scale operation* means the laboratory testing of materials, methods, or processes on a small scale, such as on a laboratory worktable.

(c) The term *cyanide (T)* means the parameter total cyanide.

(d) The term *in-plant monitoring point* means a location within a plant, where an individual process effluent can be exclusively monitored before it is diluted or mixed with other process wastewaters enroute to the end-of-pipe.

(e) The term *minimum level* means the level at which an analytical system gives recognizable signals and an acceptable calibration point.

(f) The term *nitrification capability* means the capability of a POTW treatment system to oxidize ammonia or ammonium salts initially to nitrites (via *Nitrosomonas* bacteria) and subsequently to nitrates (via *Nitrobacter* bacteria). Criteria for determining the nitrification capability of a POTW treatment system are: bioassays confirming the presence of nitrifying bacteria; and analyses of the nitrogen balance demonstrating a reduction in the concentration of ammonia or ammonium salts and an increase in the concentrations of nitrites and nitrates.

(g) The term *non-detect (ND)* means a concentration value below the minimum level that can be reliably measured by the analytical method.

(h) The term *pilot-scale operation* means processing equipment being operated at an intermediate stage between laboratory-scale and full-scale operation for the purpose of developing a new product or manufacturing process.

(i) The term *POTW* means publicly owned treatment works (40 CFR 403.3).

(j) The term *process wastewater*, as defined at 40 CFR 122.2 and for the purposes of this part, does not include the following:

(1) Trimethyl silanol, any active anti-microbial materials, process wastewater from imperfect fermentation batches, and process area spills. Discharges containing such materials are not subject to the limitations and standards of this part.

(2) Non-contact cooling water, utility wastewaters, general site surface runoff, groundwater (e.g., contaminated groundwaters from on site or off site groundwater remediation projects), and other non-process water generated on site. Discharges of such waters and wastewaters are not subject to the limitations and standards of this part.

(k) The term *non-conventional pollutants* means parameters that are neither conventional pollutants (40 CFR 401.16), nor "toxic" pollutants (40 CFR 401.15).

(l) The term *surrogate pollutant* means a regulated parameter that, for the purpose of compliance monitoring, is allowed to serve as a surrogate for a group of specific regulated parameters. Plants would be allowed to monitor for a surrogate pollutant(s), when the other parameters for which it stands are receiving the same degree of treatment as the surrogate pollutant(s) and all of the parameters discharged are in the same treatability class(es) as their respective surrogate pollutant(s). Treatability classes have been identified in Appendix A to this part for both steam stripping and biological treatment technologies, which are the respective technology bases for PSES, PSNS and BAT/NSPS limitations controlling the discharge of regulated organic parameters.

(m) The term *xylenes* means a combination of the three isomers: o-xylene, p-xylene, and m-xylene.

(n) The abbreviation Mg/L means milligrams per liter or parts per million (ppm).

[63 FR 50425, Sept. 21, 1998; 64 FR 48104, Sept. 2, 1999]

§ 439.2 Monitoring requirements.

Unless otherwise noted, self-monitoring will be conducted at the final effluent discharge point.

§ 439.3 General pretreatment standards.

Any source subject to this part that introduces process wastewater pollutants into a publicly owned treatment works (POTW) must comply with 40 CFR part 403.

[63 FR 50425, Sept. 21, 1998]

Regulated parameter	Pretreatment standards [1]	
	Maximum daily discharge	Average monthly discharge must not exceed
4 Isopropyl acetate	20.7	8.2
5 Methylene chloride	3.0	0.7

[1] Mg/L (ppm)

[63 FR 50436, Sept. 21, 1998]

§ 439.47 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7, any new source subject to this subpart must achieve the following pretreatment standards:

Regulated parameter	Pretreatment standards [1]	
	Maximum daily discharge	Average monthly discharge must not exceed
1 Acetone	20.7	8.2
2 n-Amyl acetate	20.7	8.2
3 Ethyl acetate	20.7	8.2
4 Isopropyl acetate	20.7	8.2
5 Methylene chloride	3.0	0.7

[1] Mg/L (ppm)

[63 FR 50436, Sept. 21, 1998; 64 FR 48104, Sept. 2, 1999]

Subpart E—Research Subcategory

§ 439.50 Applicability.

This subpart applies to discharges of process wastewater resulting from pharmaceutical research.

[63 FR 50436, Sept. 21, 1998]

§ 439.51 Specialized definitions.

For the purpose of this subpart, the term product means products or services resulting from research and product development activities.

[63 FR 50436, Sept. 21, 1998]

§ 439.52 Effluent limitations attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the application of BPT:

(a) The average monthly effluent limitation for BOD_5, expressed as mass

loading (pounds, kilogran
must reflect not less tha
reduction in the long-te
daily BOD_5 load of the rav
process wastewater, mult
variability factor of 3.0.
shall be required to attain
for BOD_5 that is less thar
lent of 45 mg/L.

(b) The average mont
limitation for COD, expres
loading (pounds, kilogran
must reflect not less tha
reduction in the long-te
daily COD load of the raw
process wastewater, mult
variability factor of 2.2.
shall be required to attain
for COD that is less than
lent of 220 mg/L.

(c) The long-term averag
or COD mass loading of the
wastewater (i.e., the base
which the percent reductio
is defined as the average d
COD load during any cale
over 12 consecutive month
most recent 36 months.

(1) To assure equity in
mination of NPDES permit
regulating discharges sub
subpart, calculation of th
average daily BOD_5 or COD

Ap

TABLE 1.—SURI

	Re
Amyl alcohol	
Ethanol [1]	
Isopropanol [1]	
Methanol [1]	
Phenol	
Isobutyraldehyde [1]	
n Heptane [1]	
n-Hexane [1]	
Diethylamine [1]	
Triethylamine	
Benzene	
Toluene [1]	
Xylenes [1]	
Chlorobenzene	
o-Dichlorobenzene	
Chloroform [1]	
Methylene chloride [1]	
1,2-Dichloroethane [1]	
Ethyl acetate [1]	
Isopropyl acetate	
n Amyl acetate	
n-Butyl acetate	
Methyl formate	
Tetrahydrofuran [1]	
Isopropyl ether	

MSD 019557

From: <Marshall.Paul@epamail.epa.gov>
To: Doug Mendoza <DMENDOZA@stlmsd.com>
Date: 3/15/04 3:15PM
Subject: R&D facilities

Doug:

The following paragraphs lifted from the regulation appear to state that any product resulting from a pilot project as part of R&D would be excempt, i.e. subject to only local limits.

3/15/04 - 3:25pm - Paul Marshall also called. Any kind of research can get the exemption - looking for a better process, new chemicals, etc. It's okay if a saleable product results.
→ But - if it's just a small lab that happens to be in the bldg making low volume products - then that is regulated.

A fifth subcategory, Subcategory E: Research, was excluded from regulation beyond the existing BPT regulation promulgated on October 27, 1983 at 48 FR 49808. The Research subcategory is defined by bench-scale activities or operations related to the research on and development of pharmaceutical products. BAT/BCT limitations for this subcategory are determined on a case by case best professional judgment (BPJ) basis. For indirect dischargers, the general prohibition in 40 CFR part 403 apply; in addition POTWs will establish local pretreatment limits on a case by case basis as necessary.

With regard to subcategory E facilities, EPA proposed to revise the description of the research subcategory in the applicability section of the existing subcategory E regulations to exclude pilot or full-scale operations that generate wastewater using fermentation, extraction, chemical synthesis or mixing, compounding and formulating from the scope of subpart E, and these operations were proposed to be covered by the appropriate subcategory A through D. After considering the comments received concerning the regulation of wastewaters from pilot-scale operations, EPA has decided not to change the existing description of the research subcategory in the applicability section. EPA believes that it does not have sufficient information concerning

subcategory E generated wastewaters to change the existing description. Subpart E facilities remain subject to the BPT limitations in the existing guidelines. If pilot scale operations occur at either stand alone research facilities or during operations at manufacturing facilities, then BAT and BCT limits for these wastewaters can be determined by permit writers on a best professional judgment (BPJ) basis, or similarly, such wastewater generated at indirect discharging facilities may be addressed by the regulations found at 40 CFR 403.5 and by local limits on a case-by-case basis.

§ 439.50 Applicability.
This subpart applies to discharges of process wastewater resulting from pharmaceutical research.
40. Section 439.51 is revised to read as follows:
§ 439.51 Specialized definitions.
For the purpose of this subpart, the term product means products or services resulting from research and product development activities.
41. Section 439.52 is revised to read

DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
MEMORANDUM

MEMO TO: Doug Mendoza

ACCT #: 21120596-00

FROM: Jason Gill JAG

DATE: 3/18/04

SUBJECT: **Mallinckrodt Site Visit – New Sample Point Info**

SP929 Description: "1/2" stainless steel pipe in sink with effluent from #639 centrifuge, 15' from W wall."

- Discharge volume will be the same as former SP916, 800 gpd

SP930 Description: "Valve on 4" PVC line inside NW corner of Bldg. 222S, only when sump is discharged from tanks 300 and 355."

- Karen S. will have the estimated discharge volumes for us shortly

PMT
MALLINCKRODT
#2112 0596-00

FAX TRANSMISSION

MSD
DIVISION OF ENVIRONMENTAL COMPLIANCE
10 EAST GRAND
ST. LOUIS, MO 63147
(314) 436-8756
FAX: (314) 436-8753

FG

To:	Karen Siebenberger	**Date:**	March 25, 2004
Fax #:	(314)654-1251	**Pages:**	Pages; 6 (including cover sheet)
From:	Fabian T. Grabski		
Subject:	Permit Modification		

COMMENTS:

Part I of the 03/25/04 permit modification.

*** TR. NSMISSION REPO T ***

MAR-25-04 13:38 ID:4368753 MSD DEC

START TIME	MAR-25-04 13:36
TELEPHONE NUMBER	96541251
NAME(ID NUMBER)	314 654 1251
TRANSMISSION MODE	EMMR
RESOLUTION	STD
PAGES TRANSMITTED	006
MAILBOX	OFF
SECURITY	OFF
INFORMATION CODE	OK
REDIALING TIMES	00
MACHINE ENGAGED	01'44
JOB NUMBER	342

THIS TRANSMISSION IS COMPLETED.

LAST SUCCESSFUL PAGE 006

File-Permit

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Fabian Grabski, Industrial Permit Writer

FROM: Doug Mendoza

DATE: March 25, 2004

RE: "Modification" to 21120596-00 Mallinckrodt permit

Mallinckrodt has a sample point change that needs to be done right away, so they can sample by the end of the 1st quarter 2004. Sample point 916 is being replaced by 929. The attached sheets give more details on the change, and refer to other supporting documents in the files. Jason Gill verified the new sample point info. on 3/18/04, and is adding the new sample point's info. to ECIMS.

Please write Mallinckrodt and let them know the modification for sample point 929 is approved, effective now. We can handle the actual changing of the permit in the near future when a large number of other permit modifications will be done.

Mallinckrodt needs the notification right away. Their fax number is 314-654-1251.

Metropolita
St. Louis Sewer
District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

March 16, 2004

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC.
3600 N. Second Street
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street

Dear Ms. Siebenberger:

Thank you for your March 1, 2004 letter advising us of the results of recent monitoring of your wastewater discharge. The following violations of permit limitations, terms or conditions were identified:

VIOLATIONS OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMP PT	SAMPLE TYPE	PARAMETER	PERMIT LIMIT	LIMIT TYPE	VALUE REPORTED
01-05-04	1415	928	Grab	Toluene	0.3 mg/l	DM	0.58 mg/l**
Jan. 2004		928		Toluene	0.2 mg/l	MA	0.58 mg/l**

mg/l = milligrams per liter
DM = Daily Maximum
MA = Monthly Average

The aforementioned monthly average value for sampling point 928 is the result of your sample collected on January 5, 2004. Since no additional sampling occurred in January, the result from this data set constitutes the monthly average for Toluene.

REQUIRED ACTION/RESPONSE:

Pursuant to the aforementioned letter, we acknowledge that a subsequent resampling event for Toluene evidenced a result of analysis within permit limitations. Moreover, we recognize that an internal investigation identified the likely source of the exceedence for Toluene and that corrective actions have been implemented.

Refer to the enclosure for information on potential enforcement actions should noncompliance continue. The enclosure also explains the meaning of any asterisks which appear in the Value Reported column above. You should consider the percentages applicable to Significant Noncompliance when planning for additional sampling.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Douglas Mendoza
Permit file

tyco
Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

FL
3/16/04

March 1, 2004

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: SP928 resample results
PERMIT NO. 21120596-00

ILL LANCASTER LABS FG

This letter is in follow-up to my January 23, 2004 phone call reporting Mallinckrodt had received sample results for SP928 in excess of toluene limits. The sample was obtained on 1/5/04 at 14:15 and results received on January 23 showed toluene to be at **0.58 mg/L** in excess of the daily maximum and monthly average limits. An investigation was conducted and revealed an extraction problem. A process team was formed to look at improving extraction efficiencies and implemented several corrective actions including a new piping configuration. A resample was obtained on February 17 at 20:00 and indicated toluene at 0.0036 mg/L. An additional sample will be obtained in March.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger
Principal HSE Engineer

RECEIVED
MAR 3 2004
DEPT. OF ENVIRONMENTAL COMPLIANCE

Faxed 314-436 8753
3/1/04

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

FL 2/2/04

January 27, 2004

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2003 4th Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Grabski:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 4th quarter 2003. The report indicates compliance at all monitoring points.

Mallinckrodt monitors the designated points and uses outside laboratories and analytical methods specified in 40 CFR 136 to measure the pollutant load as required by permit. Mallinckrodt has also collected additional data from processes at different monitoring locations or using methods other than those specified in the regulations in order to collect and evaluate additional data for a variety of reasons. In performing this additional monitoring, Mallinckrodt has identified a potential issue with toluene removal in the PEG distillation column (sample point 920). Although the 4th quarter sample collected October 14, 2003 passed toluene at <0.01 mg/L, four additional grab samples collected after November 20th have indicated toluene at levels above the 0.3 mg/L max daily limit (These four sampling results were not analyzed in accordance with the approved analytical methods set out within 40 CFR 136). However, Mallinckrodt has begun to investigate this potential operational problem and has taken steps that include: contracting with the column's engineering design firm for additional studies and recommendations; restricting certain wastewaters not regulated by PEG – specifically higher alcohol containing wastewaters which may be problematic to the column; eliminating wash waters that contain high foam; and performing additional upstream sampling of production wastewaters. The column manufacturer's report is due January 30, 2004 and Mallinckrodt will develop a plan to implement the recommendations and collect the 1st quarter compliance sample prior to the end of February 2004.

I wanted to inform you of these activities and would be happy to meet with MSD to provide any additional information. If you have any questions or require more detailed information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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JAN 30 2004

CC: Mr. Doug Mendoza – MSD
(no attachment)

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	0

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

(A.) CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

☐ I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print/type name of signing official: Paul VanderHeyden

Title: Site Director

Telephone: 314-654-

Signature: P J VanderHeyden

Date: 1/27/04

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JAN 30 2004

radrpt.doc 2/00

MSD 019567

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

A. If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[PDV] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 007, 082

B. If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[PDV] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit .

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

D. If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[PDV] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 915, 916.

E. If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[PDV] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes covered by SP905

F. Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[PDV] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufactur.. process subject to Categorical Standards in 40 CFR 439. for SP905, 010, 080, 915, 916, 917 919, 920 and 928

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____, I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing of the last discharge monitoring report.

B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: Paul VanderHeyden

Title: Site Director

Telephone: _____

Signature: [signature]

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Date: 1/27/04

SMF 10/93

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		001					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

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JAN 30 2004

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) __(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		002					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,800					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) __(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		10/22/2003		10/22/2003		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:00		7:20			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	17,539	M	13,824	E	3715	gal/day
Oil & Grease	200	G	19.1	G	6.6	E	~~0.000~~ 65.6	mg/l
Biochemical Oxygen Demand	****	C	92.1	C	81.3	E	~~0.000~~ 32.3	mg/l
Chemical Oxygen Demand	****	C	200	C	322	E	0.000 (–)	mg/l
Total Suspended Solids	****	C	138	C	280	E	0.000 (–)	mg/l
Temperature	60	G	9	G	7	E	~~X~~ N/A	deg C
pH Acidic	5.5	G	~~X~~	G	~~X~~	E	~~X~~ N/A	S.U.
pH Basic	11.5	G	7.6	G	7.6	E	~~X~~ N/A	S.U.

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		005					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		10/22/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:05					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	32,000					gal/day
Oil & Grease	200	G	~~ND~~ → 2.1					mg/l
Biochemical Oxygen Demand	****	C	16.2					mg/l
Chemical Oxygen Demand	****	C	60					mg/l
Total Suspended Solids	****	C	6					mg/l
Temperature	60	G	18					deg C
pH Acidic	5.5	G	~~7~~					S.U.
pH Basic	11.5	G	8.5					S.U.
BOD detection limit = 2 mg/l								
TSS detection limit = 1 mg/l								

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JAN 30 2004

MSD 019572

SP007 VOID - eliminated 11/1/03

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->	008
DATES ON WHICH SAMPLES WERE COLLECTED	----->	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->	

PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E						gal/day
Oil & Grease	200	G						mg/l
Biochemical Oxygen Demand	****	C						mg/l
Chemical Oxygen Demand	****	C						mg/l
Temperature	60	G						deg C
Total Suspended Solids	****							mg/L
pH Acidic	5.5	G						S.U.
pH Basic	11.5	G						S.U.

***No flow this quarter**

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JAN 30 2004

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) _X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		010		010			
DATES ON WHICH SAMPLES WERE COLLECTED	----->		10/22/2003		12/30/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:15		0800			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,860,482					gal/day
Oil & Grease	200	G	4.3		10.5			mg/l
Biochemical Oxygen Demand	****	C	> 423		> 433			mg/l
Chemical Oxygen Demand	****	C	1060		1240			mg/l
Total Suspended Solids	****	C	168					mg/l
Temperature	60	G	16					deg C
pH Acidic	5.5	G	see attached					S.U.
pH Basic	11.5	G	see attached					S.U.
Chromium	5	C	0.0151 J					mg/l
Copper	2.7	C	0.032					mg/l
Nickel	2.3	C	.0431 J					mg/l
Zinc	3	C	0.0771					mg/l

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JAN 30 2004

Mallinckrodt pH Monitoring for SP010: October 2003

Date	Time	pH	Total for Event in Minutes	Month-Year
10/2/03	10:14:01	4	2	October-03
10/2/03	10:18:01	4.3		October-03
10/2/03	10:20:01	3.9	4	October-03
10/2/03	10:26:01	12.5		October-03
10/2/03	10:28:01	12.6		October-03
10/2/03	10:30:01	12.5		October-03
10/2/03	10:32:01	12.4		October-03
10/2/03	10:34:01	12.3		October-03
10/2/03	10:36:01	12.2		October-03
10/2/03	10:38:01	12.1		October-03
10/2/03	10:40:01	12.1		October-03
10/2/03	10:42:01	11.9		October-03
10/2/03	10:44:01	11.8		October-03
10/2/03	10:46:01	11.7	22	October-03
10/9/03	10:24:01	4.2		October-03
10/9/03	10:26:01	4.1	4	October-03
10/9/03	10:30:01	4	2	October-03
10/15/03	0:16:01	3.1	2	October-03
10/16/03	14:04:01	0.4		October-03
10/16/03	14:06:01	0.3		October-03
10/16/03	14:08:01	0.2		October-03
10/16/03	14:10:01	0.1		October-03
10/16/03	14:12:01	2.7	10	October-03
10/16/03	14:16:01	3.8	2	October-03
10/24/03	10:12:01	4.9		October-03
10/24/03	10:14:01	4.8	4	October-03
10/24/03	10:20:01	3.8	2	October-03
10/24/03	10:26:01	0.8		October-03
10/24/03	10:28:01	0		October-03
10/24/03	10:30:01	0		October-03
10/24/03	10:32:01	1.9		October-03
10/24/03	10:34:01	3.9	10	October-03
10/24/03	21:16:01	11.8		October-03
10/24/03	21:18:01	11.8		October-03
10/24/03	21:20:01	11.9		October-03
10/24/03	21:22:01	11.8		October-03
10/24/03	21:24:01	11.7	10	October-03
10/26/03	19:38:01	11.6		October-03
10/26/03	19:40:01	11.9		October-03
10/26/03	19:42:01	12		October-03
10/26/03	19:44:01	12.1		October-03
10/26/03	19:46:01	12.2		October-03
10/26/03	19:48:01	12.2		October-03
10/26/03	19:50:01	12.2		October-03
10/26/03	19:52:01	12.2		October-03
10/26/03	19:54:01	12.2		October-03
10/26/03	19:56:01	12.2		October-03
10/26/03	19:58:01	12.2		October-03
10/26/03	20:00:01	12.2		October-03
10/26/03	20:02:01	12.1		October-03
10/26/03	20:04:01	12.3		October-03
10/26/03	20:06:01	12.3	30	October-03
10/26/03	20:10:01	12	2	October-03
10/26/03	20:14:01	12.8		October-03
10/26/03	20:16:01	13.5		October-03
10/26/03	20:18:01	13.5		October-03
10/26/03	20:20:01	13.1		October-03
10/26/03	20:22:01	12.6		October-03
10/26/03	20:24:01	11.9	12	October-03
10/26/03	22:12:01	3.9	2	October-03
10/30/03	8:38:01	4.1	2	October-03
10/30/03	8:44:01	4	2	October-03
10/30/03	10:32:01	0	2	October-03
		October Total	**126**	

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JAN 29 2004

Mallinckrodt pH Monitoring for SP010: November 2003

Date	Time	pH	Total for Event in Minutes	Month-Year
11/7/03	10:42:01	3.9	2	November-03
11/7/03	10:48:01	3.9	2	November-03
11/13/03	10:10:01	4.2	2	November-03
11/13/03	10:16:01	4	2	November-03
11/24/03	9:32:01	4.1		November-03
11/24/03	9:34:01	4	4	November-03
11/24/03	9:38:01	4	2	November-03
11/24/03	9:42:01	12.5		November-03
11/24/03	9:44:01	12.5		November-03
11/24/03	9:46:01	12.5		November-03
11/24/03	9:48:01	12.4		November-03
11/24/03	9:50:01	12.4		November-03
11/24/03	9:52:01	12.3		November-03
11/24/03	9:54:01	12.3		November-03
11/24/03	9:56:01	12.2		November-03
11/24/03	9:58:01	12.1		November-03
11/24/03	10:00:01	12.1		November-03
11/24/03	10:02:01	12.1		November-03
11/24/03	10:04:01	12.1		November-03
11/24/03	10:06:01	12.1		November-03
11/24/03	10:08:01	12.1		November-03
11/24/03	10:10:01	12.1		November-03
11/24/03	10:12:01	12		November-03
11/24/03	10:14:01	11.9		November-03
11/24/03	10:16:01	11.9		November-03
11/24/03	10:18:01	11.8		November-03
11/24/03	10:20:01	11.7		November-03
11/24/03	10:22:01	11.6		November-03
11/24/03	10:24:01	11.6	44	November-03
11/26/03	10:00:01	4.3		November-03
11/26/03	10:02:01	4.2	4	November-03
11/26/03	10:08:01	4.2		November-03
11/26/03	10:10:01	4		November-03
11/26/03	10:12:01	3.9	6	November-03
	November Total		**68**	

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Mallinckrodt pH Monitoring for SP010: December 2003

Date	Time	pH	Total for Event in Minutes	Month-Year
12/1/03	11:40:01	11.7		December-03
12/1/03	11:42:01	11.7		December-03
12/1/03	11:44:01	11.8		December-03
12/1/03	11:46:01	11.8		December-03
12/1/03	11:48:01	11.9		December-03
12/1/03	11:50:01	11.9		December-03
12/1/03	11:52:01	11.9		December-03
12/1/03	11:54:01	11.9		December-03
12/1/03	11:56:01	11.9		December-03
12/1/03	11:58:01	11.9		December-03
12/1/03	12:00:01	11.8		December-03
12/1/03	12:02:01	11.8		December-03
12/1/03	12:04:01	11.7		December-03
12/1/03	12:06:01	11.6	28	December-03
12/4/03	10:06:01	4.6		December-03
12/4/03	10:08:01	4.3	4	December-03
12/4/03	10:12:01	4	2	December-03
12/8/03	0:00:01	0	2	December-03
12/10/03	9:54:01	4.2		December-03
12/10/03	9:56:01	4	4	December-03
12/10/03	10:00:01	4		December-03
12/10/03	10:02:01	3.9	4	December-03
12/17/03	9:58:01	5.3		December-03
12/17/03	10:00:01	4.1		December-03
12/17/03	10:02:01	4	6	December-03
12/17/03	10:06:01	4		December-03
12/17/03	10:08:01	3.9	4	December-03
12/18/03	18:28:01	12		December-03
12/18/03	18:30:01	12.1		December-03
12/18/03	18:32:01	12.1		December-03
12/18/03	18:34:01	12.1		December-03
12/18/03	18:36:01	12.1		December-03
12/18/03	18:38:01	12.1		December-03
12/18/03	18:40:01	12.1		December-03
12/18/03	18:42:01	12.1		December-03
12/18/03	18:44:01	12		December-03
12/18/03	18:46:01	11.9		December-03
12/18/03	18:48:01	11.7		December-03
12/18/03	18:50:01	11.6	24	December-03
12/26/03	10:12:01	4.3		December-03
12/26/03	10:14:01	4.2	4	December-03
12/26/03	10:18:01	4	2	December-03
12/26/03	10:24:01	12.2		December-03
12/26/03	10:26:01	12.3		December-03
12/26/03	10:28:01	12.3		December-03
12/26/03	10:30:01	12.2		December-03
12/26/03	10:32:01	12		December-03
12/26/03	10:34:01	11.9		December-03
12/26/03	10:36:01	11.6	14	December-03
	December Total		**98**	

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ___(APR-JUNE) __(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		080		081		082	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		10/22/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:10					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=compc		G=grab,C=composite,M=measured flow,E=e				UNITS
FLOW		E	10,775					gal/day
Oil & Grease	200	G	2.6					mg/l
Biochemical Oxygen Demand	****	C	> 429					mg/l
Chemical Oxygen Demand	****	C	370.0					mg/l
Total Suspended Solids	****	C	75.0					mg/l
Temperature	60	G	18					deg C
pH Acidic	5.5	G	3					S.U.
pH Basic	11.5	G	9					S.U.
Total Toxic Organics	5.52	G						mg/l

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Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 080/081/082; Building 98

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
Peptides				MSD		n/a	No
Leuprolide	Pharmaceutical	10/17/2003	10/17/2003				
		10/21/2003	10/21/2003				
		10/24/2003	10/24/2003				
		10/27/2003	10/27/2003				
		10/30/2003	10/31/2003				
		11/03/2003	11/07/2003				
		11/10/2003	11/14/2003				
		11/17/2003	11/18/2003				
		11/25/2003	11/26/2003				
		12/01/2003	12/15/2003				
		12/17/2003	12/17/2003				
		12/22/2003	12/23/2003				
Naltrexone	Narcotic	10/25/2003	12/07/2003				
Oxycodone	Narcotic	12/11/2003	12/11/2003				
		12/15/2003	12/19/2003				

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Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _____(JULY-SEPT) _X__(OCT-DEC

Samples Collected By: Malinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		---->		905			
DATES ON WHICH SAMPLES WERE COLLEC		---->		11/13/2003			
TIMES AT WHICH SAMPLES WERE COLLECT		---->		13:00			
PARAMETER	LIMIT (ave) (gm/day)	LIMIT (gm/day)	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW M=measured flow			UNITS	Lab results mg/L
FLOW			M	28,341		gal/day	
Chloromethane	52.41	140.56	G	0.107		gm/day	0.001
Vinyl Chloride	46.22	81.96	G	1.073		gm/day	0.01
Chloroethane	52.41	140.56	G	0.107		gm/day	0.001
Methylene Chloride	17.15	81	G	0.054		gm/day	0.0005
Chloroform	52.89	154.86	G	0.104		gm/day	0.00097
1,1-Dichloroethane	10.48	28.11	G	0.054		gm/day	0.0005
1,2-Dichloroethane	85.77	273.51	G	0.054		gm/day	0.0005
1,1-Dichloroethene	10.48	28.59	G	0.054		gm/day	0.0005
1,2-Dichloropropane	93.39	378.33	G	0.054		gm/day	0.0005
Carbon Tetrachloride	67.66	181.07	G	0.054		gm/day	0.0005
cis-1,3-Dichloropropene	93.39	378.33	G	0.054		gm/day	0.0005
trans-1,3-Dichloropropene	93.39	378.33	G	0.054		gm/day	0.0005
trans-1,2-Dichloroethene	11.91	31.45	G	0.054		gm/day	0.0005
1,1,1-Trichloroethane	10.48	28.11	G	0.054		gm/day	0.0005
1,1,2-Trichloroethane	15.25	60.51	G	0.054		gm/day	0.0005
Benzene	27.16	63.85	G	0.054		gm/day	0.0005
Toluene	13.34	35.26	G	0.054		gm/day	0.0005
Trichloroethene	12.39	32.88	G	0.054		gm/day	0.0005
Ethylbenzene	67.66	181.07	G	0.054		gm/day	0.0005
Tetrachloroethene	24.78	78.14	G	0.054		gm/day	0.0005
Chlorobenzene	67.66	181.07	G	0.054		gm/day	0.0005
1,3-Dichlorobenzene	67.66	181.07	G	0.054		gm/day	0.0005
1,2-Dichlorobenzene	93.39	378.33	G	0.054		gm/day	0.0005
1,4-Dichlorobenzene	67.66	181.07	G	0.054		gm/day	0.0005
2-Nitrophenol	30.97	110.07	G	1.073		gm/day	0.01
4-Nitrophenol	77.19	274.46	G	5.364		gm/day	0.05
2-Methyl-4,6-dinitrophenol	37.17	131.99	G	5.364		gm/day	0.05
Hexachloroethane	93.39	378.33	G	1.073		gm/day	0.01
Nitrobenzene	1065.91	3050.49	G	1.073		gm/day	0.01
1,2,4-Trichlorobenzene	93.39	378.33	G	1.073		gm/day	0.01
Dimethyl phthalate	9.05	22.4	G	1.073		gm/day	0.01
Hexachlorobutadiene	67.66	181.066	G	1.073		gm/day	0.01
Diethyl phthalate	21.92	53.84	G	0.225		gm/day	0.0021
Hexachlorobenzene	93.39	378.33	G	1.073		gm/day	0.01
Di-n-butyl phthalate	9.53	20.49	G	1.073		gm/day	0.01
Bis(2-ethylhexyl)phthalate	45.27	122.93	G	1.073		gm/day	0.01
Naphthalene	9.05	22.4	G	1.073		gm/day	0.01
~~Phenanthrene~~	~~9.05~~	~~22.4~~	~~G~~	~~1.073~~		~~gm/day~~	~~0.01~~ N/A
Fluorene	9.05	22.4	G	1.073		gm/day	0.01
Anthracene	9.05	22.4	G	1.073		gm/day	0.01
Acenapthene	9.05	22.4	G	1.073		gm/day	0.01
Fluoranthene	10.48	25.73	G	1.073		gm/day	0.01
Pyrene	9.53	22.87	G	1.073		gm/day	0.01
Shaded values represent detection limits							
LAB RESULTS							

All lab results were non detect. Reporting or method detection limits were used as lab results.

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) __(JULY-SEPT) _X__(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		912					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		See attached					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	See attached					gal/day
DMAC (daily max)	7091	C	See attached					lb/day
DMAC (monthly average)	5459	C	See attached					lb/day
Dimethyl Sulfide(daily average)	*	C	See attached					lb/day
* Monitoring requirement only.								

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DMAC Analysis and Mass Loadings
Oct-03

REMOVED 11/1/03 FG

		SP 912 - Bldg 504		SP 926 - Bldg 505 sump
Date	**Flow (gal/day)**	**DMAC mg/l**	**DMAC lb/day**	**DMAC mg/l**
01-Oct				
02-Oct	57152.92969	9,000	4,298	<5
03-Oct				
04-Oct				
05-Oct				
06-Oct				
07-Oct				
08-Oct				
09-Oct				
10-Oct	74508.32813	3,700	2,303	<5
11-Oct				
12-Oct				
13-Oct				
14-Oct				
15-Oct				
16-Oct	88755.57031	2,100	1,557	<5
17-Oct				
18-Oct				
19-Oct				
20-Oct				
21-Oct				
22-Oct				
23-Oct	57852.30469	2,500	1,208	<5
24-Oct				
25-Oct				
26-Oct				
27-Oct				
28-Oct				
29-Oct				
30-Oct	10047.62695	2,100	176	<5
31-Oct				
Avg (weighte	57,663	3,880	1,869	
Max:	88,756	9,000	4,298	
Min:	10,048	2,100	176	
Monthly Lin	n/a	n/a	5,459	
Daily Max:	n/a	n/a	7,091	

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MSD 019583

DMAC Analysis and Mass Loadings
Nov-03

SP 912 - Bldg 504

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day
01-Nov			
02-Nov			
03-Nov			
04-Nov			
05-Nov			
06-Nov	41103	2,500	859
07-Nov			
08-Nov			
09-Nov			
10-Nov			
11-Nov			
12-Nov			
13-Nov	48817	3,000	1,224
14-Nov			
15-Nov			
16-Nov			
17-Nov			
18-Nov			
19-Nov			
20-Nov	55265	5800	2,678
21-Nov			
22-Nov			
23-Nov			
24-Nov			
25-Nov			
26-Nov			
27-Nov	17679	2,500	369
28-Nov			
29-Nov			
30-Nov			
Avg (weighte	40,716	3,450	1,174
Max:	55,265	5,800	2,678
Min:	17,679	2,500	369
Monthly Lin	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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SP912 DMAC Analysis and Mass Loadings
Dec-03

SP 912 - Bldg 504

Date	Flow (gal/day)	DMAC mg/l	DMAC lb/day
01-Dec			
02-Dec			
03-Dec			
04-Dec	66799	1,300	726
05-Dec			
06-Dec			
07-Dec			
08-Dec			
09-Dec			
10-Dec			
11-Dec			
12-Dec	64312	720	387
13-Dec			
14-Dec			
15-Dec			
16-Dec			
17-Dec			
18-Dec	50301	640	269
19-Dec			
20-Dec			
21-Dec			
22-Dec			
23-Dec			
24-Dec			
25-Dec			
26-Dec	18816	1,900	299
27-Dec			
28-Dec			
29-Dec			
30-Dec	79496	2,000	1,328
31-Dec			
Avg (weighte	55,945	1,312	613
Max:	79,496	2,000	1,328
Min:	18,816	640	269
Monthly Lin	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

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SP914 Eliminated

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	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
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PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	__X__(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 915		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/23/2003		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	16:22		
SAMPLE TYPE				Grab		
FLOW			E	2,700		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result		
Acetone	524.2	20.70	8.20	<0.300		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	<0.010		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	<0.100		
n-Hexane	1666	3.00	0.70	<0.100		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100		
Tetrahydrofuran	1666	9.20	3.40	<0.100		
Toluene	524.2	0.30	0.20	<0.010		
Xylenes	1666	3.00	0.70	<0.200		
Isobutyraldehyde	1666	20.70	8.20	<0.100		
n-Amyl acetate	1666	20.70	8.20	<0.100		
n-Butyl acetate	1666	20.70	8.20	<0.100		
Isopropyl acetate	1666	20.70	8.20	<0.100		
Isopropyl ether	1666	20.70	8.20	<0.100		
n-Heptane	1666	3.00	0.70	<0.200		
Methyl formate	1666	20.70	8.20	<0.500		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by lab				5, 100		

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Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	_X__(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 916	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/22/2003	12/05/2003
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	13:00	6:40
SAMPLE TYPE				Grab	
FLOW			E	800	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Isobutyraldehyde	1666	20.70	8.20	<0.001	
Isopropyl ether	1666	20.70	8.20	<0.001	
Isopropyl acetate	1666	20.70	8.20	<0.001	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001	
n-Butyl acetate	1666	20.70	8.20	<0.001	
n-Amyl acetate	1666	20.70	8.20	<0.001	
Methyl formate	1666	20.70	8.20	<0.005	
n-Hexane	1666	3.00	0.70	<0.001	
Ethyl Acetate	1666	20.70	8.20	<0.001	
Tetrahydrofuran	1666	9.20	3.40	<0.001	
n-Heptane	1666	3.00	0.70	<0.002	
Xylenes	1666	3.00	0.70	<0.002	
Acetone	524.2	20.70	8.20	<0.030	
Methylene chloride	524.2	3.00	0.70	<0.003	
Chloroform	524.2	0.10	0.03	0.0035 J	
Benzene	524.2	3.00	0.70	<0.001	
1,2-Dichloroethane	524.2	20.70	8.20	<0.001	
Toluene	524.2	0.30	0.20	0.0065	0.0072
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001	
Chlorobenzene	524.2	3.00	0.70	<0.001	
Dilution by Lab				1, 10	10

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	METROPOLITAN ST. LOUIS SEWER DISTRICT						
	INDUSTRIAL USER SELF MONITORING REPORT						
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PART I: IDENTIFYING INFORMATION							
Company Name:		Mallinckrodt Inc.					
Permit No.:		21120596-00					
Premise Address:		3600 North Second St., St. Louis, MO 63147					
Monitoring Period:	_____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	__X__(OCT-DEC)		
Samples Collected By:		Mallinckrodt Inc					
Analysis Performed By:		Lancaster Labs					
Part II: ANALYTICAL RESULTS OF SELF MONITORING							
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 917			
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/28/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	11:00			
SAMPLE TYPE				Grab			
FLOW		E	5000 GPD				
PARAMETER							
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result			
Acetone	524.2	20.70	8.20	<0.030			
Benzene	524.2	3.00	0.70	<0.001			
Chlorobenzene	524.2	3.00	0.70	<0.001			
Chloroform	524.2	0.10	0.03	0.0021 J			
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001			
1,2-Dichloroethane	524.2	20.70	8.20	<0.001			
Ethyl Acetate	1666	20.70	8.20	<0.001			
n-Hexane	1666	3.00	0.70	<0.001			
Methylene chloride	524.2	3.00	0.70	<0.003			
4-Methyl-2-pentanone	1666	20.70	8.20	0.0219			
Tetrahydrofuran	1666	9.20	3.40	0.00813 J			
Toluene	524.2	0.30	0.20	0.017			
Xylenes	1666	3.00	0.70	<0.002			
Isobutyraldehyde	1666	20.70	8.20	<0.001			
n-Amyl acetate	1666	20.70	8.20	<0.001			
n-Butyl acetate	1666	20.70	8.20	<0.001			
Isopropyl acetate	1666	20.70	8.20	<0.001			
Isopropyl ether	1666	20.70	8.20	<0.001			
n-Heptane	1666	3.00	0.70	<0.002			
Methyl formate	1666	20.70	8.20	<0.005			
Diethyl amine	1671	255.00	100.00	<17.0			
Triethyl amine	1671	255.00	100.00	<17.0			
Dilution factor by lab				1, 10			

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Sample Point 917

Mallinckrodt, Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Points 917; Building 97

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Meperidine HCl	Pharmaceutical	10/01/03	11/20/03	MSD (change over cleanouts only HCL/water	NA	No	No
Amphetamines	Pharmaceutical	11/21/03	12/05/03	MSD (cleanouts)	NA	No	No
Meperidine HCl	Pharmaceutical	12/06/03	12/31/03	MSD (change over cleanouts only HCL/water)	NA	No	No
Methylphenidate HCl	Pharmaceutical	12/06/03	12/28/03	MSD (tank cleanouts to MSD or tested mother liquor)	NA	No	No
Methylphenidate HCl	Pharmaceutical	10/01/03	10/06/03	MSD (tank cleanouts to MSD or tested	NA	No	No

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Sample Point 917

				mother liquor			
Diphenoxylate HCl	Pharmaceutical	10/18/03	10/23/03	MSD (sends NaOH to MSD in one segment)	NA	No	No
Nalbuphine HCl	Pharmaceutical	10/24/03	11/07/03	MSD (tank cleanouts HCl/water)	NA	No	No
Methylphenidate HCl	Pharmaceutical	11/09/03	11/20/03	MSD	NA	No	No

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	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	_X___(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
MSD SAMPLE POINT REFERENCE NUMBERS			---->	SP 918		
DATES ON WHICH SAMPLES WERE COLLECTED			---->	N/A		
TIMES AT WHICH SAMPLES WERE COLLECTED			---->	N/A		
SAMPLE TYPE						
FLOW			E	0	NO FLOW	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly			
Acetone	524.2	20.70	8.20			
Benzene	524.2	3.00	0.70			
Chlorobenzene	524.2	3.00	0.70			
Chloroform	524.2	0.10	0.03			
1,2-Dichlorobenzene	524.2	20.70	8.20			
1,2-Dichloroethane	524.2	20.70	8.20			
Ethyl Acetate	1666	20.70	8.20			
n-Hexane	1666	3.00	0.70			
Methylene chloride	524.2	3.00	0.70			
4-Methyl-2-pentanone	1666	20.70	8.20			
Tetrahydrofuran	1666	9.20	3.40			
Toluene	524.2	0.30	0.20			
Xylenes	1666	3.00	0.70			
Isobutyraldehyde	1666	20.70	8.20			
n-Amyl acetate	1666	20.70	8.20			
n-Butyl acetate	1666	20.70	8.20			
Isopropyl acetate	1666	20.70	8.20			
Methyl cellosolve	1671	275.00	59.70			
Isopropyl ether	1666	20.70	8.20			
n-Heptane	1666	3.00	0.70			
Methyl formate	1666	20.70	8.20			
Diethyl amine	1671	255.00	100.00			
Triethyl amine	1671	255.00	100.00			
Dilution by lab						

RECEIVED
JAN 30 2004

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
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Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	_____(JAN-MAR)	____(APR-JUN)		___(JULY-SEP)	__X__(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				SP 919		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/14/2003		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	11:10		
SAMPLE TYPE			----->	Grabs		
FLOW			E	6,000		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method		Avg Monthly Limit	Result		
Acetone	524.2	20.70	8.20	<0.030		
Benzene	524.2	3.00	0.70	<0.001		
Chlorobenzene	524.2	3.00	0.70	<0.001		
Chloroform	524.2	0.10	0.03	0.0072		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001		
1,2-Dichloroethane	524.2	20.70	8.20	<0.001		
Ethyl Acetate	1666	20.70	8.20	<0.001		
n-Hexane	1666	3.00	0.70	<0.001		
Methylene chloride	524.2	3.00	0.70	<0.003		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001		
Tetrahydrofuran	1666	9.20	3.40	<0.001		
Toluene	524.2	0.30	0.20	<0.001		
Xylenes	1666	3.00	0.70	<0.002		
Isobutyraldehyde	1666	20.70	8.20	<0.001		
n-Amyl acetate	1666	20.70	8.20	<0.001		
n-Butyl acetate	1666	20.70	8.20	<0.001		
Isopropyl acetate	1666	20.70	8.20	<0.001		
Isopropyl ether	1666	20.70	8.20	<0.001		
n-Heptane	1666	3.00	0.70	<0.002		
Methyl formate	1666	20.70	8.20	<0.005		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by Lab				1, 10		

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JAN 30 2004

			METROPOLITAN ST. LOUIS SEWER DISTRICT				
			INDUSTRIAL USER SELF MONITORING REPORT				
		PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
		PART I: IDENTIFYING INFORMATION					
		Company Name:		Mallinckrodt Inc.			
		Permit No.:		21120596-00			
		Premise Address:		3600 North Second St., St. Louis, MO 63147			
		Monitoring Period:	____(JAN-MAR)	___(APR-JUN)		__(JULY-SEP)	__X__(OCT-DEC)
		Samples Collected By:		Mallinckrodt Inc			
		Analysis Performed By:		Lancaster Labs			
		Part II: ANALYTICAL RESULTS OF SELF MONITORING					
		MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 920	
		DATES ON WHICH SAMPLES WERE COLLECTE			----->	10/14/2003	
		TIMES AT WHICH SAMPLES WERE COLLECTEI			----->	10:00	
		SAMPLE TYPE				Grabs	
		FLOW			E	24,000	
		PARAMETER					
		Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
1	22	Diethyl amine	1671	255.00	100.00	<17	
3	23	Triethyl amine	1671	255.00	100.00	<17	
4	14	Isobutyraldehyde	1666	20.70	8.20	<0.010	
5	19	Isopropyl ether	1666	20.70	8.20	<0.010	
6	17	Isopropyl acetate	1666	20.70	8.20	<0.010	
7	10	4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
8	16	n-Butyl acetate	1666	20.70	8.20	<0.010	
9	15	n-Amyl acetate	1666	20.70	8.20	<0.010	
10	21	Methyl formate	1666	20.70	8.20	<0.050	
11	8	n-Hexane	1666	3.00	0.70	<0.010	
12	7	Ethyl Acetate	1666	20.70	8.20	<0.010	
13	11	Tetrahydrofuran	1666	9.20	3.40	<0.010	
14	20	n-Heptane	1666	3.00	0.70	<0.020	
15	13	Xylenes	1666	3.00	0.70	<0.020	
16	1	Acetone	524.2	20.70	8.20	<0.300	
17	9	Methylene chloride	524.2	3.00	0.70	<0.030	
18	4	Chloroform	524.2	0.10	0.03	<0.010	
19	2	Benzene	524.2	3.00	0.70	<0.010	
20	6	1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
21	12	Toluene	524.2	0.30	0.20	<0.010	
22	5	1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
23	3	Chlorobenzene	524.2	3.00	0.70	<0.010	
		Dilution by lab				1, 10, 100	

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METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:		____(JAN-MAR)	____(APR-JUN)	____(JULY-SEP)	__X__(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP927	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/09/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	14:45	
SAMPLE TYPE				Grab	
FLOW			E	2,200	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.060	
Methylene chloride	524.2	3.00	0.70	<0.006	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Dilution by lab				10, 20	

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JAN 30 2004

METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:		____(JAN-MAR)	____(APR-JUN)	____(JULY-SEP)	__X__(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP928	
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/09/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	15:30	
SAMPLE TYPE				Grab	
FLOW			E	2,200	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	0.023 J	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	<0.100	
n-Hexane	1666	3.00	0.70	<0.100	
Methylene chloride	524.2	3.00	0.70	<0.030	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100	
Tetrahydrofuran	1666	9.20	3.40	<0.100	
Toluene	524.2	0.30	0.20	<0.010	
Xylenes	1666	3.00	0.70	<0.200	
Isobutyraldehyde	1666	20.70	8.20	<0.100	
n-Amyl acetate	1666	20.70	8.20	<0.100	
n-Butyl acetate	1666	20.70	8.20	<0.100	
Isopropyl acetate	1666	20.70	8.20	<0.100	
Isopropyl ether	1666	20.70	8.20	<0.100	
n-Heptane	1666	3.00	0.70	<0.200	
Methyl formate	1666	20.70	8.20	<0.500	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution				1, 100	

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Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

November 24, 2003

Karen Siebenberger
MALLINCKRODT
3600 North Second St.
St. Louis, MO 63147

Re: Wastewater User Charge Billing for Special Discharge

Dear Ms. Siebenberger:

This is to advise you of the wastewater user charges applicable to two on-site special discharges approved in our letters to you dated November 7, 2003 and November 14, 2003. You were advised of the extra-strength surcharges as part of the original approval letter. That charge was determined using the ethylene glycol concentrations in your applications for special discharge. The discharge dates and quantities are from information submitted by you in a letter dated November 18, 2003.

Our Finance Department will bill you by invoice for the charges described below. These charges are based on the rates in MSD Wastewater User Charge Ordinance 11553. For your convenience, using the volume and strength of the waste discharged, the ordinance rates have been converted to a per-gallon basis.

PARTY TO BILL: Addressee

BILLING IS FOR: On-Site Special Discharge

DISCHARGE PERIOD: November 7, 2003 through November 15, 2003

SOURCE OF WASTE: Used 1.45% and 50% ethylene glycol solutions from the power plant and boiler house cooling systems at the Mallinckrodt facility located at 3600 North Second Street, St. Louis, Missouri.

Discharge Dates	Billing Item	Quantity	Units	Rate	Charge
11/7/03 – 11/8/03	Extra-Strength Surcharge	22,800	Gal	$0.01	$228.00
11/15/03	Extra-Strength Surcharge	200	Gal	$0.33	$66.00
Totals:	------	23,000	Gal	-----	$294.00

Please do not pay until you receive our invoice. If you have any questions, please contact me at (314) 436-8742.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Roland A. Biehl
Environmental Assistant Engineer

pc Kiedra King - Finance Dept.
File: IU – Mallinckrodt, 3600 North Second Street, St. Louis, Missouri

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

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NOV 20 2003

November 18, 2003

Mr. Roland Biehl
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: Status of recent Special Discharge Requests
Permit No. 21120596-00

Dear Mr. Biehl:

This letter is to confirm wastewater special discharges of ethylene glycol solutions as approved by MSD have been completed.

	MSD approval letter date	Volume discharged (gals)	Dates discharged Rate	Notes	
NSD SD 815	Oct 6, 2003	cancelled		Material was reused	
819	Nov 7, 2003	22,800	Nov 7- 8, 2003 $2.08/gal		$228.00
820	Nov 14, 2003	200	Nov 15, 2003 $4.33/gal		$866.00

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Invoiced 11/24/03 [illegible]

Karen Siebenberger
Principal HSE Engineer

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

November 18, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: Response to NOV dated November 5, 2003
Permit No. 21120596-00

Dear Mr. Grabski:

This letter is to confirm that remedial actions have been completed to address the pH excursion on September 18, 2003. This excursion and the previous one on August 9th were due to a faulty circuit breaker in the Building 40 electrical substation. The circuit breaker was replaced on October 29, 2003.

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger
Principal HSE Engineer

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NOV 20 2003

Metropolitan
St. Louis Sewer
District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

November 5, 2003

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC.
3600 N. Second Street
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street

Dear Ms. Siebenberger:

Thank you for your September 25, 2003 letter advising us of the results of recent monitoring of your wastewater discharge. That letter accompanied the third quarter 2003 self-monitoring report required under the terms of the above referenced permit. The following violations of permit limitations, terms or conditions were identified:

VIOLATIONS OF DISCHARGE LIMITATIONS:

SAMPLE POINT	MSD ORD. 8472 LIMIT	DATE	VIOLATIONS REPORTED IN AUGUST
010	No individual pH excursion longer than 60 minutes	09-18-03	One excursion of 82 minutes lower than 5.5 SU

SU = Standard pH Units

REQUIRED ACTION/RESPONSE:

Pursuant to the aforementioned correspondence, we understand that the origin of the pH excursion is being investigated. Please inform the District when the origin of the exceedence is identified and what remedial actions will be implemented to avoid future pH excursions.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

pc: Suspense file

cc: Douglas Mendoza
Permit file

tyco
Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

Permit

October 16, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Request to eliminate SP007
Permit No. 21120596-00

This letter is to formally request the elimination of SP007 from Mallinckrodt's permit. SP007 is the manhole in the Railroad spur under the McKinley Bridge. It is described as the line running North on Hall, then East along Salisbury to interceptor at Wharf. A review of records and current operations indicate no plant flow to this point other than stormwater. No process or sanitary wastewaters are discharged and no vehicle unloading areas discharge to this point. Since MSD is in the process of re-issuing the permit for Mallinckrodt, I wanted to make this request so that all sample points listed are accurate and capture current discharges appropriately.

OK
– DMM

If you have any further questions, please call me at (314) 654-1920.

Point originally received discharge from bldgs that are now gone.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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OCT 20 2003

Permit

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Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

October 3, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Alternate in-process testing for SP926
Permit No. 21120596-00

This letter is to provide you with additional information on dimethylacetamide (DMAC) control from the Ioversol production buildings. As discussed, in lieu of Building 505 wastewater analysis for DMAC, there is on-going in-process testing that will also ensure no detectable DMAC in the building wastewater. DMAC content in the Building 505 Ioversol is measured at the second processing step to ensure DMAC does not exceed 50 ppm. Again, Building 505 is a very water intensive operation, so that DMAC will not be detected in the wastewater. We also discussed that the DMAC testing is actually performed because it is part of the original drug master file submitted to the FDA and can not easily be changed due to FDA regulations.

Additionally, prior to the Ioversol being moved from Building 504 (SP912)to Building 505 (SP926), conductivity of the intermediate is checked and recorded on building trend charts. Trending the decrease in conductivity indicates a concurrent decrease in DMAC concentration. Ioversol above a certain conductivity (corresponding to DMAC concentration) will not be moved forward to Building 505.

Add as S.C. to permit. -DMW

Mallinckrodt recognizes MSD's concern with DMAC discharges and continued monitoring at SP912 (Building 504) will accurately reflect DMAC discharges from the plant. If you have any further questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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OCT - 6 2003

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Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

Permit

September 12, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Request to eliminate SP926
Permit No. 21120596-00

In January of this year, Mallinckrodt requested a modification to SP912 which was the point of wastewater discharge from Buildings 504 and 505 – Ioversol production. Wastewater from Building 505 was discharged through a sump and then pumped over to Building 504 – Tank 450 where it combined with the Building 504 effluent. Mallinckrodt requested this change due to operational difficulties in pumping over the Building 505 effluent. Mallinckrodt provided process information that showed no dimethylacetamide (DMAC), the only parameter monitored at SP912, was used in Building 505.

MSD responded that the effluents could be separated but that the current SP912 pounds DMAC per day limit would need to be applied to the combined effluents. SP 926 was established for Building 505 with a DMAC limit as < 5 mg/L (non-detect). Building 504 wastewater effluent, SP912, retained the established DMAC limits.

Mallinckrodt agreed that a DMAC level of non-detect was acceptable and requested that MSD be open to revisiting this subject after SP926 data had been collected with the hope of eliminating this monitoring. DMAC is present in the crude Ioversol entering Building 505 at levels less than 100 ppm w/w. Building 505 uses water in excess of 100,000 gpd to decolorize, deionize, and further purify the Ioversol. Mallinckrodt's continued in-process testing ensures that no detectable amounts of DMAC will be discharged in the wastewater. ← after DMAC removal in bldg 504.

Mallinckrodt has now conducted weekly wastewater sampling of Building 505 for 7 months (31 samples) with all results at the expected non-detect level (<5 mg/L). Based on these results and the continued in-process monitoring of the product for DMAC, Mallinckrodt requests the elimination of SP926. MSD's concern for DMAC monitoring is achieved through the continued Building 504 effluent sampling at SP912. ← Add as a special condition in permit.

conductivity of DMAC salts measured for each batch

Karen will send letter.

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SEP 17 2003

I understand that MSD will visit the plant to verify the status of these actions. If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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SEP 17 2003

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

September 8, 2003

Karen Siebenberger
MALLINCKRODT, INC.
3600 N. 2nd Street
St. Louis, MO 63147

Dear Ms. Siebenberger:

You were recently sent a notice of violations that included toluene exceedances of the daily maximum limit on 7/22/03 and 7/23/03 at sample point 916. Mallinckrodt was cited for three exceedances on July 22. This letter is to inform you that the samples taken that day for toluene will be averaged to be compared to the daily maximum limit. The average value of 0.987 mg/l will still be a violation of the 0.3 mg/l daily maximum limit, but it will be a single violation. For July 23, there will be no daily maximum violation. When all the grab sample results for the day are averaged, the are below the limit.

If you have any questions, please contact me at 314-436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

file-permit

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

September 3, 2003

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC.
3600 N. Second Street
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street

Dear Ms. Siebenberger:

Thank you for your August 21, 2003 letter advising us of the results of recent monitoring of your wastewater discharge. The following violations of permit limitations, terms or conditions were identified:

VIOLATIONS OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMP PT	SAMPLE TYPE	PARAMETER	PERMIT LIMIT	LIMIT TYPE	VALUE REPORTED
07-01-03	2230	914	Grab	Toluene	0.3 mg/l	DM	0.83 mg/l**
07-30-03	0930	914	Grab	Toluene	0.3 mg/l	DM	3.0 mg/l***
Jul 2003		914		Toluene	0.2 mg/l	MA	0.83 mg/l**
07-01-03	2245	916	Grab	Toluene	0.3 mg/l	DM	1.50 mg/l**
07-22-03	0630	916	Grab	Toluene	0.3 mg/l	DM	1.50 mg/l***
07-22-03	1300	916	Grab	Toluene	0.3 mg/l	DM	0.96 mg/l***
07-22-03	1915	916	Grab	Toluene	0.3 mg/l	DM	0.50 mg/l***
07-23-03	0030	916	Grab	Toluene	0.3 mg/l	DM	0.56 mg/l***
Jul 2003		916		Toluene	0.2 mg/l	MA	0.2732 mg/l**

mg/l = milligrams per liter
DM = Daily Maximum
MA = Monthly Average

REQUIRED ACTION/RESPONSE:

Pursuant to your letter and your recent telephone conversation with District employee Douglas Mendoza, we recognize and approve that future discharges from sampling point 914 will be conveyed to the central PEG treatment system and that sampling point 914 will be eliminated. Moreover, we acknowledge that the source of the Toluene exceedence at sampling point 916 was identified and that corrective remedial actions have been enacted. The August 5, 2003 resample for Toluene at sampling point 916 evidenced a result of analysis within permit limitations.

Refer to the enclosure for information on potential enforcement actions should noncompliance continue. The enclosure also explains the meaning of any asterisks which appear in the Value Reported column above. You should consider the percentages applicable to Significant Noncompliance when planning for additional sampling.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Douglas Mendoza
Permit file

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

September 25, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: Permit Violation – pH excursion 9/18/03
Permit No. 21120596-00

Dear Mr. Mendoza:

8/18/03 NOV

This letter is in follow up to a verbal report to you on September 19th for a pH excursion at SP010 for 82 minutes (04:58-06:18, pH <5). This incident was triggered by the loss of power at one of the substations in the plant. A similar pH excursion occurred on August 9th. The root cause of that power loss was not identified, but due to the similar nature a committee incident investigation is currently underway. Two preliminary corrective actions, replacing the trip indicator and the breaker will be implemented to prevent recurrence.

Additional corrective actions determined from the investigation will be assigned and tracked for closure.

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECEIVED
SEP 30 2003

tyco
Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

October 28, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2003 3rd Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Grabski:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 3rd quarter 2003.

Please note that Mallinckrodt has addressed and closed each of the noted violations as documented in the following correspondence to MSD:

SP010 – out of range pH episodes for >60 minutes on August 9th and September 18th. These were both due to an electrical substation power failure and documented in writing to MSD on August 14, September 2 (follow-up) and September 25. Interim measures including the use of the spill tanks was instituted and the permanent solution of replacing a circuit breaker in the substation will be completed tomorrow, October 29, 2003.

SP914 – toluene failures on July 1, July 30 and monthly average and SP916- toluene failures on July 1, July 22 and monthly average. MSD cited Mallinckrodt on September 3, 2003. These issues have been addressed as outlined in Mallinckrodt's August 21st letter to Doug Mendoza. SP914 has been rerouted to the central PEG treatment system and SP916, atypical batches are routed to the central PEG treatment system and processing times and temperatures have been modified. The August sample passed under these new conditions. Additional sampling is planned for November and December.

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECEIVED
OCT 29 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	0

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

(A.) CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

PDV I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

RECEIVED
OCT 29 2003

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print/type name of signing official: Paul VanderHeyden

Title: Site Director Telephone: 314-654-8090

Signature: PD VanderHeyden Date: 10/28/03

radrpt.doc 2/00

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

(A) If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[PDV] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 007, 082

(B) If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[PDV] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit .

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

(D) If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[PDV] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 914, 915, 916.

(E) If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[PDV] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes conveyed by SP905.

(F) Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[PDV] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufactu.. process subject to Categorical Standards in 40 CFR 439. for SP005, 010, 080, 914, 915, 916, 917, 918, 919, 920 and 928.

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____, I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing of the last discharge monitoring report.

B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

RECEIVED OCT 29 2003

Print or type name of signing official: Paul VanderHeyden

Title: Site Director Telephone: 314-654-8090

Signature: PDVanderHeyden Date: 10/28/03

SMF 10/93

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) _X__(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		001					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

RECEIVED
OCT 29 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) _X_(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		002					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,800					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X_(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

DWN VPS

MSD SAMPLE POINT REFERENCE NUMBERS	----->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		07/15/2003		07/15/2003		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:50		7:40			
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW						
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	28,253	M	10,454	E	17799	gal/day
Oil & Grease	200	G	8.7	G	3.9	E	~~0.0001~~ 11.52	mg/l
Biochemical Oxygen Demand	****	C	15.7	C	9.4	E	~~0.000~~ 19.4	mg/l
Chemical Oxygen Demand	****	C	54	C	56	E	~~0.000~~ 52.5	mg/l
Total Suspended Solids	****	C	55	C	15	E	~~0.000~~ 18.5	mg/l
Temperature	60	G	17	G	17	E	~~17~~	deg C
pH Acidic	5.5	G	7	G	7	E	~~7~~ N/A	S.U.
pH Basic	11.5	G	7	G	7	E	~~7~~	S.U.

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ___(JAN-MAR) ___(APR-JUNE) _X_(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		005
DATES ON WHICH SAMPLES WERE COLLECTED	----->		07/15/2003
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:10
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW	
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW		E	32,000	gal/day
Oil & Grease	200	G	1.2	mg/l
Biochemical Oxygen Demand	****	C	4.1	mg/l
Chemical Oxygen Demand	****	C	56	mg/l
Total Suspended Solids	****	C	8	mg/l
Temperature	60	G	19	deg C
pH Acidic	5.5	G	7	S.U.
pH Basic	11.5	G	7	S.U.

BOD detection limit = 2 mg/l
TSS detection limit = 10 mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X__(JULY-SEPT) ____(OCT-DEC)

Samples Collected By:

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		007					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		NA					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
STORMWATER ONLY								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) _X__(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		008				
DATES ON WHICH SAMPLES WERE COLLECTED	----->						
TIMES AT WHICH SAMPLES WERE COLLECTED	----->						
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW					
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW		E					gal/day
Oil & Grease	200	G					mg/l
Biochemical Oxygen Demand	****	C					mg/l
Chemical Oxygen Demand	****	C					mg/l
Temperature	60	G					deg C
Total Suspended Solids	****						mg/L
pH Acidic	5.5	G					S.U.
pH Basic	11.5	G					S.U.

*No flow this quarter

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ___(JAN-MAR) ___(APR-JUNE) _X_(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		010	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		07/15/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:30	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW		E	2,040,000	gal/day
Oil & Grease	200	G	8.1	mg/l
Biochemical Oxygen Demand	****	C	250	mg/l
Chemical Oxygen Demand	****	C	530	mg/l
Total Suspended Solids	****	C	165	mg/l
Temperature	60	G	19	deg C
pH Acidic	5.5	G	see attached	S.U.
pH Basic	11.5	G	see attached	S.U.
Chromium	5	C	0.008	mg/l
Copper	2.7	C	0.0412	mg/l
Nickel	2.3	C	0.0108	mg/l
Zinc	3	C	0.0944	mg/l

Mallinckrodt pH Monitoring for SP010: July 2003				
Date	**Time**	**pH**	**Total for Event in Minutes**	**Month-Year**
7/2/03	12:26:01	4.5	2	July-03
7/2/03	12:30:01	3.9	2	July-03
7/3/03	14:14:01	5.3		July-03
7/3/03	14:16:01	2.9		July-03
7/3/03	14:18:01	2.1		July-03
7/3/03	14:20:01	1.8		July-03
7/3/03	14:22:01	2.1		July-03
7/3/03	14:24:01	3.5	12	July-03
7/3/03	19:02:01	3		July-03
7/3/03	19:04:01	2.8		July-03
7/3/03	19:06:01	3.1		July-03
7/3/03	19:08:01	4.2	8	July-03
7/4/03	8:24:01	4.1	2	July-03
7/4/03	8:28:01	4.5		July-03
7/4/03	8:30:01	2.5		July-03
7/4/03	8:32:01	2		July-03
7/4/03	8:34:01	2.1		July-03
7/4/03	8:36:01	2.4	10	July-03
7/9/03	13:12:01	3.8		July-03
7/9/03	13:14:01	3.9		July-03
7/9/03	13:16:01	3.9	6	July-03
7/17/03	13:00:01	3.9	2	July-03
7/17/03	13:06:01	3.9	2	July-03
7/23/03	9:52:01	0.1		July-03
7/23/03	9:54:01	0.3	4	July-03
7/23/03	9:58:01	3.9	2	July-03
7/26/03	12:50:01	11.7		July-03
7/26/03	12:52:01	12		July-03
7/26/03	12:54:01	12.1		July-03
7/26/03	12:56:01	12.1		July-03
7/26/03	12:58:01	12.1		July-03
7/26/03	13:00:01	12.1		July-03
7/26/03	13:02:01	12.1		July-03
7/26/03	13:04:01	12.1		July-03
7/26/03	13:06:01	11.9		July-03
7/26/03	13:08:01	11.6	20	July-03
7/27/03	0:10:01	11.8		July-03
7/27/03	0:12:01	12.2		July-03
7/27/03	0:14:01	12.3		July-03
7/27/03	0:16:01	12.3		July-03
7/27/03	0:18:01	12.3		July-03
7/27/03	0:20:01	12.3		July-03
7/27/03	0:22:01	12.3		July-03
7/27/03	0:24:01	12.2		July-03
7/27/03	0:26:01	12.2		July-03
7/27/03	0:28:01	12.2		July-03
7/27/03	0:30:01	12		July-03
7/27/03	0:32:01	11.8		July-03
7/27/03	0:34:01	11.6	26	July-03
7/31/03	11:14:01	4.3	2	July-03
7/31/03	11:18:01	3.9	2	July-03
		July Total	102	

Mallinckrodt pH Monitoring for SP010: August 2003

Date	Time	pH	Total for Event in Minutes		Date	Time	pH	Event Time	Total for Event in Minutes
8/5/03	14:40:01	0	2		8/15/03	10:04:01	4.3	2	
8/8/03	13:44:01	3.8	2		8/15/03	10:06:01	4.3	2	4
8/8/03	13:48:01	4			8/15/03	10:10:01	4	2	2
8/8/03	13:50:01	4	4		8/15/03	13:58:01	0	2	2
8/9/03	7:40:01	4.3			8/18/03	14:34:01	11.6	2	
8/9/03	7:42:01	3.6			8/18/03	14:36:01	11.6	2	4
8/9/03	7:44:01	3.3			8/18/03	21:48:01	11.6	2	
8/9/03	7:46:01	3			8/18/03	21:50:01	11.6	2	
8/9/03	7:48:01	2.9			8/18/03	21:52:01	11.6	2	
8/9/03	7:50:01	2.8			8/18/03	21:54:01	11.6	2	8
8/9/03	7:52:01	2.7			8/19/03	3:56:01	11.7	2	
8/9/03	7:54:01	2.7			8/19/03	3:58:01	11.7	2	
8/9/03	7:56:01	2.6			8/19/03	4:00:01	11.7	2	
8/9/03	7:58:01	2.5			8/19/03	4:02:01	11.7	2	
8/9/03	8:00:01	2.4			8/19/03	4:04:01	11.7	2	
8/9/03	8:02:01	2.4			8/19/03	4:06:01	11.6	2	12
8/9/03	8:04:01	2.4			8/19/03	15:00:01	11.6	2	
8/9/03	8:06:01	2.4			8/19/03	15:02:01	11.6	2	
8/9/03	8:08:01	2.3			8/19/03	15:04:01	11.6	2	6
8/9/03	8:10:01	2.3			8/20/03	9:24:01	11.7	2	
8/9/03	8:12:01	2.3			8/20/03	9:26:01	11.8	2	
8/9/03	8:14:01	2.3			8/20/03	9:28:01	11.8	2	
8/9/03	8:16:01	2.4			8/20/03	9:30:01	11.7	2	
8/9/03	8:18:01	2.5			8/20/03	9:32:01	11.7	2	
8/9/03	8:20:01	2.5			8/20/03	9:34:01	11.7	2	
8/9/03	8:22:01	2.6			8/20/03	9:36:01	11.6	2	
8/9/03	8:24:01	2.7			8/20/03	9:38:01	11.6	2	16
8/9/03	8:26:01	2.7			8/21/03	7:50:01	11.7	2	
8/9/03	8:28:01	2.8			8/21/03	7:52:01	11.8	2	
8/9/03	8:30:01	2.9			8/21/03	7:54:01	11.8	2	
8/9/03	8:32:01	3			8/21/03	7:56:01	11.7	2	
8/9/03	8:34:01	3.1			8/21/03	7:58:01	11.6	2	10
8/9/03	8:36:01	3.2			8/21/03	11:02:01	3.9	2	2
8/9/03	8:38:01	3.5			8/21/03	11:08:01	4	2	
8/9/03	8:40:01	4			8/21/03	11:10:01	4.3	2	4
8/9/03	8:42:01	4.6			8/28/03	13:12:01	4	2	
8/9/03	8:44:01	5.2	66	*previously	8/28/03	13:14:01	4	2	4
				reported	8/28/03	13:18:01	4	2	2
					8/28/03	13:36:01	4.6	2	2
					8/31/03	20:04:01	3.7	2	2
							Aug Total		154

Mallinckrodt pH Monitoring for SP010: September 2003

Date	Time	pH	Total for Event in Minutes		Date	Time	pH	Total for Event in Minutes		
9/1/03	7:52:01	5.4	2		9/18/03	5:58:01	2.2			
9/4/03	9:28:01	4.2	2		9/18/03	6:00:01	2.2			
9/4/03	9:32:01	4	2		9/18/03	6:02:01	2.2			
9/4/03	17:38:01	11.6			9/18/03	6:04:01	2.2			
9/4/03	17:40:01	11.6			9/18/03	6:06:01	2.2			
9/4/03	17:42:01	11.6			9/18/03	6:08:01	2.2			
9/4/03	17:44:01	11.6	8		9/18/03	6:10:01	2.2			
9/5/03	7:54:01	5.4			9/18/03	6:12:01	2.2			
9/5/03	7:56:01	5.2			9/18/03	6:14:01	2.3			
9/5/03	7:58:01	4.9			9/18/03	6:16:01	2.3			
9/5/03	8:00:01	4.7	8		9/18/03	6:18:01	5	82	*previously reported	
9/11/03	14:48:01	4.2	2		9/19/03	10:24:01	4.2	2		
9/11/03	14:52:01	4	2		9/19/03	10:30:01	3.9	2		
9/15/03	10:38:01	0	2		9/25/03	9:26:01	5.3			
9/15/03	10:50:01	0	2		9/25/03	9:28:01	4.9	4		
9/16/03	7:10:01	4.2			9/25/03	10:02:01	4.1			
9/16/03	7:12:01	3.2			9/25/03	10:04:01	4	4		
9/16/03	7:14:01	4			9/25/03	10:10:01	4			
9/16/03	7:16:01	4.4			9/25/03	10:12:01	3.9	2		
9/16/03	7:18:01	4.7			9/25/03	10:18:01	12.7			
9/16/03	7:20:01	5			9/25/03	10:20:01	12.7			
9/16/03	7:22:01	5.2			9/25/03	10:22:01	12.7			
9/16/03	7:24:01	5.4	16		9/25/03	10:24:01	12.6			
9/18/03	4:58:01	4			9/25/03	10:26:01	12.6			
9/18/03	5:00:01	3			9/25/03	10:28:01	12.5			
9/18/03	5:02:01	2.6			9/25/03	10:30:01	12.5			
9/18/03	5:04:01	2.4			9/25/03	10:32:01	12.4			
9/18/03	5:06:01	2.2			9/25/03	10:34:01	12.3			
9/18/03	5:08:01	2.1			9/25/03	10:36:01	12.3			
9/18/03	5:10:01	2			9/25/03	10:38:01	12.2			
9/18/03	5:12:01	2			9/25/03	10:40:01	12.1			
9/18/03	5:14:01	2			9/25/03	10:42:01	12.1			
9/18/03	5:16:01	2			9/25/03	10:44:01	12			
9/18/03	5:18:01	2			9/25/03	10:46:01	12			
9/18/03	5:20:01	2			9/25/03	10:48:01	12			
9/18/03	5:22:01	2			9/25/03	10:50:01	11.9			
9/18/03	5:24:01	2			9/25/03	10:52:01	11.8			
9/18/03	5:26:01	2			9/25/03	10:54:01	11.8			
9/18/03	5:28:01	2			9/25/03	10:56:01	11.8			
9/18/03	5:30:01	2			9/25/03	10:58:01	11.8			
9/18/03	5:32:01	2			9/25/03	11:00:01	11.8			
9/18/03	5:34:01	2			9/25/03	11:02:01	11.8	46		
9/18/03	5:36:01	2					Sep Tot	188		
9/18/03	5:38:01	2.1								
9/18/03	5:40:01	2.1								
9/18/03	5:42:01	2.1								
9/18/03	5:44:01	2.1								
9/18/03	5:46:01	2.1								
9/18/03	5:48:01	2.1								
9/18/03	5:50:01	2.1								
9/18/03	5:52:01	2.1								
9/18/03	5:54:01	2.1								
9/18/03	5:56:01	2.2								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ___(APR-JUNE) _X_(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		080	081	082	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		07/15/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:20			
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW				
PARAMETER	LIMIT		G=grab,C=compo	G=grab,C=composite,M=measured flow,E=e		UNITS
FLOW		E	10,775			gal/day
Oil & Grease	200	G	1			mg/l
Biochemical Oxygen Demand	****	C	12.1			mg/l
Chemical Oxygen Demand	****	C	30.0			mg/l
Total Suspended Solids	****	C	13.0			mg/l
Temperature	60	G	19			deg C
pH Acidic	5.5	G	6.5			S.U.
pH Basic	11.5	G	X			S.U.
Total Toxic Organics	5.52	G				mg/l

RECEIVED
OCT 29 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) __X__(JULY-SEPT) ___(OCT-DEC

Samples Collected By: Malinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		---->		905		
DATES ON WHICH SAMPLES WERE COLLEC		---->		09/26/2003		
TIMES AT WHICH SAMPLES WERE COLLECT		---->		14:00		
	LIMIT (ave)	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW			
PARAMETER	(gm/day)	(gm/day)		M=measured flow	UNITS	Lab results mg/L
FLOW			M	442	gal/day	
Chloromethane	52.41	140.56	G	0.002	gm/day	0.001
Vinyl Chloride	46.22	81.96	G	0.017	gm/day	0.01
Chloroethane	52.41	140.56	G	0.002	gm/day	0.001
Methylene Chloride	17.15	81	G	0.001	gm/day	0.0005
Chloroform	52.89	154.86	G	0.000	gm/day	0.000025
1,1-Dichloroethane	10.48	28.11	G	0.001	gm/day	0.0005
1,2-Dichloroethane	85.77	273.51	G	0.001	gm/day	0.0005
1,1-Dichloroethene	10.48	28.59	G	0.001	gm/day	0.0005
1,2-Dichloropropane	93.39	378.33	G	0.001	gm/day	0.0005
Carbon Tetrachloride	67.66	181.07	G	0.001	gm/day	0.0005
cis-1,3-Dichloropropene	93.39	378.33	G	0.001	gm/day	0.0005
trans-1,3-Dichloropropene	93.39	378.33	G	0.001	gm/day	0.0005
trans-1,2-Dichloroethene	11.91	31.45	G	0.001	gm/day	0.0005
1,1,1-Trichloroethane	10.48	28.11	G	0.001	gm/day	0.0005
1,1,2-Trichloroethane	15.25	60.51	G	0.001	gm/day	0.0005
Benzene	27.16	63.85	G	0.001	gm/day	0.0005
Toluene	13.34	35.26	G	0.001	gm/day	0.0005
Trichloroethene	12.39	32.88	G	0.001	gm/day	0.0005
Ethylbenzene	67.66	181.07	G	0.001	gm/day	0.0005
Tetrachloroethene	24.78	78.14	G	0.001	gm/day	0.0005
Chlorobenzene	67.66	181.07	G	0.001	gm/day	0.0005
1,3-Dichlorobenzene	67.66	181.07	G	0.001	gm/day	0.0005
1,2-Dichlorobenzene	93.39	378.33	G	0.001	gm/day	0.0005
1,4-Dichlorobenzene	67.66	181.07	G	0.001	gm/day	0.0005
2-Nitrophenol	30.97	110.07	G	0.017	gm/day	0.01
4-Nitrophenol	77.19	274.46	G	0.084	gm/day	0.05
2-Methyl-4,6-dinitrophenol	37.17	131.99	G	0.008	gm/day	0.005
Hexachloroethane	93.39	378.33	G	0.017	gm/day	0.01
Nitrobenzene	1065.91	3050.49	G	0.017	gm/day	0.01
1,2,4-Trichlorobenzene	93.39	378.33	G	0.017	gm/day	0.01
Dimethyl phthalate	9.05	22.4	G	0.017	gm/day	0.01
Hexachlorobutadiene	67.66	181.066	G	0.017	gm/day	0.01
Diethyl phthalate	21.92	53.84	G	0.017	gm/day	0.01
Hexachlorobenzene	93.39	378.33	G	0.017	gm/day	0.01
Di-n-butyl phthalate	9.53	20.49	G	0.017	gm/day	0.01
Bis(2-ethylhexyl)phthalate	45.27	122.93	G	0.011	gm/day	0.0067
Naphthalene	9.05	22.4	G	0.017	gm/day	0.01
Phenanthrene	9.05	22.4	G	0.017	gm/day	0.01
Fluorene	9.05	22.4	G	0.017	gm/day	0.01
Anthracene	9.05	22.4	G	0.017	gm/day	0.01
Acenapthene	9.05	22.4	G	0.017	gm/day	0.01
Fluoranthene	10.48	25.73	G	0.017	gm/day	0.01
Pyrene	9.53	22.87	G	0.017	gm/day	0.01

Shaded values represent detection limits

LAB RESULTS

All lab results were non detect. Reporting or method detection limits were used as lab results.

MALLINCKRODT CHEMICAL INC

Client Sample ID: SP905

GC/MS Volatiles

Lot-Sample #...: F3I300287-001 **Work Order #...:** F1GGJ1AA **Matrix.....:** WATER
Date Sampled...: 09/26/03 14:00 **Date Received..:** 09/30/03
Prep Date.....: 10/03/03 **Analysis Date..:** 10/03/03
Prep Batch #...: 3279264 **Analysis Time..:** 22:54
Dilution Factor: 1

Method.....: CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Benzene	ND	5.0	ug/L	0.11
Carbon tetrachloride	ND	5.0	ug/L	0.14
Chlorobenzene	ND	5.0	ug/L	0.12
Chloroethane	ND	10	ug/L	0.56
Chloroform	**0.25 J**	**5.0**	**ug/L**	**0.12**
Chloromethane	ND	10	ug/L	0.23
1,2-Dichlorobenzene	ND	5.0	ug/L	0.87
1,3-Dichlorobenzene	ND	5.0	ug/L	0.52
1,4-Dichlorobenzene	ND	5.0	ug/L	0.39
1,1-Dichloroethane	ND	5.0	ug/L	0.21
1,2-Dichloroethane	ND	5.0	ug/L	0.14
trans-1,2-Dichloroethene	ND	5.0	ug/L	0.31
1,1-Dichloroethene	ND	5.0	ug/L	0.68
1,2-Dichloropropane	ND	5.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	5.0	ug/L	0.15
trans-1,3-Dichloropropene	ND	5.0	ug/L	0.53
Ethylbenzene	ND	5.0	ug/L	0.38
Methylene chloride	ND	5.0	ug/L	2.6
Tetrachloroethene	ND	5.0	ug/L	0.20
Toluene	ND	5.0	ug/L	0.59
1,1,1-Trichloroethane	ND	5.0	ug/L	0.11
1,1,2-Trichloroethane	ND	5.0	ug/L	0.77
Trichloroethene	ND	5.0	ug/L	0.060
Vinyl chloride	ND	10	ug/L	0.64

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	89	(75 - 131)
Toluene-d8	98	(84 - 115)
4-Bromofluorobenzene	83	(69 - 115)

NOTE(S):

J Estimated result. Result is less than RL.

MALLINCKRODT CHEMICAL INC

Client Sample ID: SP905

GC/MS Semivolatiles

Lot-Sample #...: F3I300287-001 **Work Order #...:** F1GGJ1AC **Matrix.....:** WATER
Date Sampled...: 09/26/03 14:00 **Date Received..:** 09/30/03
Prep Date.....: 10/01/03 **Analysis Date..:** 10/04/03
Prep Batch #...: 3274401 **Analysis Time..:** 07:59
Dilution Factor: 1

Method.....: CFR136A 625

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	ND	10	ug/L	0.35
Anthracene	ND	10	ug/L	0.39
bis(2-Ethylhexyl) phthalate	**6.7 J**	**10**	**ug/L**	**2.7**
Di-n-butyl phthalate	ND	10	ug/L	0.47
Diethyl phthalate	ND	10	ug/L	0.24
Dimethyl phthalate	ND	10	ug/L	0.68
4,6-Dinitro-2-methylphenol	ND	50	ug/L	0.53
Fluoranthene	ND	10	ug/L	0.44
Fluorene	ND	10	ug/L	0.38
Hexachlorobenzene	ND	10	ug/L	0.47
Hexachlorobutadiene	ND	10	ug/L	0.41
Hexachloroethane	ND	10	ug/L	0.24
Naphthalene	ND	10	ug/L	0.30
Nitrobenzene	ND	10	ug/L	0.34
2-Nitrophenol	ND	10	ug/L	0.64
4-Nitrophenol	ND	50	ug/L	0.81
Phenanthrene	ND	10	ug/L	0.40
Pyrene	ND	10	ug/L	0.46
1,2,4-Trichloro-benzene	ND	10	ug/L	0.45

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	75	(11 - 121)
2-Fluorophenol	57	(10 - 115)
2,4,6-Tribromophenol	77	(10 - 120)
Nitrobenzene-d5	79	(10 - 118)
Phenol-d5	57	(10 - 115)
Terphenyl-d14	44	(10 - 124)

NOTE(S):

J Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: F3I300287 Work Order #...: F1V5Q1AC Matrix.....: WATER
LCS Lot-Sample#: F3J060000-264
Prep Date.....: 10/03/03 Analysis Date..: 10/03/03
Prep Batch #...: 3279264 Analysis Time..: 22:04
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Bromodichloromethane	20.0	17.3	ug/L	86	CFR136A 624
Bromoform	20.0	18.6	ug/L	93	CFR136A 624
Bromomethane	20.0	9.93	ug/L	50	CFR136A 624
Dibromochloromethane	20.0	18.9	ug/L	95	CFR136A 624
* 2-Chloroethyl vinyl ether	~~20.0~~ 0.0	0.0	ug/L	0.0	CFR136A 624
1,1,2,2-Tetrachloroethane	20.0	18.0	ug/L	90	CFR136A 624
Trichlorofluoromethane	20.0	12.3	ug/L	61	CFR136A 624
1,1-Dichloroethene	20.0	16.3	ug/L	82	CFR136A 624
Trichloroethene	20.0	18.7	ug/L	93	CFR136A 624
Benzene	20.0	17.5	ug/L	88	CFR136A 624
Toluene	20.0	17.6	ug/L	88	CFR136A 624
Chlorobenzene	20.0	19.2	ug/L	96	CFR136A 624
Carbon tetrachloride	20.0	16.6	ug/L	83	CFR136A 624
Chloroethane	20.0	11.4	ug/L	57	CFR136A 624
Chloroform	20.0	17.6	ug/L	88	CFR136A 624
Chloromethane	20.0	5.10	ug/L	26	CFR136A 624
1,2-Dichlorobenzene	20.0	19.0	ug/L	95	CFR136A 624
1,3-Dichlorobenzene	20.0	19.2	ug/L	96	CFR136A 624
1,4-Dichlorobenzene	20.0	18.9	ug/L	94	CFR136A 624
1,1-Dichloroethane	20.0	16.5	ug/L	83	CFR136A 624
1,2-Dichloroethane	20.0	16.0	ug/L	80	CFR136A 624
trans-1,2-Dichloroethene	20.0	18.4	ug/L	92	CFR136A 624
1,2-Dichloropropane	20.0	17.3	ug/L	86	CFR136A 624
cis-1,3-Dichloropropene	20.0	17.2	ug/L	86	CFR136A 624
trans-1,3-Dichloropropene	20.0	17.1	ug/L	85	CFR136A 624
Ethylbenzene	20.0	18.6	ug/L	93	CFR136A 624
Methylene chloride	20.0	16.6	ug/L	83	CFR136A 624
Tetrachloroethene	20.0	18.3	ug/L	92	CFR136A 624
1,1,1-Trichloroethane	20.0	16.9	ug/L	84	CFR136A 624
1,1,2-Trichloroethane	20.0	17.8	ug/L	89	CFR136A 624
Vinyl chloride	20.0	7.26	ug/L	36	CFR136A 624

MW 10.7.03

(Continued on next page)

* compound not added to spike mix.

MW 10.7.03

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	____(JAN-MAR) ____(APR-JUNE) _X_(JULY-SEPT) ___(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		912
DATES ON WHICH SAMPLES WERE COLLECTED	----->		See attached
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		

PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW		M	See attached	gal/day
DMAC (daily max)	7091	C	See attached	lb/day
DMAC (monthly average)	5459	C	See attached	lb/day
Dimethyl Sulfide(daily average)	*	C	See attached	lb/day
* Monitoring requirement only.				

DMAC Analysis and Mass Loadings						
Jul-03						
		SP 912 - Bldg 504		SP 926 - Bldg. 505 sump		
Date	Flow	DMAC		DMAC		
	(gal/day)	mg/l	lb/day	mg/l		
01-Jul						
02-Jul						
03-Jul	62050	1,800	933	<5		
04-Jul						
05-Jul						
06-Jul						
07-Jul						
08-Jul						
09-Jul						
10-Jul						
11-Jul	62516	3,700	1,933	<5		
12-Jul						
13-Jul						
14-Jul						
15-Jul						
16-Jul						
17-Jul	84167	1,200	844	<5		
18-Jul						
19-Jul						
20-Jul						
21-Jul						
22-Jul						
23-Jul						
24-Jul	97672	2,100	1,714	<5		
25-Jul						
26-Jul						
27-Jul						
28-Jul						
29-Jul						
30-Jul						
31-Jul	97039	1,600	1,297	<5		
Avg (wei	80,689	2,080	1,402	<5		
Max:	97,672	3,700	1,933	<5		
Min:	62,050	1,200	844	<5		
Monthly	n/a	n/a	5,459	<5		

DMAC and DMS Analysis and Mass Loadings
Aug-03

		SP 912 - Bldg 504		SP 926 - Bldg 505 sump	
Date	**Flow**	**DMAC**		**DMAC**	
	(gal/day)	**mg/l**	**lb/day**	**mg/l**	
01-Aug					
02-Aug					
03-Aug					
04-Aug					
05-Aug					
06-Aug					
07-Aug	87098	1,800	1,310	<5	
08-Aug					
09-Aug					
10-Aug					
11-Aug					
12-Aug					
13-Aug					
14-Aug	98038	1,200	983	<5	
15-Aug					
16-Aug					
17-Aug					
18-Aug					
19-Aug					
20-Aug					
21-Aug	83768	1900	1,330	<5	
22-Aug					
23-Aug					
24-Aug					
25-Aug					
26-Aug					
27-Aug					
28-Aug	78320	2,100	1,374	<5	
29-Aug					
30-Aug					
31-Aug					
Avg (wei	86,806	1,750	1,269	<5	
Max:	98,038	2,100	1,374	<5	
Min:	78,320	1,200	983	<5	
Monthly	n/a	n/a	5,459	<5	

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DMAC and DMS Analysis and Mass Loadings
Sep-03

Date	Flow (gal/day)	DMAC (SP 912 - Bldg 504) mg/l	DMAC (SP 912 - Bldg 504) lb/day	DMAC (SP 926 - Bldg 505 sump) mg/l
01-Sep				
02-Sep				
03-Sep				
04-Sep	79,593	1,500	998	<5
05-Sep				
06-Sep				
07-Sep				
08-Sep				
09-Sep				
10-Sep				
11-Sep	86,503	2,000	1,446	<5
12-Sep				
13-Sep				
14-Sep				
15-Sep				
16-Sep				
17-Sep				
18-Sep	55,880	7,200	3,362	<5
19-Sep				
20-Sep				
21-Sep				
22-Sep				
23-Sep				
24-Sep				
25-Sep	61,834	6,700	3,462	<5
26-Sep				
27-Sep				
28-Sep				
29-Sep				
30-Sep				
Avg (weig	70,952	4,350	2,579	<5
Max:	86,503	7,200	3,462	0
Min:	55,880	1,500	998	0
Monthly	n/a	n/a	5,459	<5
Daily Ma	n/a	n/a	7,091	<5

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:		Mallinckrodt Inc.							
Permit No.:		21120596-00							
Premise Address:		3600 North Second St., St. Louis, MO 63147							
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		__X__(JULY-SEP)	____(OCT-DEC)				
Samples Collected By:		Mallinckrodt Inc							
Analysis Performed By:		Lancaster Labs							
Part II: ANALYTICAL RESULTS OF SELF MONITORING									
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 914					July
DATES ON WHICH SAMPLES WERE COLLECTED			----->	07/01/2003	7/21/2003	07/23/2003	07/29/2003	07/30/2003	Monthly Avg
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	22:30	14:20	12:10	4:45	9:30	
SAMPLE TYPE				GRAB					
FLOW			E	450					
PARAMETER									
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	7/1/03 results					
Acetone	524.2	20.70	8.20	<0.300					
Benzene	524.2	3.00	0.70	<0.010					
Chlorobenzene	524.2	3.00	0.70	<0.010					
Chloroform	524.2	0.10	0.03	<0.010					
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010					
1,2-Dichloroethane	524.2	20.70	8.20	<0.010					
Ethyl Acetate	1666	20.70	8.20	0.0699 J					
n-Hexane	1666	3.00	0.70	<0.010					
Methylene chloride	524.2	3.00	0.70	<0.030					
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010					
Tetrahydrofuran	1666	9.20	3.40	<0.010					
Toluene	524.2	0.30	0.20	0.83	.0021 J	<0.0025	0.071	3	0.78
Xylenes	1666	3.00	0.70	<0.020					
Isobutyraldehyde	1666	20.70	8.20	<0.010					
n-Amyl acetate	1666	20.70	8.20	<0.010					
n-Butyl acetate	1666	20.70	8.20	<0.010					
Isopropyl acetate	1666	20.70	8.20	<0.010					
Methyl cellosolve	1671	275.00	59.70	<6.7					
Isopropyl ether	1666	20.70	8.20	<0.010					
n-Heptane	1666	3.00	0.70	<0.020					
Methyl formate	1666	20.70	8.20	<0.050					
Diethyl amine	1671	255.00	100.00	<17.0					
Triethyl amine	1671	255.00	100.00	<17.0					
Dilution by lab				1, 10, 100	10	25	5	1000	

SEE FTG 9/3/03 NOV.
FG

IN ECMS ALREADY.

2 INK L # 0395490

PUT IN ECMS VIA 8/28/03 SMR.
FG

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	_____(JAN-MAR)	____(APR-JUN)		__X__(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 915		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	07/01/2003		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	19:50		
SAMPLE TYPE				Grab		
FLOW			E	2,700		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result		
Acetone	524.2	20.70	8.20	<0.300		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	<0.010		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	<0.010		
n-Hexane	1666	3.00	0.70	<0.010		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010		
Tetrahydrofuran	1666	9.20	3.40	<0.010		
Toluene	524.2	0.30	0.20	<0.010		
Xylenes	1666	3.00	0.70	<0.020		
Isobutyraldehyde	1666	20.70	8.20	0.0114 J		
n-Amyl acetate	1666	20.70	8.20	<0.010		
n-Butyl acetate	1666	20.70	8.20	<0.010		
Isopropyl acetate	1666	20.70	8.20	<0.010		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.010		
n-Heptane	1666	3.00	0.70	<0.020		
Methyl formate	1666	20.70	8.20	<0.050		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by lab				1, 10, 100		

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:		Mallinckrodt Inc.												
Permit No.:		21120596-00												
Premise Address:		3600 North Second St., St. Louis, MO 63147												
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		_X_(JULY-SEP)	___(OCT-DEC)									
Samples Collected By:		Mallinckrodt Inc												
Analysis Performed By:		Lancaster Labs												

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 916										
DATES ON WHICH SAMPLES WERE COLLECTED			----->	07/01/2003	07/21/2003	07/22/2003	7/23/2003	07/24/2003	07/25/2003	07/26/2003	07/27/2003	07/28/2003	07/29/2003	07/30/2003
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	22:45	daily avg	daily avg	daily avg	daily avg	daily avg	daily avg	daily avg	daily avg	daily avg	daily avg
SAMPLE TYPE				Grab										
FLOW			E	800										
PARAMETER														
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Acetone	524.2	20.70	8.20	<0.300										
Benzene	524.2	3.00	0.70	<0.010										
Chlorobenzene	524.2	3.00	0.70	<0.010										
Chloroform	524.2	0.10	0.03	<0.010										
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010										
1,2-Dichloroethane	524.2	20.70	8.20	<0.010										
Ethyl Acetate	1666	20.70	8.20	<0.010										
n-Hexane	1666	3.00	0.70	<0.010										
Methylene chloride	524.2	3.00	0.70	<0.030										
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010										
Tetrahydrofuran	1666	9.20	3.40	<0.010										
Toluene	524.2	0.30	0.20	1.5	0.072	0.9867	0.1923	0.084	0.0017	0.0012	0.0036	0.0429	0.07	0.0505
Xylenes	1666	3.00	0.70	<0.020										
Isobutyraldehyde	1666	20.70	8.20	<0.010										
n-Amyl acetate	1666	20.70	8.20	<0.010										
n-Butyl acetate	1666	20.70	8.20	<0.010										
Isopropyl acetate	1666	20.70	8.20	<0.010										
Methyl cellosolve	1671	275.00	59.70	<6.7										
Isopropyl ether	1666	20.70	8.20	<0.010										
n-Heptane	1666	3.00	0.70	<0.020										
Methyl formate	1666	20.70	8.20	<0.050										
Diethyl amine	1671	255.00	100.00	<17.0										
Triethyl amine	1671	255.00	100.00	<17.0										
Dilution by Lab				1, 10, 100										
			July monthly avg - toluene		0.2732									

SEE FTG 9/3/03 NOV FG

LAUREADS IN ECMS

ZINKL # 0895489

IN ECMS VIA 8/29/03 SMR.

PUT IN ECMS VIA 8/28/03 SMR FG

IN BCUMS = ✓

SP914 / SP916 Toluene Sampling Project

Sample ID	Date Collected	Time Collected	SP914 Result	SP916 Result	SP916 Daily Avg
SP916-E10525	07/21/03	12:50		0.0720	
SP914-EB191	07/21/03	14:20	0.0021		0.0720
SP916-E10526	07/22/03	6:30		1.5000	
SP916-E10527	07/22/03	13:00		0.9600	
SP916-E10528	07/22/03	19:15		0.5000	0.9867
SP916-E10529	07/23/03	0:30		0.5600	
SP916-E10530	07/23/03	6:40		0.0620	
SP914-EB193	07/23/03	12:10	0.0010		
SP916-E10531	07/23/03	13:10		0.0660	
SP916-E10532	07/23/03	19:32		0.0810	0.1923
SP916-E10533	07/24/03	1:55		0.0220	
SP916-E10534	07/24/03	6:33		0.1100	
SP916-E10535	07/24/03	12:23		0.1200	0.0840
SP916-E10537	07/25/03	3:05		0.0010	
SP916-E10538	07/25/03	9:50		0.0031	
SP916-E10539	07/25/03	16:00		0.0010	0.0017
SP916-E10540	07/26/03	10:42		0.0012	0.0012
SP916-E10541	07/27/03	7:30		0.0010	
SP916-E10542	07/27/03	13:15		0.0089	
SP916-E10543	07/27/03	19:15		0.0010	0.0036
SP916-E10548	07/28/03	1:00		0.1300	
SP916-E10544	07/28/03	2:00		0.0035	
SP916-E10545	07/28/03	7:00		0.0010	
SP916-E10546	07/28/03	13:00		0.0010	
SP916-E10547	07/28/03	19:05		0.0790	0.0429
SP914-EB200	07/29/03	4:45	0.0710		
SP916-E10549	07/29/03	7:40		0.0630	
SP916-E10550	07/29/03	13:40		0.1200	
SP916-E10551	07/29/03	19:00		0.0270	0.0700
SP916-E10552	07/30/03	1:30		0.0640	
SP916-E10553	07/30/03	7:00		0.0370	
SP914-EB203	07/30/03	9:30	3.0000		0.0505

SP914 Original	0.8300	
SP916 Original		1.5000
Permitted Monthly Average	0.2000	0.2000
July Monthly Average	0.7808	0.2732

	METROPOLITAN ST. LOUIS SEWER DISTRICT						
	INDUSTRIAL USER SELF MONITORING REPORT						
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PART I: IDENTIFYING INFORMATION							
Company Name:		Mallinckrodt Inc.					
Permit No.:		21120596-00					
Premise Address:		3600 North Second St., St. Louis, MO 63147					
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		__X__(JULY-SEP)	____(OCT-DEC)		
Samples Collected By:		Mallinckrodt Inc					
Analysis Performed By:		Lancaster Labs					
Part II: ANALYTICAL RESULTS OF SELF MONITORING							
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 917			
DATES ON WHICH SAMPLES WERE COLLECTED			----->	07/02/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	9:00			
SAMPLE TYPE				Grab			
FLOW		E	5000 GPD				
PARAMETER							
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result			
Acetone	524.2	20.70	8.20	0.019			
Benzene	524.2	3.00	0.70	<0.0002			
Chlorobenzene	524.2	3.00	0.70	<0.0002			
Chloroform	524.2	0.10	0.03	0.0091			
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.0002			
1,2-Dichloroethane	524.2	20.70	8.20	<0.0002			
Ethyl Acetate	1666	20.70	8.20	<0.001			
n-Hexane	1666	3.00	0.70	<0.001			
Methylene chloride	524.2	3.00	0.70	<0.0006			
4-Methyl-2-pentanone	1666	20.70	8.20	0.195			
Tetrahydrofuran	1666	9.20	3.40	0.00133 J			
Toluene	524.2	0.30	0.20	0.029			
Xylenes	1666	3.00	0.70	<0.002			
Isobutyraldehyde	1666	20.70	8.20	<0.001			
n-Amyl acetate	1666	20.70	8.20	<0.001			
n-Butyl acetate	1666	20.70	8.20	<0.001			
Isopropyl acetate	1666	20.70	8.20	<0.001			
Methyl cellosolve	1671	275.00	59.70	<6.7			
Isopropyl ether	1666	20.70	8.20	<0.001			
n-Heptane	1666	3.00	0.70	<0.002			
Methyl formate	1666	20.70	8.20	<0.005			
Diethyl amine	1671	255.00	100.00	<17.0			
Triethyl amine	1671	255.00	100.00	<17.0			
Dilution factor by lab				1, 2			

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
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PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	_____(JAN-MAR)	____(APR-JUN)		__X__(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 918		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	N/A		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	N/A		
SAMPLE TYPE						
FLOW			E	0	NO FLOW	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly			
Acetone	524.2	20.70	8.20			
Benzene	524.2	3.00	0.70			
Chlorobenzene	524.2	3.00	0.70			
Chloroform	524.2	0.10	0.03			
1,2-Dichlorobenzene	524.2	20.70	8.20			
1,2-Dichloroethane	524.2	20.70	8.20			
Ethyl Acetate	1666	20.70	8.20			
n-Hexane	1666	3.00	0.70			
Methylene chloride	524.2	3.00	0.70			
4-Methyl-2-pentanone	1666	20.70	8.20			
Tetrahydrofuran	1666	9.20	3.40			
Toluene	524.2	0.30	0.20			
Xylenes	1666	3.00	0.70			
Isobutyraldehyde	1666	20.70	8.20			
n-Amyl acetate	1666	20.70	8.20			
n-Butyl acetate	1666	20.70	8.20			
Isopropyl acetate	1666	20.70	8.20			
Methyl cellosolve	1671	275.00	59.70			
Isopropyl ether	1666	20.70	8.20			
n-Heptane	1666	3.00	0.70			
Methyl formate	1666	20.70	8.20			
Diethyl amine	1671	255.00	100.00			
Triethyl amine	1671	255.00	100.00			
Dilution by lab						

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	METROPOLITAN ST. LOUIS SEWER DISTRICT					
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Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		_X_(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				SP 919		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	07/02/2003		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	9:15		
SAMPLE TYPE			----->	Grabs		
FLOW			E	6,000		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method		Avg Monthly Limit	7/2/03 Result		
Acetone	524.2	20.70	8.20	0.064		
Benzene	524.2	3.00	0.70	<0.001		
Chlorobenzene	524.2	3.00	0.70	<0.001		
Chloroform	524.2	0.10	0.03	0.0092		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001		
1,2-Dichloroethane	524.2	20.70	8.20	<0.001		
Ethyl Acetate	1666	20.70	8.20	<0.001		
n-Hexane	1666	3.00	0.70	<0.001		
Methylene chloride	524.2	3.00	0.70	<0.003		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001		
Tetrahydrofuran	1666	9.20	3.40	<0.001		
Toluene	524.2	0.30	0.20	<0.001		
Xylenes	1666	3.00	0.70	<0.002		
Isobutyraldehyde	1666	20.70	8.20	<0.001		
n-Amyl acetate	1666	20.70	8.20	<0.001		
n-Butyl acetate	1666	20.70	8.20	<0.001		
Isopropyl acetate	1666	20.70	8.20	<0.001		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.001		
n-Heptane	1666	3.00	0.70	<0.002		
Methyl formate	1666	20.70	8.20	<0.005		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by Lab				1, 10		

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	_____(JAN-MAR)	____(APR-JUN)		_X_(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 920	
DATES ON WHICH SAMPLES WERE COLLECTE			----->	07/02/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	13:30	
SAMPLE TYPE				Grabs	
FLOW			E	36,000	
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.030	
Benzene	524.2	3.00	0.70	<0.001	
Chlorobenzene	524.2	3.00	0.70	<0.001	
Chloroform	524.2	0.10	0.03	<0.001	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001	
1,2-Dichloroethane	524.2	20.70	8.20	<0.001	
Ethyl Acetate	1666	20.70	8.20	<0.001	
n-Hexane	1666	3.00	0.70	<0.001	
Methylene chloride	524.2	3.00	0.70	<0.003	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001	
Tetrahydrofuran	1666	9.20	3.40	<0.001	
Toluene	524.2	0.30	0.20	0.012	
Xylenes	1666	3.00	0.70	<0.002	
Isobutyraldehyde	1666	20.70	8.20	<0.001	
n-Amyl acetate	1666	20.70	8.20	<0.001	
n-Butyl acetate	1666	20.70	8.20	<0.001	
Isopropyl acetate	1666	20.70	8.20	<0.001	
Methyl cellosolve	1671	275.00	59.70	18 J	
Isopropyl ether	1666	20.70	8.20	<0.001	
n-Heptane	1666	3.00	0.70	<0.002	
Methyl formate	1666	20.70	8.20	<0.005	
Diethyl amine	1671	255.00	100.00	<17	
Triethyl amine	1671	255.00	100.00	<17	
Dilution by lab				1, 10	

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->	SP927
DATES ON WHICH SAMPLES WERE COLLECTED			---->	07/01/2003
TIMES AT WHICH SAMPLES WERE COLLECTED			---->	8:00
SAMPLE TYPE				Grab
FLOW			E	2,200
PARAMETER				
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result
Acetone	524.2	20.70	8.20	<0.300
Methylene chloride	524.2	3.00	0.70	<0.030
Ethyl Acetate	1666	20.70	8.20	<0.010
n-Amyl acetate	1666	20.70	8.20	<0.010
Isopropyl acetate	1666	20.70	8.20	<0.010
Dilution by lab				10, 100

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	____(JAN-MAR) ____(APR-JUN) __X__(JULY-SEP) ____(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->	SP928
DATES ON WHICH SAMPLES WERE COLLECTED			---->	07/01/2003
TIMES AT WHICH SAMPLES WERE COLLECTED			---->	3:10
SAMPLE TYPE				Grab
FLOW			E	2,200
PARAMETER				
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result
Acetone	524.2	20.70	8.20	<0.300
Benzene	524.2	3.00	0.70	<0.010
Chlorobenzene	524.2	3.00	0.70	<0.010
Chloroform	524.2	0.10	0.03	0.036 J
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010
1,2-Dichloroethane	524.2	20.70	8.20	<0.010
Ethyl Acetate	1666	20.70	8.20	<0.010
n-Hexane	1666	3.00	0.70	<0.010
Methylene chloride	524.2	3.00	0.70	<0.030
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010
Tetrahydrofuran	1666	9.20	3.40	<0.010
Toluene	524.2	0.30	0.20	0.014 J
Xylenes	1666	3.00	0.70	<0.020
Isobutyraldehyde	1666	20.70	8.20	0.0636 J
n-Amyl acetate	1666	20.70	8.20	<0.010
n-Butyl acetate	1666	20.70	8.20	<0.010
Isopropyl acetate	1666	20.70	8.20	<0.010
Methyl cellosolve	1671	275.00	59.70	<6.7
Isopropyl ether	1666	20.70	8.20	<0.010
n-Heptane	1666	3.00	0.70	<0.020
Methyl formate	1666	20.70	8.20	<0.050
Diethyl amine	1671	255.00	100.00	<17.0
Triethyl amine	1671	255.00	100.00	<17.0
Dilution				1, 10, 100

Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 080/081/082; Building 98

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
Peptides				MSD		n/a	No
Leuprolide	Pharmaceutical	07/01/2003	07/03/2003				
		07/07/2003	07/10/2003				
		07/14/2003	07/14/2003				
		0723/2003	07/25/2003				
		07/28/2003	08/01/2003				
		08/04/2003	08/08/2003				
		08/13/2003	08/15/2003				
		08/18/2003	08/20/2003				
		08/22/2003	08/22/2003				
		08/25/2003	08/25/2003				
		08/27/2003	08/29/2003				
		09/04/2003	09/05/2003				
		09/08/2003	09/09/2003				
		09/17/2003	09/19/2003				
		09/22/2003	09/25/2003				
Morphine Alkaloid	Narcotic	09/24/2003	09/24/2003				

Mallinckrodt, Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Points 917; Building 97

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF- Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Meperidine HCl	Pharmaceutical	07/01/03	07/18/03	MSD	NA	No	No
Hydrocodone	Pharmaceutical	07/19/03	08/23/03	MSD	NA	No	No
Meperidine HCl	Pharmaceutical	08/25/03	09/15/03	MSD	NA	No	No
Methylphenidate HCl	Pharmaceutical	07/01/03	07/06/03	MSD	NA	No	No
Thebaine from Glaxo	Pharmaceutical	07/07/03	08/04/03	MSD	NA	No	No
Thebaine Alkaloid from Bitartrate	Pharmaceutical	08/04/03	08/24/03	MSD	NA	No	No
Diphenoxylate HCl	Pharmaceutical	08/25/03	09/14/03	MSD	NA	No	No
Thebaine SFH	Pharmaceutical	09/15/03	09/24/03	MSD	NA	No	No
Methylphenidate HCl	Pharmaceutical	09/25/03	09/30/03	MSD	NA	No	No

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Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

✓ DW
✓ FG 9/3/3

August 21, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Corrective Actions for SP914 and SP916
Permit No. 21120596-00

This letter is in follow-up to Mallinckrodt's corrective actions regarding the above sample points.

On July 17th, I notified you by phone that samples obtained on July 1st (SP914 @22:30 and SP916 @22:45) had failed toluene at 0.83 and 1.5 mg/L respectively. These results are above the maximum daily limit of 0.3 and the monthly average of 0.2 mg/L.

Initial investigations into the failure at SP914 indicated that a dip tube normally used for toluene transfer was used to transfer alcohol, thereby contaminating the alcohol. SP914 was sampled on four additional days in July, with the first three samples passing and the final sample collected July 30th failing for toluene. The July 30th failure at 3.0 mg/L was phoned into you on August 7th. The monthly average for SP914 was 0.83 mg/L. Mallinckrodt has since found toluene contamination in the alcohol process that discharges at SP914. Since this is not a high volume discharge (average 450 gpd), Mallinckrodt has decided to route this wastewater discharge to the central PEG treatment system and eliminate the SP914 discharge. Due to being in the first month of the current six month period used to calculate SNC, Mallinckrodt's actions are in avoidance of any SNC determination by MSD.

← OK - WE HAD DISCUSSED ON TELEPHONE. -DMM

At SP916, a recovery batch was being processed and was identified as the source of toluene in the July 1st sample. Future recovery batches will discharge the wastewater to the PEG treatment system. Typical batches will continue to discharge through SP916.

For SP916, samples were obtained on 10 additional days in July. The daily average of 0.9867 mg/L toluene in the July 22nd samples exceeded the daily maximum, as did a single sample on July 23rd at 0.56 mg/L. These exceedances were reported to you on July 29th and July 31st, respectively. Nine out of the ten sampling days passed, but the monthly average for SP916 was 0.2732 mg/L. Further adjustment of processing time and temperature have been instituted and this sample point demonstrated compliance in August with toluene at <0.001 mg/L toluene (August 5th at 06:55).

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I understand that MSD will visit the plant to verify the status of these actions. If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger
Principal HSE Engineer

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SP914 / SP916 Toluene Sampling Project

Sample ID	Date Collected	Time Collected	Date Shipped	Results Due	SP914 Result	SP916 Result	SP916 Daily Avg	Other Result
SP916-E10525	07/21/03	12:50	07/22/03	07/28/03	DM	0.0720	MA	
SP914-EB191	07/21/03	14:20	07/22/03	07/28/03	0.0021	DM	0.0720	
SP916-E10526	07/22/03	6:30	07/22/03	07/28/03		1.5000		
SP916-E10527	07/22/03	13:00	07/22/03	07/28/03		0.9600	MA	
SP916-E10528	07/22/03	19:15	07/24/03	07/30/03		0.5000	0.9867	
SP916-E10529	07/23/03	0:30	07/24/03	07/30/03		0.5600		
SP916-E10530	07/23/03	6:40	07/24/03	07/30/03		0.0620		
T-107	07/23/03	12:00	07/24/03	07/30/03				320.0000 3A alcohol sample
SP914-EB193	07/23/03	12:10	07/24/03	07/30/03	0.0010			
SP916-E10531	07/23/03	13:10	07/24/03	07/30/03		0.0660		
SP916-E10532	07/23/03	19:32	07/24/03	07/30/03		0.0810	0.1923	
SP916-E10533	07/24/03	1:55	07/24/03	07/30/03		0.0220		
SP916-E10534	07/24/03	6:33	07/24/03	07/30/03		0.1100		
SP916-E10535	07/24/03	12:23	07/24/03	07/30/03		0.1200	0.0840	
SP916-E10537	07/25/03	3:05	07/30/03	08/04/03		0.0010		
SP916-E10538	07/25/03	9:50	07/30/03	08/04/03		0.0031		
SP916-E10539	07/25/03	16:00	07/30/03	08/04/03		0.0010	0.0017	
SP916-E10540	07/26/03	10:42	07/30/03	08/08/03		0.0012	0.0012	
SP916-E10541	07/27/03	7:30	07/30/03	08/08/03		0.0010		
SP916-E10542	07/27/03	13:15	07/30/03	08/08/03		0.0089		
SP916-E10543	07/27/03	19:15	07/30/03	08/08/03		0.0010	0.0036	
SP916-E10548	07/28/03	1:00	07/30/03	08/05/03		0.1300		
SP916-E10544	07/28/03	2:00	07/30/03	08/05/03		0.0035		
SP916-E10545	07/28/03	7:00	07/30/03	08/05/03		0.0010		
SP916-E10546	07/28/03	13:00	07/30/03	08/05/03		0.0010		
SP916-E10547	07/28/03	19:05	07/30/03	08/06/03		0.0790	0.0429	
SP914-EB200	07/29/03	4:45	07/30/03	08/06/03	0.0710			
GBW-01 (EB200A)	07/29/03	4:45	07/30/03	08/04/03				0.0010 Boiled water in jar
SP916-E10549	07/29/03	7:40	07/30/03	08/06/03		0.0630		
SP916-E10550	07/29/03	13:40	07/30/03	08/06/03		0.1200		
SP916-E10551	07/29/03	19:00	07/30/03	08/07/03		0.0270	0.0700	
SP916-E10552	07/30/03	1:30	07/30/03	08/07/03		0.0640		
SP916-E10553	07/30/03	7:00	07/30/03	08/07/03	DM	0.0370		
SP914-EB203	07/30/03	9:30	07/30/03	08/07/03	3.0000		0.0505	
SP914 Original					0.8300			
SP916 Original							1.5000	
Permitted Monthly Average					0.2000		0.2000	
July Monthly Average					0.7808		0.2732	

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Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

August 18, 2003

Karen Burke
Waste and Remediation Manager
MALLINCKRODT INC.
3600 N. Second Street
P.O. Box 470158
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street

Dear Ms. Burke:

Thank you for your August 14, 2003 letter advising us of the results of recent monitoring of your wastewater discharge. The following violations of permit limitations, terms or conditions were identified:

VIOLATIONS OF DISCHARGE LIMITATIONS:

SAMPLE POINT	MSD ORD. 8472 LIMIT	DATE	VIOLATIONS REPORTED IN AUGUST
010	No individual pH excursion longer than 60 minutes	08-09-03	One excursion of 64 minutes lower than 5.5 SU

SU = Standard pH Units

REQUIRED ACTION/RESPONSE:

Pursuant to the aforementioned correspondence, we understand that the origin of the pH excursion is being investigated. Please inform the District when the origin of the exceedence is identified and what remedial actions will be implemented to avoid future pH excursions.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

pc: suspense file

cc: Douglas Mendoza
Permit file

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Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

August 14, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: pH Excursion - PERMIT NO. 21120596-00

Dear Mr. Mendoza;

The purpose of this letter is to follow-up on our telephone conversation regarding the pH excursion on 08/09/03. On 08/11/03 the boilerhouse communicated that the plant had a pH excursion on 08/09/03. The cause of the pH excursion was due to the main breaker in the electrical substation that controls the neutralization system tripped. The plant diverted the low pH wastewaters to the plants catch tanks however, the Blending Tank, were the neutralization of the wastewaters actually occurs, continued to discharge to low pH wastewaters. The pH came back into range after 64 minutes. 8/12/3 NOV.

Plant electricians are still trying to determine what tripped the electrical substation. If you have any questions or require additional information, please contact me at (314) 654-1683.

Thank you,

Karen Burke

Karen Burke
Waste and Remediation Manager

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Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

September 2, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: Permit Violation – pH excursion 8/9/03
Permit No. 21120596-00

Dear Mr. Grabski:

This letter is in response to the Notice of Violation dated August 18, 2003 for a pH excursion at SP010 on August 9, 2003 for 64 minutes. An incident investigation was performed to determine the cause of this incident. A main breaker in an electrical substation tripped, shutting down power to the caustic pump used to adjust pH of the plant effluent. An electrical foreman and three electricians responded to the breaker trip. No problem was found and the breaker was closed. Two wastewater streams are combined and pH adjusted in a neutralization tank. The low pH stream was diverted into one of the plant's spill tanks, but the neutralization tank was full with pH<5.5 wastewater and continued to flow to MSD for 64 minutes. In the future, all wastewater will be diverted into the spill tanks to prevent out of range flow to MSD for periods greater than 60 minutes.

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

July 24, 2003

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT CHEMICAL INC.
3600 N. Second Street
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street

Dear Ms. Siebenberger:

Thank you for your July 21, 2003 letter advising us of the results of recent monitoring of your wastewater discharge. That letter accompanied the second quarter 2003 self-monitoring report required under the terms of the above referenced permit. The following violations of permit limitations, terms or conditions were identified:

VIOLATIONS OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMP PT	SAMPLE TYPE	PARAMETER	PERMIT LIMIT	LIMIT TYPE	VALUE REPORTED
04-17-03	1330	918	Grab	Chloroform	1.0 mg/l	DM	1.3 mg/l**
Apr 2003		918		Chloroform	0.03 mg/l	MA	1.3 mg/l**
04-14-03	0930	920	Grab	Toluene	0.3 mg/l	DM	0.99 mg/l**
Apr 2003		920		Toluene	0.2 mg/l	MA	0.99 mg/l**

mg/l = milligrams per liter
DM = Daily Maximum
MA = Monthly Average

The aforementioned monthly average values for sampling points 918 and 920 are the results of your samples collected on April 14 and 17, 2003. Since no additional sampling occurred in April, the results from these data sets constitutes the respective monthly averages.

REQUIRED ACTION/RESPONSE:

Pursuant to your correspondence, we acknowledge that Mallinckrodt has investigated the origins of the above exceedences and corrective remedial actions enacted. Furthermore, we recognize that several resampling events occurred subsequent to the above exceedences. The reported results of analysis are within permit limitations.

Refer to the enclosure for information on potential enforcement actions should noncompliance continue. The enclosure also explains the meaning of any asterisks which appear in the Value Reported column above. You should consider the percentages applicable to Significant Noncompliance when planning for additional sampling.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

pc: Suspense file

cc: Douglas Mendoza
Permit file

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Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

July 21, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2003 2nd Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Grabski:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 2nd quarter 2003. The following are status updates on three issues that have been previously communicated to Doug Mendoza.

OK
NO VIOLATION

SP912 - Due to equipment malfunction and vacation coverage, the weekly dimethylacetamide (DMAC) sample for SP912 was not collected the week of 4/20-26/03. A written contingency plan was implemented to prevent recurrence.

SP920 - April 14 sample failed toluene at 0.99 mg/L. This is the discharge of the PEG stripper. An investigation did not reveal a definitive cause for this failure. Process personnel are monitoring column conditions and the feed tanks. SP920 was resampled May 15 with passing toluene results of 0.17 mg/L and again on June 27 with toluene passing at 0.028 mg/L.

SP918 - April 17 sample of SP 918 failed chloroform at 1.3 mg/L. The likely cause of this failure was a misdirected wastewater discharge (one intended for the PEG stripper). The building has now locked access to the SP918 discharge lines, so that all discharges will need to be verified by the building foreman. The May and June resamples were passing at 0.016 mg/L (5/30/03) and <0.010 mg/L (6/8/03) chloroform respectively.

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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JUL 23 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☐(JAN-MAR) ☒(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	0

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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JUL 23 2003

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print/type name of signing official: Brian Donley

Title: Director, HSE Telephone: 314-654-1412

Signature: Date: 7/21/03

radrpt.doc 2/00

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

(A) If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[BLH] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 007, 082

(B.) If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[BLH] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit .

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

(D) If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[BLH] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 914, 915, 916

(E.) If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[BLH] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes conveyed by SP905.

(F.) Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[BLH] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufactu... process subject to Categorical Standards in 40 CFR 439. for SP005, 010, 080, 914, 915, 916, 917, 918, 919, 920 and 928.

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____ . I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing the last discharge monitoring report.

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B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: Brian Donley

Title: Director Health, Safety & Environmental Telephone: 314-654-1412

Signature: _____ Date: 7/21/03

SMF 10/93

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		001					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

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Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		002					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,800					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

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Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) __(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		---->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED		---->		04/23/2003		04/23/2003		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED		---->		7:25		7:15			
			RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW						
PARAMETER		LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW			M	20,939	M	15,833	E	5106	gal/day
Oil & Grease		200	G	13.3	G	36.4	E	(-) 0.000	mg/l
Biochemical Oxygen Demand		****	C	101	C	144	E	(-) 0.000	mg/l
Chemical Oxygen Demand		****	C	137	C	244	E	(-) 0.000	mg/l
Total Suspended Solids		****	C	45	C	115	E	(-) 0.000	mg/l
Temperature		60	G	23	G	23	E	23	deg C
pH Acidic		5.5	G	6.5	G	6.5	E	N/A	S.U.
pH Basic		11.5	G		G		E		S.U.

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Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		---->		005
DATES ON WHICH SAMPLES WERE COLLECTED		---->		04/23/2003
TIMES AT WHICH SAMPLES WERE COLLECTED		---->		7:35
			RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW	
PARAMETER	LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow	UNITS
FLOW		E	32,000	gal/day
Oil & Grease	200	G	1.2	mg/l
Biochemical Oxygen Demand	****	C	28.1	mg/l
Chemical Oxygen Demand	****	C	54	mg/l
Total Suspended Solids	****	C	7	mg/l
Temperature	60	G	27	deg C
pH Acidic	5.5	G	6	S.U.
pH Basic	11.5	G		S.U.

BOD detection limit = 2 mg/l

TSS detection limit = 10 mg/l

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Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By:

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		007					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		NA					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
STORMWATER ONLY								

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		008	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		05/24/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		7:25	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow	UNITS
FLOW		E	200,000	gal/day
Oil & Grease	200	G	78.0	mg/l
Biochemical Oxygen Demand	****	C	< 83.0	mg/l
Chemical Oxygen Demand	****	C	106.0	mg/l
Temperature	60	G	25.0	deg C
Total Suspended Solids	****		82.0	mg/L
pH Acidic	5.5	G	8.4	S.U.
pH Basic	11.5	G		S.U.

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MSD SAMPLE POINT REFERENCE NUMBERS	--->		008					
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TIMES AT WHICH SAMPLES WERE COLLECTED	--->		7:25					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	200,000	E		E		gal/day
Chloromethane KP		G	ND	G		G		mg/l
Vinyl Chloride KP		G	0.0031	G		G		mg/l
Bromomethane KP		G	ND	G		G		mg/l
Chloroethane		G	ND	G		G		mg/l
Methylene Chloride KP		G	0.004	G		G		mg/l
Chloroform KP		G	0.0065	G		G		mg/l
1,1-Dichloroethane KP		G	ND	G		G		mg/l
1,2-Dichloroethane		G	0.0016 KP	G		G		mg/l
1,1-Dichloroethene KP		G	ND	G		G		mg/l
1,2-Dichloropropane		G	ND	G		G		mg/l
Carbon Tetrachloride KP		G	ND	G		G		mg/l
cis-1,3-Dichloropropene		G	ND	G		G		mg/l
trans-1,3-Dichloropropene		G	ND	G		G		mg/l
trans-1,2-Dichloroethene		G	ND	G		G		mg/l
Dibromochloromethane KP		G	ND	G		G		mg/l
Bromodichloromethane KP		G	ND	G		G		mg/l
1,1,1-Trichloroethane KP		G	ND	G		G		mg/l
1,1,2-Trichloroethane KP		G	0.0041	G		G		mg/l
Benzene KP		G	0.00038	G		G		mg/l
Toluene KP		G	0.004	G		G		mg/l
Trichloroethene KP		G	0.00027	G		G		mg/l
Ethylbenzene KP		G	ND	G		G		mg/l
1,1,2,2-Tetrachloroethane KP		G	ND	G		G		mg/l
Tetrachloroethene		G	ND	G		G		mg/l
Chlorobenzene KP		G	ND	G		G		mg/l
1,3-Dichlorobenzene KP		G	ND	G		G		mg/l
1,2-Dichlorobenzene KP		G	ND	G		G		mg/l
1,4-Dichlorobenzene KP		G	ND	G		G		mg/l
Bromoform		G	ND	G		G		mg/l
2-Chloroethylvinylether		G	ND	G		G		mg/l
Acrolein KP		G	ND	G		G		mg/l
Acrylonitrile KP		G	ND	G		G		mg/l
Phenol KP		G	ND	G		G		mg/l
2-Chlorophenol KP		G	ND	G		G		mg/l
2,4-Dimethylphenol		G	ND	G		G		mg/l
2,4-Dichlorophenol KP		G	ND	G		G		mg/l
2-Nitrophenol KP		G	ND	G		G		mg/l
4-Nitrophenol KP		G	ND	G		G		mg/l
2,4-Dinitrophenol		G	ND	G		G		mg/l
2,4,6-Trichlorophenol		G	ND	G		G		mg/l
Pentachlorophenol		G	ND	G		G		mg/l
4-Chloro-3-methylphenol		G	ND	G		G		mg/l
2-Methyl-4,6-dinitrophenol		G	ND	G		G		mg/l
N-nitrosodimethylamine KP		G	ND	G		G		mg/l
Bis(2-chloroethyl)ether		G	ND	G		G		mg/l
Bis(2-chloroisopropyl)ether		G	ND	G		G		mg/l
N-nitrosodi-n-propylamine		G	ND	G		G		mg/l
Hexachloroethane KP		G	ND	G		G		mg/l
Nitrobenzene KP		G	ND	G		G		mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	--->		008					
DATES ON WHICH SAMPLES WERE COLLECTED	--->		05/24/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	--->		7:25					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	200,000	E		E		gal/day
Isophorone		G	ND	G		G		mg/l
Bis(2-chloroethoxy)methane		G	ND	G		G		mg/l
1,2,4-Trichlorobenzene		G	ND	G		G		mg/l
Dimethyl phthalate		G	ND	G		G		mg/l
Hexachlorobutadiene		G	ND	G		G		mg/l
Hexachlorocyclopentadiene		G	ND	G		G		mg/l
2-Chloronapthalene		G	ND	G		G		mg/l
2,6-Dinitrotoluene		G	ND	G		G		mg/l
2,4-Dinitrotoluene		G	ND	G		G		mg/l
4-Chlorophenyl-phenylether		G	ND	G		G		mg/l
4-Bromophenyl-phenylether		G	ND	G		G		mg/l
Diethyl phthalate		G	ND	G		G		mg/l
Hexachlorobenzene		G	ND	G		G		mg/l
N-nitrosodiphenylamine		G	ND	G		G		mg/l
1,2-Diphenylhydrazine		G	ND	G		G		mg/l
Di-n-butyl phthalate		G	ND	G		G		mg/l
3,3-Dichlorobenzidine		G	ND	G		G		mg/l
Bis(2-ethylhexyl)phthalate		G	ND	G		G		mg/l
Butyl benzyl phthalate		G	ND	G		G		mg/l
Di-n-octyl phthalate		G	ND	G		G		mg/l
Benzidine		G	ND	G		G		mg/l
Naphthalene		G	ND	G		G		mg/l
Phenanthrene		G	ND	G		G		mg/l
Fluorene		G	ND	G		G		mg/l
Anthracene		G	ND	G		G		mg/l
Acenapthene		G	ND	G		G		mg/l
Acenaphthylene		G	ND	G		G		mg/l
Benzo(a)pyrene		G	ND	G		G		mg/l
Chrysene		G	ND	G		G		mg/l
Fluoranthene		G	ND	G		G		mg/l
Pyrene		G	ND	G		G		mg/l
Benzo(a)anthracene		G	ND	G		G		mg/l
Benzo(b)fluoranthene		G	ND	G		G		mg/l
Benzo(k)fluoranthene		G	ND	G		G		mg/l
Dibenzo(a,h)anthracene		G	ND	G		G		mg/l
Benzo(g,h,i)perylene		G	ND	G		G		mg/l
Ideno(1,2,3-cd)pyrene		G	ND	G		G		mg/l
Total Toxic Organics	5.52	--	0.02395		0		0	mg/l
Shaded cells represent known absent or suspected absent								

NOTE: CHLOROFORM WAS THE ONLY QUANTIFIABLE COMPOUND. OTHER WITH REPORTED VALUES WERE ESTIMATED RESULTS. Results ALL OTHERS REPORTED WERE LABORATORY DETECTION LIMITS.

<0.01

MSD 019659

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		010	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		04/23/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:00	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow	UNITS
FLOW		E	2,040,000	gal/day
Oil & Grease	200	G	23.8	mg/l
Biochemical Oxygen Demand	****	C	1420	mg/l
Chemical Oxygen Demand	****	C	2260	mg/l
Total Suspended Solids	****	C	83	mg/l
Temperature	60	G	32	deg C
pH Acidic	5.5	G	see attached	S.U.
pH Basic	11.5	G	see attached	S.U.
Chromium	5	C	0.051	mg/l
Copper	2.7	C	0.0829	mg/l
Nickel	2.3	C	0.0221	mg/l
Zinc	3	C	0.276	mg/l

Mallinckrodt pH monitoring Sample Point 010 - April 2003					
Date	**Time**	**pH**	**Total for Event in Minutes**	**Month-Year**	
4/2/03	2:18:01 PM	4		April-03	
4/2/03	2:20:01 PM	4	4	April-03	
4/2/03	2:26:01 PM	4		April-03	
4/2/03	2:28:01 PM	4		April-03	
4/2/03	2:30:01 PM	4	6	April-03	
4/10/03	10:12:01 AM	4.1		April-03	
4/10/03	10:14:01 AM	3.9		April-03	
4/10/03	10:16:01 AM	3.8	6	April-03	
4/10/03	10:22:01 AM	4	2	April-03	
4/16/03	9:44:01 AM	4.8	2	April-03	
4/16/03	9:50:01 AM	4		April-03	
4/16/03	9:52:01 AM	4	4	April-03	
4/17/03	8:20:01 AM	0	2	April-03	
4/25/03	10:20:01 AM	4.7	2	April-03	
4/25/03	10:24:01 AM	3.8		April-03	
4/25/03	10:26:01 AM	4.2	4	April-03	
April Total			32		

Mallinckrodt pH monitoring Sample Point 010 - May 2003								
Date	Time	pH	Total for Event in Minutes	Month-Year				
5/2/03	10:00:01 AM	4.9	2	May-03				
5/2/03	10:28:01 AM	4.9	2	May-03				
5/2/03	11:00:01 AM	4	2	May-03				
5/2/03	11:04:01 AM	4	2	May-03				
5/2/03	11:08:01 AM	4	2	May-03				
5/3/03	8:08:01 PM	4.4		May-03				
5/3/03	8:10:01 PM	3.4		May-03				
5/3/03	8:12:01 PM	3		May-03				
5/3/03	8:14:01 PM	3		May-03				
5/3/03	8:16:01 PM	3		May-03				
5/3/03	8:18:01 PM	3.1	12	May-03				
5/4/03	11:44:01 PM	11.6	2	May-03				
5/4/03	11:54:01 PM	11.7		May-03				
5/4/03	11:56:01 PM	11.8		May-03				
5/4/03	11:58:01 PM	11.8		May-03				
5/5/03	12:00:01 AM	11.8	8	May-03				
5/5/03	12:00:01 AM	11.8		May-03				
5/5/03	12:02:01 AM	11.8		May-03				
5/5/03	12:04:01 AM	11.8		May-03				
5/5/03	12:06:01 AM	11.8		May-03				
5/5/03	12:08:01 AM	11.8		May-03				
5/5/03	12:10:01 AM	11.7		May-03				
5/5/03	12:12:01 AM	11.7		May-03				
5/5/03	12:14:01 AM	11.6	16	May-03				
5/5/03	9:56:01 AM	11.6		May-03				
5/5/03	9:58:01 AM	11.7		May-03				
5/5/03	10:00:01 AM	11.7	6	May-03				
5/5/03	10:04:01 AM	11.8		May-03				
5/5/03	10:06:01 AM	11.8		May-03				
5/5/03	10:08:01 AM	11.8		May-03				
5/5/03	10:10:01 AM	11.7		May-03				
5/5/03	10:12:01 AM	11.6		May-03				
5/5/03	10:14:01 AM	11.8		May-03				
5/5/03	10:16:01 AM	11.8		May-03				
5/5/03	10:18:01 AM	11.9		May-03				
5/5/03	10:20:01 AM	11.9		May-03				
5/5/03	10:22:01 AM	11.9		May-03				
5/5/03	10:24:01 AM	11.9		May-03				
5/5/03	10:26:01 AM	11.8		May-03				
5/5/03	10:28:01 AM	11.8		May-03				
5/5/03	10:30:01 AM	11.7		May-03				
5/5/03	10:32:01 AM	11.7		May-03				
5/5/03	10:34:01 AM	11.7		May-03				
5/5/03	10:36:01 AM	11.7		May-03				
5/5/03	10:38:01 AM	11.6		May-03				
5/5/03	10:40:01 AM	11.6		May-03				
5/5/03	10:42:01 AM	11.6	40	May-03				

5/6/03	8:52:01 AM	11.6		May-03				
5/6/03	8:54:01 AM	11.6	4	May-03				
5/8/03	10:18:01 AM	4.2		May-03				
5/8/03	10:20:01 AM	4.7		May-03				
5/8/03	10:22:01 AM	4.7	6	May-03				
5/8/03	10:26:01 AM	4.8		May-03				
5/8/03	10:28:01 AM	4.7		May-03				
5/8/03	10:30:01 AM	4		May-03				
5/8/03	10:32:01 AM	4.7		May-03				
5/8/03	10:34:01 AM	4.1		May-03				
5/8/03	10:36:01 AM	4		May-03				
5/8/03	10:38:01 AM	3.9		May-03				
5/8/03	10:40:01 AM	4		May-03				
5/8/03	10:42:01 AM	4		May-03				
5/8/03	10:44:01 AM	4		May-03				
5/8/03	10:46:01 AM	3.9		May-03				
5/8/03	10:48:01 AM	3.9		May-03				
5/8/03	10:50:01 AM	4		May-03				
5/8/03	10:52:01 AM	3.9		May-03				
5/8/03	10:54:01 AM	3.9		May-03				
5/8/03	10:56:01 AM	3.9		May-03				
5/8/03	10:58:01 AM	3.9		May-03				
5/8/03	11:00:01 AM	3.9		May-03				
5/8/03	11:02:01 AM	3.9		May-03				
5/8/03	11:04:01 AM	4.7		May-03				
5/8/03	11:06:01 AM	4.4		May-03				
5/8/03	11:08:01 AM	4.4		May-03				
5/8/03	11:10:01 AM	4.4		May-03				
5/8/03	11:12:01 AM	4.8	48	May-03				
5/8/03	11:14:01 AM	0		May-03				
5/8/03	11:16:01 AM	2.9		May-03				
5/8/03	11:18:01 AM	0.4		May-03				
5/8/03	11:20:01 AM	0.3		May-03				
5/8/03	11:22:01 AM	0.3		May-03				
5/8/03	11:24:01 AM	0.3		May-03				
5/8/03	11:26:01 AM	0.3		May-03				
5/8/03	11:28:01 AM	0.2		May-03				
5/8/03	11:30:01 AM	0.2		May-03				
5/8/03	11:32:01 AM	0.2		May-03				
5/8/03	11:34:01 AM	0.2		May-03				
5/8/03	11:36:01 AM	0.2		May-03				
5/8/03	11:38:01 AM	0.2		May-03				
5/8/03	11:40:01 AM	0.2		May-03				
5/8/03	11:42:01 AM	0.2		May-03				
5/8/03	11:44:01 AM	0.2		May-03				
5/8/03	11:46:01 AM	0.2		May-03				
5/8/03	11:48:01 AM	0.2		May-03				
5/8/03	11:50:01 AM	0.2		May-03				
5/8/03	11:52:01 AM	0.2		May-03				
5/8/03	11:54:01 AM	0.2		May-03				
5/8/03	11:56:01 AM	0.2		May-03				

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5/8/03	11:58:01 AM	0.2		May-03				
5/8/03	12:00:01 PM	0.2		May-03				
5/8/03	12:02:01 PM	0.2		May-03				
5/8/03	12:04:01 PM	0.2		May-03				
5/8/03	12:06:01 PM	0.2		May-03				
5/8/03	12:08:01 PM	0.2	56 *	May-03				
5/8/03	12:12:01 PM	4	2	May-03				
5/14/03	9:30:01 AM	4.1	2	May-03				
5/14/03	9:38:01 AM	4		May-03				
5/14/03	9:40:01 AM	4	4	May-03				
5/21/03	10:02:01 AM	4.1	2	May-03				
5/21/03	10:08:01 AM	4	2	May-03				
May Total			164					
*May 8 data (pH<0.2)has been subtracted from the total. This out of range pH was attributed to a failure								
in the pH probe wiring. It was replaced.								

Mallinckrodt pH monitoring Sample Point 010 - June 2003					
Date	Time	pH	Total for Event in Minutes	Month-Year	
6/4/03	9:34:01 AM	5.2		June-03	
6/4/03	9:36:01 AM	4.9		June-03	
6/4/03	9:38:01 AM	4.8		June-03	
6/4/03	9:40:01 AM	4.8	8	June-03	
6/4/03	9:46:01 AM	5		June-03	
6/4/03	9:48:01 AM	4		June-03	
6/4/03	9:50:01 AM	3.9	6	June-03	
6/4/03	10:02:01 AM	4.7		June-03	
6/4/03	10:04:01 AM	3.8		June-03	
6/4/03	10:06:01 AM	3.4		June-03	
6/4/03	10:08:01 AM	3.2		June-03	
6/4/03	10:10:01 AM	3.1		June-03	
6/4/03	10:12:01 AM	3.1		June-03	
6/4/03	10:14:01 AM	3.4		June-03	
6/4/03	10:16:01 AM	3.6		June-03	
6/4/03	10:18:01 AM	3.9		June-03	
6/4/03	10:20:01 AM	4.2	20	June-03	
6/12/03	10:38:01 AM	4.2		June-03	
6/12/03	10:40:01 AM	4.1	4	June-03	
6/12/03	10:44:01 AM	4.8		June-03	
6/12/03	10:46:01 AM	4		June-03	
6/12/03	10:48:01 AM	3.9	6	June-03	
6/12/03	10:54:01 AM	11.6		June-03	
6/12/03	10:56:01 AM	11.6		June-03	
6/12/03	10:58:01 AM	11.6	6	June-03	
6/14/03	1:32:01 AM	11.6		June-03	
6/14/03	1:34:01 AM	11.6		June-03	
6/14/03	1:36:01 AM	11.6		June-03	
6/14/03	1:38:01 AM	11.6	8	June-03	
6/20/03	10:48:01 AM	4.2	2	June-03	
6/20/03	10:52:01 AM	3.9	2	June-03	
6/22/03	12:04:01 AM	11.6		June-03	
6/22/03	12:06:01 AM	11.8		June-03	
6/22/03	12:08:01 AM	11.9		June-03	
6/22/03	12:10:01 AM	11.9		June-03	
6/22/03	12:12:01 AM	11.9		June-03	
6/22/03	12:14:01 AM	11.9		June-03	
6/22/03	12:16:01 AM	11.8		June-03	
6/22/03	12:18:01 AM	11.6	16	June-03	
6/24/03	10:52:01 PM	11.6		June-03	
6/24/03	10:54:01 PM	11.6		June-03	
6/24/03	10:56:01 PM	11.6		June-03	
6/24/03	10:58:01 PM	11.6		June-03	
6/24/03	11:00:01 PM	11.6		June-03	
6/24/03	11:02:01 PM	11.6		June-03	
6/24/03	11:04:01 PM	11.6		June-03	
6/24/03	11:06:01 PM	11.6		June-03	

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6/24/03	11:08:01 PM	11.6		June-03	
6/24/03	11:10:01 PM	11.6		June-03	
6/24/03	11:12:01 PM	11.6		June-03	
6/24/03	11:14:01 PM	11.6		June-03	
6/24/03	11:16:01 PM	11.6	26	June-03	
6/27/03	10:34:01 AM	4.3	2	June-03	
6/27/03	10:38:01 AM	4.2		June-03	
6/27/03	10:40:01 AM	3.9		June-03	
6/27/03	10:42:01 AM	3.8	6	June-03	
6/30/03	4:14:01 AM	11.6		June-03	
6/30/03	4:16:01 AM	11.7		June-03	
6/30/03	4:18:01 AM	11.7		June-03	
6/30/03	4:20:01 AM	11.7		June-03	
6/30/03	4:22:01 AM	11.7		June-03	
6/30/03	4:24:01 AM	11.7		June-03	
6/30/03	4:26:01 AM	11.7		June-03	
6/30/03	4:28:01 AM	11.8		June-03	
6/30/03	4:30:01 AM	11.9		June-03	
6/30/03	4:32:01 AM	11.9		June-03	
6/30/03	4:34:01 AM	11.9		June-03	
6/30/03	4:36:01 AM	11.9		June-03	
6/30/03	4:38:01 AM	11.9		June-03	
6/30/03	4:40:01 AM	12		June-03	
6/30/03	4:42:01 AM	12		June-03	
6/30/03	4:44:01 AM	11.9		June-03	
6/30/03	4:46:01 AM	11.8		June-03	
6/30/03	4:48:01 AM	11.6	36	June-03	
6/30/03	7:56:01 AM	4.1	2	June-03	
June Total			150		

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) _X__(APR-JUNE) __(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	------>		080	081	082	
DATES ON WHICH SAMPLES WERE COLLECTED	------>		04/23/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED	------>		7:48			
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW				
PARAMETER	LIMIT		G=grab,C=comp	G=grab,C=composite,M=measured flow,E=e		UNITS
FLOW		E	10,775			gal/day
Oil & Grease	200	G	10.8			mg/l
Biochemical Oxygen Demand	****	C	>2350			mg/l
Chemical Oxygen Demand	****	C	11400.0			mg/l
Total Suspended Solids	****	C	208.0			mg/l
Temperature	60	G	27			deg C
pH Acidic	5.5	G	6.5			S.U.
pH Basic	11.5	G				S.U.
Total Toxic Organics	5.52	G				mg/l

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) __X__(APR-JUNE) _____(JULY-SEPT) ___(OCT-DEC

Samples Collected By: Malinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		---->		905	
DATES ON WHICH SAMPLES WERE COLLECT		---->		06/04/2003	
TIMES AT WHICH SAMPLES WERE COLLECT		---->		14:45	
	LIMIT (ave)	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	(gm/day)	(gm/day)		M=measured flow	UNITS	Lab results mg/L
FLOW			M	130,769	gal/day	
Chloromethane	52.41	140.56	G	4.950	gm/day	0.01
Vinyl Chloride	46.22	81.96	G	4.950	gm/day	0.01
Chloroethane	52.41	140.56	G	4.950	gm/day	0.01
Methylene Chloride	17.15	81	G	4.950	gm/day	0.01
Chloroform	52.89	154.86	G	4.950	gm/day	0.01
1,1-Dichloroethane	10.48	28.11	G	4.950	gm/day	0.01
1,2-Dichloroethane	85.77	273.51	G	4.950	gm/day	0.01
1,1-Dichloroethene	10.48	28.59	G	4.950	gm/day	0.01
1,2-Dichloropropane	93.39	378.33	G	4.950	gm/day	0.01
Carbon Tetrachloride	67.66	181.07	G	4.950	gm/day	0.01
cis-1,3-Dichloropropene	93.39	378.33	G	4.950	gm/day	0.01
trans-1,3-Dichloropropene	93.39	378.33	G	4.950	gm/day	0.01
trans-1,2-Dichloroethene	11.91	31.45	G	4.950	gm/day	0.01
1,1,1-Trichloroethane	10.48	28.11	G	4.950	gm/day	0.01
1,1,2-Trichloroethane	15.25	60.51	G	4.950	gm/day	0.01
Benzene	27.16	63.85	G	4.950	gm/day	0.01
Toluene	13.34	35.26	G	4.950	gm/day	0.01
Trichloroethene	12.39	32.88	G	4.950	gm/day	0.01
Ethylbenzene	67.66	181.07	G	4.950	gm/day	0.01
Tetrachloroethene	24.78	78.14	G	4.950	gm/day	0.01
Chlorobenzene	67.66	181.07	G	4.950	gm/day	0.01
1,3-Dichlorobenzene	67.66	181.07	G	4.950	gm/day	0.01
1,2-Dichlorobenzene	93.39	378.33	G	4.950	gm/day	0.01
1,4-Dichlorobenzene	67.66	181.07	G	4.950	gm/day	0.01
2-Nitrophenol	30.97	110.07	G	4.950	gm/day	0.01
4-Nitrophenol	77.19	274.46	G	24.749	gm/day	0.05
2-Methyl-4,6-dinitrophenol	37.17	131.99	G	4.950	gm/day	0.01
Hexachloroethane	93.39	378.33	G	4.950	gm/day	0.01
Nitrobenzene	1065.91	3050.49	G	4.950	gm/day	0.01
1,2,4-Trichlorobenzene	93.39	378.33	G	4.950	gm/day	0.01
Dimethyl phthalate	9.05	22.4	G	4.950	gm/day	0.01
Hexachlorobutadiene	67.66	181.066	G	4.950	gm/day	0.01
Diethyl phthalate	21.92	53.84	G	4.950	gm/day	0.01
Hexachlorobenzene	93.39	378.33	G	4.950	gm/day	0.01
Di-n-butyl phthalate	9.53	20.49	G	4.950	gm/day	0.01
Bis(2-ethylhexyl)phthalate	45.27	122.93	G	1.782	gm/day	0.0036
Naphthalene	9.05	22.4	G	4.950	gm/day	0.01
Phenanthrene	9.05	22.4	G	4.950	gm/day	0.01
Fluorene	9.05	22.4	G	4.950	gm/day	0.01
Anthracene	9.05	22.4	G	4.950	gm/day	0.01
Acenapthene	9.05	22.4	G	4.950	gm/day	0.01
Fluoranthene	10.48	25.73	G	4.950	gm/day	0.01
Pyrene	9.53	22.87	G	4.950	gm/day	0.01

Shaded values represent detection limits

LAB RESULTS

All lab results were non detect. Reporting or method detection limits were used as lab results.

DMAC Analysis and Mass Loadings							
May-03							
		Bldg 504 - SP912			Bldg. 505 - SP926		
Date	Flow	DMAC		Flow	DMAC		
	(gal/day)	mg/l	lb/day	(gal/day)	mg/l	lb/day	
01-May	16991	No Prdcn		160000	<5.0	0	
02-May							
03-May							
04-May							
05-May							
06-May							
07-May							
08-May	6202	71	4	160000	No prdcn	0	
09-May							
10-May							
11-May							
12-May							
13-May							
14-May							
15-May	21888	600	110	160000	<5.0	0	
16-May							
17-May							
18-May							
19-May							
20-May							
21-May							
22-May	31383	5,700	1,495	160000	<5.0	0	
23-May							
24-May							
25-May							
26-May							
27-May							
28-May							
29-May	19768	9,000	1,487	160000	<5.0	0	
30-May							
31-May							
Avg (wei	19,810	3,843	636				
Max:	31,383	9,000	1,495				
Min:	6,202	71	4				
Monthly	n/a	n/a	5,459				
Daily Ma	n/a	n/a	7,091				

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DMAC Analysis and Mass Loadings						
Apr-03						
		Bldg 504- SP912			Bldg. 505 -SP926	
Date	Flow	DMAC		Flow	DMAC	
	(gal/day)	mg/l	lb/day	(gal/day)	mg/l	lb/day
01-Apr						
02-Apr						
03-Apr						
04-Apr	39784	6,200	2,061	160000	<5	0
05-Apr						
06-Apr						
07-Apr						
08-Apr						
09-Apr						
10-Apr	41337	5,100	1,761	160000	<5	0
11-Apr						
12-Apr						
13-Apr						
14-Apr						
15-Apr						
16-Apr						
17-Apr	47796	6,400	2,556	160000	<5	0
18-Apr						
19-Apr	58307	4200	2,046			
20-Apr						
21-Apr						
22-Apr						
23-Apr						
24-Apr	51675	Sample missed		160000	<5	0
25-Apr		OK				
26-Apr		FG				
27-Apr		7/24/03				
28-Apr						
29-Apr						
30-Apr						
Avg (wei	47,780	5,475	2,186			
Max:	58,307	6,400	2,556			
Min:	39,784	4,200	1,761			
Monthly	n/a	n/a	5,459			
Daily Ma	n/a	n/a	7,091			

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DMAC Analysis and Mass Loadings						
Jun-03						
		Bldg 504- SP912			Bldg. 505 -SP926	
Date	Flow	DMAC		Flow	DMAC	
	(gal/day)	mg/l	lb/day	(gal/day)	mg/l	lb/day
01-Jun						
02-Jun						
03-Jun						
04-Jun						
05-Jun	53918	1,500	676	160000	<5	0
06-Jun						
07-Jun						
08-Jun						
09-Jun						
10-Jun						
11-Jun						
12-Jun	55950	950	444	160000	<5	0
13-Jun						
14-Jun						
15-Jun						
16-Jun						
17-Jun						
18-Jun						
19-Jun	71901	410	246	160000	<5	0
20-Jun						
21-Jun						
22-Jun						
23-Jun						
24-Jun						
25-Jun						
26-Jun	67865	720	408	160000	<5	0
27-Jun						
28-Jun						
29-Jun						
30-Jun						
Avg (wei	62,409	895	467			
Max:	71,901	1,500	676			
Min:	53,918	410	246			
Monthly	n/a	n/a	5,459			
Daily Ma	n/a	n/a	7,091			

Mallinckrodt, Inc.
St. Louis Plant

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St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Building 97

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF- Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Methylphenidate Base	Pharmaceutical	04/01/03	04/22/03	MSD	NA	No	No
Meperidine	Pharmaceutical	04/23/03	06/30/03	MSD	NA	No	No
Thebaine from Taz	Pharmaceutical	04/01/03	04/21/03	MSD	NA	No	No
Dihydrothebaine	Pharmaceutical	04/22/03	05/02/03	MSD	NA	No	No
Thebaine SFH	Pharmaceutical	05/03/03	06/02/03	MSD	NA	No	No
Thebaine from Taz	Pharmaceutical	06/03/03	06/21/03	MSD	NA	No	No
Nalbuphine	Pharmaceutical	06/22/03	06/28/03	MSD	NA	No	No
Methylphendiate	Pharmaceutical	06/29/03	06/30/03	MSD	NA	No	No

Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

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Sample Point 080/081/082; Building 98

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
Peptides				MSD		n/a	No
Leuprolide	Pharmaceutical	05/23/2003	05/23/2003				
		05/28/2003	05/30/2003				
		06/02/2003	06/06/2003				
		06/09/2003	06/11/2003				
		06/16/2003	06/19/2003				
		06/25/2003	06/26/2003				
Prospatide	Pharmaceutical	04/01/2003	04/04/2003				
		04/07/2003	04/11/2003				
		04/14/2003	04/18/2003				
		05/13/2003	05/13/2003				
Morphine Alkaloid	Narcotic	05/06/2003	05/06/2003				

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	____(JAN-MAR)	__X__(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 914
DATES ON WHICH SAMPLES WERE COLLECTED				----->	04/15/2003
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	12:00
SAMPLE TYPE					GRAB
FLOW				E	450
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	4/15/03 Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	<0.010	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	0.0250 J	
n-Hexane	1666	3.00	0.70	<0.010	
Methylene chloride	524.2	3.00	0.70	<0.030	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
Tetrahydrofuran	1666	9.20	3.40	<0.010	
Toluene	524.2	0.30	0.20	<0.010	
Xylenes	1666	3.00	0.70	<0.020	
Isobutyraldehyde	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
n-Butyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Methyl cellosolve	1671	275.00	59.70	<6.7	
Isopropyl ether	1666	20.70	8.20	<0.010	
n-Heptane	1666	3.00	0.70	<0.020	
Methyl formate	1666	20.70	8.20	<0.050	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by lab				1, 10, 100	

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	__X__(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 915	
DATES ON WHICH SAMPLES WERE COLLECTED				----->	04/14/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	17:45	
SAMPLE TYPE					Grab	
FLOW				E	2,700	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	4/14/03 Result		
Acetone	524.2	20.70	8.20	.410 J		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	<0.010		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	<0.010		
n-Hexane	1666	3.00	0.70	<0.010		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010		
Tetrahydrofuran	1666	9.20	3.40	<0.010		
Toluene	524.2	0.30	0.20	0.0010 J		
Xylenes	1666	3.00	0.70	<0.020		
Isobutyraldehyde	1666	20.70	8.20	0.0345 J		
n-Amyl acetate	1666	20.70	8.20	<0.010		
n-Butyl acetate	1666	20.70	8.20	<0.010		
Isopropyl acetate	1666	20.70	8.20	<0.010		
Methyl cellosolve	1671	275.00	59.70	<34		
Isopropyl ether	1666	20.70	8.20	<0.010		
n-Heptane	1666	3.00	0.70	<0.020		
Methyl formate	1666	20.70	8.20	<0.050		
Diethyl amine	1671	255.00	100.00	<85		
Triethyl amine	1671	255.00	100.00	<85		
Dilution by lab				5, 10, 100		

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	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	_X___(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 916	
DATES ON WHICH SAMPLES WERE COLLECTED				----->	04/17/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	23:45	
SAMPLE TYPE					Grab	
FLOW				E	800	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result		
Acetone	524.2	20.70	8.20	0.65		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	<0.010		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	<0.010		
n-Hexane	1666	3.00	0.70	<0.010		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010		
Tetrahydrofuran	1666	9.20	3.40	0.0598		
Toluene	524.2	0.30	0.20	<0.010		
Xylenes	1666	3.00	0.70	<0.020		
Isobutyraldehyde	1666	20.70	8.20	<0.010		
n-Amyl acetate	1666	20.70	8.20	<0.010		
n-Butyl acetate	1666	20.70	8.20	<0.010		
Isopropyl acetate	1666	20.70	8.20	<0.010		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.010		
n-Heptane	1666	3.00	0.70	<0.020		
Methyl formate	1666	20.70	8.20	<0.050		
Diethyl amine	1671	255.00	100.00	<17.0		
Triethyl amine	1671	255.00	100.00	<17.0		
Dilution by Lab				1, 10, 100		

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	METROPOLITAN ST. LOUIS SEWER DISTRICT						
	INDUSTRIAL USER SELF MONITORING REPORT						
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT							
PART I: IDENTIFYING INFORMATION							
Company Name:		Mallinckrodt Inc.					
Permit No.:		21120596-00					
Premise Address:		3600 North Second St., St. Louis, MO 63147					
Monitoring Period:	____(JAN-MAR)	__X__(APR-JUN)		___(JULY-SEP)	___(OCT-DEC)		
Samples Collected By:		Mallinckrodt Inc					
Analysis Performed By:		Lancaster Labs					
Part II: ANALYTICAL RESULTS OF SELF MONITORING							
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 917			
DATES ON WHICH SAMPLES WERE COLLECTED			----->	04/14/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	11:00			
SAMPLE TYPE				Grab			
FLOW		E	5000 GPD				
PARAMETER							
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result			
Acetone	524.2	20.70	8.20	<0.003			
Benzene	524.2	3.00	0.70	<0.001			
Chlorobenzene	524.2	3.00	0.70	<0.001			
Chloroform	524.2	0.10	0.03	.0026 J			
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001			
1,2-Dichloroethane	524.2	20.70	8.20	<0.001			
Ethyl Acetate	1666	20.70	8.20	<0.001			
n-Hexane	1666	3.00	0.70	<0.001			
Methylene chloride	524.2	3.00	0.70	<0.003			
4-Methyl-2-pentanone	1666	20.70	8.20	0.11			
Tetrahydrofuran	1666	9.20	3.40	<0.02			
Toluene	524.2	0.30	0.20	.0018 J			
Xylenes	1666	3.00	0.70	<0.02			
Isobutyraldehyde	1666	20.70	8.20	<0.001			
n-Amyl acetate	1666	20.70	8.20	<0.001			
n-Butyl acetate	1666	20.70	8.20	<0.001			
Isopropyl acetate	1666	20.70	8.20	<0.001			
Methyl cellosolve	1671	275.00	59.70	<6.7			
Isopropyl ether	1666	20.70	8.20	<0.001			
n-Heptane	1666	3.00	0.70	<0.002			
Methyl formate	1666	20.70	8.20	<0.005			
Diethyl amine	1671	255.00	100.00	<17.0			
Triethyl amine	1671	255.00	100.00	<17.0			
Dilution factor by lab				1			

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	__X__(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 918		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	04/17/2003	05/30/2003	06/08/2003
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	13:30	7:40	9:00
SAMPLE TYPE				Grab	Grab	Grab
FLOW			E	8,000	8,000	8,000
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	4/17/03 Result	05/30/03 Result	6/8/03 Result
Acetone	524.2	20.70	8.20	2.2		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	1.3	0.016	<0.010
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	0.0214 J		
n-Hexane	1666	3.00	0.70	<0.010		
Methylene chloride	524.2	3.00	0.70	0.12		
4-Methyl-2-pentanone	1666	20.70	8.20	0.189		
Tetrahydrofuran	1666	9.20	3.40	<0.010		
Toluene	524.2	0.30	0.20	0.07	0.028	
Xylenes	1666	3.00	0.70	0.369 J		
Isobutyraldehyde	1666	20.70	8.20	<0.010		
n-Amyl acetate	1666	20.70	8.20	<0.010		
n-Butyl acetate	1666	20.70	8.20	<0.010		
Isopropyl acetate	1666	20.70	8.20	<0.010		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.010		
n-Heptane	1666	3.00	0.70	<0.020		
Methyl formate	1666	20.70	8.20	<0.050		
Diethyl amine	1671	255.00	100.00	<17.0		
Triethyl amine	1671	255.00	100.00	<17.0		
Dilution by lab				1, 10, 100	100	20
Exceeds daily max & monthly avg						

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	__X__(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				SP 919		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	04/16/2003		
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	10:00		
SAMPLE TYPE			----->	Grabs		
FLOW			E	6,000		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method		Avg Monthly Limit	4/16/03 Result		
Acetone	524.2	20.70	8.20	0.03		
Benzene	524.2	3.00	0.70	<0.001		
Chlorobenzene	524.2	3.00	0.70	<0.001		
Chloroform	524.2	0.10	0.03	0.0048 J		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001		
1,2-Dichloroethane	524.2	20.70	8.20	<0.001		
Ethyl Acetate	1666	20.70	8.20	<0.001		
n-Hexane	1666	3.00	0.70	<0.001		
Methylene chloride	524.2	3.00	0.70	<0.003		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001		
Tetrahydrofuran	1666	9.20	3.40	<0.001		
Toluene	524.2	0.30	0.20	0.0017 J		
Xylenes	1666	3.00	0.70	<0.002		
Isobutyraldehyde	1666	20.70	8.20	<0.001		
n-Amyl acetate	1666	20.70	8.20	<0.001		
n-Butyl acetate	1666	20.70	8.20	<0.001		
Isopropyl acetate	1666	20.70	8.20	<0.001		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.001		
n-Heptane	1666	3.00	0.70	<0.002		
Methyl formate	1666	20.70	8.20	<0.005		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by Lab				1, 10		

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	_X_(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 920		
DATES ON WHICH SAMPLES WERE COLLECTE			----->	04/14/2003	05/15/2003	06/27/2003
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	9:30	8:00	14:00
SAMPLE TYPE				Grabs		
FLOW			E	36,000		
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result		
Acetone	524.2	20.70	8.20	<0.300		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	<0.010	<0.010	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	<0.010		
n-Hexane	1666	3.00	0.70	<0.010		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	0.0715		
Tetrahydrofuran	1666	9.20	3.40	<0.010		
Toluene	524.2	0.30	0.20	0.99	0.17	0.028
Xylenes	1666	3.00	0.70	<0.020		
Isobutyraldehyde	1666	20.70	8.20	<0.010		
n-Amyl acetate	1666	20.70	8.20	<0.010		
n-Butyl acetate	1666	20.70	8.20	<0.010		
Isopropyl acetate	1666	20.70	8.20	<0.010		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.010		
n-Heptane	1666	3.00	0.70	<0.020		
Methyl formate	1666	20.70	8.20	<0.050		
Diethyl amine	1671	255.00	100.00	<17		
Triethyl amine	1671	255.00	100.00	<17		
Dilution by lab						

METROPO[illegible]N ST. LOUIS SEWER DISTRICT - INDUSTRIAL [illegible] MONITORING REPORT								
PART I: IDENTIFYING INFORMATION								
Company Name:		Mallinckrodt Inc.						
Permit No.:		21120596-00						
Premise Address:		3600 North Second St., St. Louis, MO 63147						
Monitoring Period:	____(JAN-MAR)		__X__(APR-JUN)			____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc						
Analysis Performed By:		Lancaster Labs						
Part II: ANALYTICAL RESULTS OF SELF MONITORING								
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP927				
DATES ON WHICH SAMPLES WERE COLLECTED			----->	06/03/2003				
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	2:15				
SAMPLE TYPE				Grab				
FLOW		E	2,200					
PARAMETER								
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result				
Acetone	524.2	20.70	8.20	<0.060				
Ethyl Acetate	1666	20.70	8.20	<0.010				
Methylene chloride	524.2	3.00	0.70	<0.006				
n-Amyl acetate	1666	20.70	8.20	<0.010				
Isopropyl acetate	1666	20.70	8.20	<0.010				
Dilution by lab				1, 10, 20				

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METROPO[illegible]N ST. LOUIS SEWER DISTRICT - INDUSTRIAL S[illegible] MONITORING REPORT								
PART I: IDENTIFYING INFORMATION								
Company Name:		Mallinckrodt Inc.						
Permit No.:		21120596-00						
Premise Address:		3600 North Second St., St. Louis, MO 63147						
Monitoring Period:	_____(JAN-MAR)		__X__(APR-JUN)		____(JULY-SEP)		____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc						
Analysis Performed By:		Lancaster Labs						
Part II: ANALYTICAL RESULTS OF SELF MONITORING								
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP928				
DATES ON WHICH SAMPLES WERE COLLECTED			----->	06/03/2003				
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	2:30				
SAMPLE TYPE				Grab				
FLOW		E	2,200					
PARAMETER								
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result				
Acetone	524.2	20.70	8.20	<0.060				
Benzene	524.2	3.00	0.70	<0.002				
Chlorobenzene	524.2	3.00	0.70	<0.002				
Chloroform	524.2	0.10	0.03	0.013				
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.002				
1,2-Dichloroethane	524.2	20.70	8.20	<0.002				
Ethyl Acetate	1666	20.70	8.20	<0.010				
n-Hexane	1666	3.00	0.70	<0.010				
Methylene chloride	524.2	3.00	0.70	<0.006				
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010				
Tetrahydrofuran	1666	9.20	3.40	<0.010				
Toluene	524.2	0.30	0.20	0.0067				
Xylenes	1666	3.00	0.70	0.0446				
Isobutyraldehyde	1666	20.70	8.20	0.0798				
n-Amyl acetate	1666	20.70	8.20	<0.010				
n-Butyl acetate	1666	20.70	8.20	<0.010				
Isopropyl acetate	1666	20.70	8.20	<0.010				
Methyl cellosolve	1671	275.00	59.70	<20.0				
Isopropyl ether	1666	20.70	8.20	<0.010				
n-Heptane	1666	3.00	0.70	<0.020				
Methyl formate	1666	20.70	8.20	<0.050				
Diethyl amine	1671	255.00	100.00	<17.0				
Triethyl amine	1671	255.00	100.00	<17.0				
Dilution				1, 10, 20				

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Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

June 5, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Resample results SP920
Permit No. 21120596-00

SEE 7/24/03 NOV
FG

This letter is to update MSD with recent monitoring data for SP920. The sample collected at SP920 on April 14 failed for toluene at 0.99 mg/L. This sample point was resampled on May 15 with passing results of 0.17 mg/L toluene. An additional sample will be collected in June.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

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Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

May 30, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: MSD – Potential Violation of Discharge Prohibitions – dated 5/6/03
Permit No. 21120596-00

Mallinckrodt is in receipt of the May 6, 2003 NOV and potential violations. As indicated in your letter Mallinckrodt has addressed the violations. In regards to the potential violation, Mallinckrodt was not able to identify the source of toluene in the January 9, 2003 sample of SP010. Toluene is used primarily in the buildings associated with pharmaceutical processing that are tied to the PEG column and is not anticipated to be found at appreciable levels in the general plant outfall. With the exception of toluene in the 1/9/03 grab sample, the other TTO compounds have been significantly lower since the start-up of the PEG wastewater stripper system in October, 2001.

Mallinckrodt recognizes the seriousness of wastewater discharges which cause or contribute to emissions of toxic gases, vapors or fumes into the sewer atmosphere and has communicated this to the plant at large.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

JUN 03 2003

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

AMT
21120596-00
FG 5/20/03

May 14, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Missed sample at SP912 week of 4/20 – 4/26/03
Permit No. 21120596-00

This letter is to confirm our discussion concerning Mallinckrodt's missed sample at sample point 912 – Building 504 production, the week of 4/20-4/26/03. This sample point has an inline autosampler that malfunctioned. The normal supervisor of the area was on vacation and the replacement supervisor did not obtain a manual sample. Building personnel have developed a written contingency plan and will train all appropriate personnel to ensure a weekly sample is obtained.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECEIVED
MAY 15 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

MAY 15 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

May 6, 2003

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC.
3600 N. Second Street
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street

Dear Ms. Siebenberger:

Thank you for your April 25, 2003 letter advising us of the results of recent monitoring of your wastewater discharge. The following violations of permit limitations, terms or conditions were identified:

VIOLATIONS OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMP PT	SAMPLE TYPE	PARAMETER	PERMIT LIMIT	LIMIT TYPE	VALUE REPORTED
01-09-03	2100	918	Grab	Toluene	0.3 mg/l	DM	19.0 mg/l**
Jan 2003		918		Toluene	0.2 mg/l	MA	19.0 mg/l**
02-27-03	0800	912	24 hr-comp	DMAC	7091 mg/l	DM	9418 mg/l**

mg/l = milligrams per liter
DM = Daily Maximum
MA = Monthly Average
DMAC = N,N-Dimethyl Acetamide

The aforementioned monthly average value for sampling point 918 is the result of your sample collected on January 9, 2003. Since no additional sampling occurred in January, the result from this data set constitutes the monthly average for Toluene.

SAMPLE POINT	MSD ORD. 8472 LIMIT	DATE	VIOLATIONS REPORTED IN FEBRUARY
010	No individual pH excursion longer than 60 minutes	02-18-03	One excursion of 88 minutes greater than 11.5 SU

SU = Standard pH Units

POTENTIAL VIOLATIONS OF DISCHARGE PROHIBITIONS:

A certain volatile chemical compound was found at an elevated level as indicated below.

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	PARAMETER	GAS/VAPOR TOXIC SCREENING LEVEL	VALUE FOUND
01-09-03	1300	010	Grab	Toluene	1.36 mg/l	1.7 mg/l

mg/l = milligrams per liter
< = less than indicated value

The gas/vapor toxicity screening levels for wastewater are based on Threshold Limit Value/Time Weighted Averages (TLV/TWA) published by the American Conference of Governmental Industrial Hygienists and used by OSHA and NIOSH to establish air contaminant exposure limits for workers.

The presence of volatile chemical compounds at concentrations above the screening levels can result in generation of toxic gases or vapors in the sewer atmosphere, posing a serious threat to the health and safety of MSD personnel and to other users of the sewer system. If several compounds are present at elevated levels, the potential for generation of toxic gases or vapors is increased due to possible additive and/or synergistic effects.

Wastewater discharges which cause or contribute to emissions of toxic gases, vapors or fumes into the sewer atmosphere at levels in excess of the applicable TLVs are prohibited under Ordinance 8472, Article V, Section One, Paragraph A.8.

REQUIRED ACTION/RESPONSE:

Pursuant to the aforementioned letter, we acknowledge that resampling events occurred for Toluene and DMAC subsequent to the above exeedences. The results of analysis reported are within permit limitations. Moreover, we recognize that internal investigations identified the likely sources of the exceedences for Toluene, DMAC, and pH and that corrective actions have been implemented.

Submit a report of corrective actions, which you have initiated, to ensure that discharges of volatile chemical compounds are maintained below levels of concern. Please submit your response June 2, 2003.

Refer to the enclosure for information on potential enforcement actions should noncompliance continue. The enclosure also explains the meaning of any asterisks which appear in the Value Reported column above. You should consider the percentages applicable to Significant Noncompliance when planning for additional sampling.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Douglas Mendoza
Permit file

→ FABIAN

FILE: IU-MALLINCKRODT 2112 6596

SD - SLAPS

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
8945 LATTY AVENUE
BERKELEY, MISSOURI 63134

REPLY TO ATTENTION OF:

April 25, 2003

Formerly Utilized Sites Remedial Action Program Project Office

Subject: Quarterly Metropolitan Sewer District (MSD) Self-Monitoring Report for January 2003 Through March 2003, St. Louis Site (SLS)

Mr. Roland Biehl
St. Louis Metropolitan Sewer District
Office of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

RECEIVED APR 29 2003

Dear Mr. Biehl:

The USACE is submitting the January through March 2003 quarterly self-monitoring report for the St. Louis Downtown Site (SLDS). During this period, eight batches of wastewater from SLDS were discharged to the Metropolitan Sewer District (MSD). There was no release to MSD during the quarter at the St. Louis Airport Site (SLAPS); thus, there will be no submission for SLAPS.

137160/748 = 183 CCF ($1.05/CCF) = $192.15

BILLED RB 5/5/03

For the calendar quarter a total of 137,160 gallons of wastewater from Plant 6EH operations was discharged with a total activity of 1.6E -06 curies for Thorium; 1.1E-05 curies for Uranium (isotopic); and 7.6E-07 curies for Radium. Data for each batch are presented on the attached pages for your review.

Also included in this report are the results of analysis for uranium (KPA method) and total suspended solids for each discharge.

Should you have any comments or questions regarding this letter, please feel free to contact either Dr. Greg Hempen at (314) 260-3939 or Mr. Ron Frerker at (314) 260-3936.

Sincerely,

Sharon R. Cotner

Sharon R. Cotner
FUSRAP Program Manager

Enclosure

SLDS FUSRAP
Self Monitoring Report for 1st Quarter for Inlet 17D3-022C

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha	BK-362	1/13/2003	0.0	17,950	0.0E+00	3,000	
Gross Beta			13.1		8.9E-07	N/A	
TH-228			1.3		9.0E-08	2,000	
TH-230			1.7		1.2E-07	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			0.0		0.0E+00	3,000	
RA-226			0.5		3.5E-08	600	
RA-228*			1.3		9.0E-08	2,000	0.0
Uranium (KPA)			0.3			3,000	
Total Suspended Solids			0.0 mg/l			30	
Gross Alpha	BK-363	2/05/2003	3.6	19,270	2.6E-07	3,000	
Gross Beta			11.4		8.3E-07	N/A	
TH-228			1.1		8.2E-08	2,000	
TH-230			3.9		2.8E-07	1,000	
TH-232			0.5		3.6E-08	300	
Uranium (Nat)			0.6		4.7E-08	3,000	
RA-226			0.1		8.0E-09	600	
RA-228*			1.1		8.2E-08	2,000	0.0
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.4 mg/l			30	
Gross Alpha	BK-364	2/13/2003	4.5	10,260	1.8E-07	3,000	
Gross Beta			19.0		7.4E-07	N/A	
TH-228			0.6		2.3E-08	2,000	
TH-230			2.5		9.5E-08	1,000	
TH-232			0.1		5.4E-09	300	
Uranium (Nat)			2.8		1.1E-07	3,000	
RA-226			0.5		2.1E-08	600	
RA-228*			0.6		2.3E-08	2,000	0.0
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.5 mg/l			30	
Gross Alpha	BK-365	2/25/2003	0.0	19,190	0.0E+00	3,000	
Gross Beta			4.0		2.9E-07	N/A	
TH-228			0.6		4.5E-08	2,000	
TH-230			1.7		1.3E-07	1,000	
TH-232			0.5		3.4E-08	300	
Uranium (Nat)			1.5		1.1E-07	3,000	
RA-226			0.9		6.7E-08	600	
RA-228*			0.6		4.5E-08	2,000	0.0
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.3 mg/l			30	

SLDS FUSRAP
Self Monitoring Report for 1st Quarter for Inlet 17D3-022C

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios
Gross Alpha	BK-366	3/03/2003	0.7	12,540	3.5E-08	3,000	
Gross Beta			25.9		1.2E-06	N/A	
TH-228			1.0		4.9E-08	2,000	
TH-230			2.9		1.4E-07	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			0.5		2.3E-08	3,000	
RA-226			0.0		0.0E+00	600	
RA-228*			1.0		4.9E-08	2,000	0.0
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.0 mg/l			30	
Gross Alpha	BK-367	3/12/2003	1.5	11,740	6.5E-08	3,000	
Gross Beta			11.9		5.3E-07	N/A	
TH-228			0.7		3.2E-08	2,000	
TH-230			2.4		1.1E-07	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			1.7		7.5E-08	3,000	
RA-226			0.0		0.0E+00	600	
RA-228*			0.7		3.2E-08	2,000	0.0
Uranium (KPA)			0.0			3,000	
Total Suspended Solids			0.2 mg/l			30	
Gross Alpha	BK-368	3/24/2003	78.6	20,660	6.1E-06	3,000	
Gross Beta			14.8		1.2E-06	N/A	
TH-228			0.7		5.4E-08	2,000	
TH-230			0.6		4.5E-08	1,000	
TH-232			0.0		0.0E+00	300	
Uranium (Nat)			66.8		5.2E-06	3,000	
RA-226			0.9		7.3E-08	600	
RA-228*			0.7		5.4E-08	2,000	0.0
Uranium (KPA)			65.6			3,000	
Total Suspended Solids			0.6 mg/l			30	
Gross Alpha	BK-369	3/26/2003	50.9	25,550	4.9E-06	3,000	
Gross Beta			17.9		1.7E-06	N/A	
TH-228			1.1		1.0E-07	2,000	
TH-230			1.0		9.4E-08	1,000	
TH-232			0.2		1.8E-08	300	
Uranium (Nat)			58.0		5.6E-06	3,000	
RA-226			0.8		7.6E-08	600	
RA-228*			1.1		1.0E-07	2,000	0.0
Uranium (KPA)			40.5			3,000	
Total Suspended Solids			0.4 mg/l			30	

SLDS FUSRAP
Self Monitoring Report for 1st Quarter for Inlet 17D3-022C

Parameter	Batch Number	Date of Discharge	Batch Results (pCi/L)	Amount Discharged (gal)	Total Activity per Discharge (Ci)	MSD Limits	Sum of the Ratios

NOTES:

1. Negative values are excluded from the calculation for total activity discharged.
2. Ra-228 assumed to be in equilibrium with Th-228.

Total Activity Discharged in 1st Quarter (Ci)

TH-228	4.8E-07
TH-230	1.0E-06
TH-232	9.4E-08
Uranium (Nat)	1.1E-05
RA-226	2.8E-07
RA-228*	4.8E-07

Total Activity Discharged YTD through 03/31/03 (Ci)

TH-228	4.8E-07
TH-230	1.0E-06
TH-232	9.4E-08
Uranium (Nat)	1.1E-05
RA-226	2.8E-07
RA-228*	4.8E-07

Total Volume Discharged in 1st Quarter (gal)

Gallons	137,160

Total Volume Discharged YTD through 03/31/03 (gal)

Gallons	137,160

Total Suspended Solids (mg/l)	Maximum Weekly	Monthly Average
January	0.00	0.00
February	0.50	0.40
March	0.50	0.30

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt (2nd Street) Permit File

FROM: Doug Mendoza

DATE: May 9, 2003

RE: Notification of self-monitoring violation

On 5/8/03, Karen Siebenberger called to report a self-monitoring violation. At SP918, their 4/17/03 sample had a chloroform violation of 1.3 mg/l. They are investigating, and were surprised by the result. They think perhaps there is some in the raw materials.

tyco
Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

April 25, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2003 1st Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Grabski:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 1st quarter 2003.

As has been previously communicated, please note the dimethylacetamide (DMAC) failure for sample point 912 on February 27,2003 (DMAC discharge was calculated to be 9418 pounds versus the daily maximum of 5459 pound limit). SP 912 is monitored on a weekly basis for DMAC discharge. Analytical results are multiplied by the flow to calculate pounds DMAC discharged per day. Additional samples from that time period were sent for analysis and all were found to be well in range (Feb 25 – 1863#, Feb 26 – 2094#, March 1- 2664# and March 2- 2340#). Review of the operating parameters, the DMAC recovery system, tank levels, and DMAC raw material usage do not support the exceedance value for February 27. The automatic sampler appears to be sampling as programmed. Mallinckrodt's investigation suggests the flow meter may be over reporting water flow. This meter was installed without the ability to calibrate in-line. Building 504 is scheduled for an outage beginning April 28th at which time the meter will be calibrated.

Also, as stated in Mallinckrodt's letter of March 7 to Doug Mendoza, the January 9 failure for toluene at sample point 918 was attributed to toluene levels in the raw material. Mallinckrodt's process uses no toluene. The batch records were changed to direct future discharges from this product to discharge to the plant's PEG system. Additional samples were taken from sample point 918 in February and March with passing results (February 5 – 0.028 mg/L and March 3 0.110 mg/L toluene).

Please note a pH exceedance on February 18 from sample point 010 for an 88 minute duration. The exceedance has been to traced a faulty caustic addition valve. The caustic addition is made at the Boilerhouse to adjust an acidic wastewater discharge from the plant DI water generation system. This valve has been replaced.

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECEIVED
APR 29 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☒(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

KMB I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Karen Burke

APR 29 2003

Print/type name of signing official: for Brian Donley

Title: Director, HSE Telephone: 314-654-1412

Signature: Karen Burke Date: 4/28/03

radrpt.doc 2/00

MSD 019694

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

(A.) If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[KMB] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 007, 082

(B.) If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[KMB] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit .

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

(D) If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[KMB] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 913, 914, 915 and 916

(E.) If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[KMB] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 except for those wastes conveyed by SP905.

(F) Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[KMB] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufacturing process subject to Categorical Standards in 40 CFR 439. for SP005, 010, 080, 082, 912, 913, 914, 915, 916, 917, 918, 919 and 920.

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____, I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing of the last discharge monitoring report.

B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

APR 29 2003

Karen Burke

Print or type name of signing official: for Brian Donley

Title: Director, Health Safety & Environmental Telephone: 314-654-1412

Signature: Karen Burke Date: 4/28/03

SMF 10/93

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X___(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		001					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
Oil & Grease	200	G						mg/l
Biochemical Oxygen Demand	****	C						mg/l
Chemical Oxygen Demand	****	C						mg/l
Total Suspended Solids	****	C						mg/l
Temperature	60	G						deg C
pH Acidic	5.5	G						S.U.
pH Basic	11.5	G						S.U.
NO MONITORING REQUIRED								
SANITARY ONLY								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X___(JAN-MAR) ____(APR-JUNE) __(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		002					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,800					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

RECEIVED
APR 29 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: X (JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

				DWN		UP			
MSD SAMPLE POINT REFERENCE NUMBERS		---->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED		---->		01/09/2003		01/09/2003		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED		---->		8:00		8:15			
				RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW					
PARAMETER		LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW			E	37,400	E	23,287	E	14113	gal/day
Oil & Grease		200	G	9.7	G	12	E	0.000 5.9	mg/l
Biochemical Oxygen Demand		****	C	404	C	404	E	0.000 404	mg/l
Chemical Oxygen Demand		****	C	141	C	107	E	197.101	mg/l
Total Suspended Solids		****	C	59	C	85	E	0.000 60.1	mg/l
Temperature		60	G	23	G	24	E	24	deg C
pH Acidic		5.5	G	6.5	G	6.5	E	X N/A	S.U.
pH Basic		11.5	G	X	G	X	E	X	S.U.

RECEIVED
APR 29 2003

MSD 019698

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __x___(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED ---->		01/09/2003		01/09/2003		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED ---->		8:00		0.34375			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW		E	37400	E	23287		14113	gal/day
Chloromethane		G	ND	G	ND		ND <.01	mg/l
Vinyl Chloride		G	0.011	G	0.01 <.01		0.013	mg/l
Bromomethane		G	ND	G	ND		ND <.01	mg/l
Chloroethane		G	ND	G	ND		ND	mg/l
Methylene Chloride		G	ND	G	ND		ND <.01	mg/l
Chloroform		G	0.0026 <.01	G	0.00081 <.01		0.006	mg/l
1,1-Dichloroethane		G	0.0071	G	0.005 <.01		0.011	mg/l
1,2-Dichloroethane		G	ND	G	ND		ND	mg/l
1,1-Dichloroethene		G	0.0039 <.01	G	0.005 <.01		0.002	mg/l
1,2-Dichloropropane		G	ND	G	ND		ND	mg/l
Carbon Tetrachloride		G	ND	G	ND		ND <.01	mg/l
cis-1,3-Dichloropropene		G	ND	G	ND		ND	mg/l
trans-1,3-Dichloropropene		G	ND	G	ND		ND	mg/l
1,2-Dichloroethane		G	ND	G	ND		ND	mg/l
Dibromochloromethane		G	ND	G	ND		ND	mg/l
Bromodichloromethane		G	0.00052 <.01	G	0.00076 <.01		0.0001	mg/l
1,1,1-Trichloroethane		G	ND	G	ND		ND <.01	mg/l
1,1,2-Trichloroethane		G	ND	G	ND		ND <.01	mg/l
Benzene		G	0.0014 <.01	G	0.005		0.000 (-)	mg/l
Toluene		G	0.017	G	0.00061 <.01		0.044	mg/l
Trichloroethene		G	0.037	G	0.005		0.090	mg/l
Ethylbenzene		G	ND	G	ND		ND <.01	mg/l
1,1,2,2-Tetrachloroethane		G	ND	G	ND		ND <.01	mg/l
Tetrachloroethene		G	ND	G	ND		ND	mg/l
Chlorobenzene		G	ND	G	ND		ND	mg/l
1,3-Dichlorobenzene		G	ND	G	ND		ND <.01	mg/l
1,2-Dichlorobenzene		G	ND	G	ND		ND	mg/l
1,4-Dichlorobenzene		G	ND	G	ND		ND	mg/l
Bromoform		G	ND	G	ND		ND	mg/l
2-Chloroethylvinylether		G	ND	G	ND		ND	mg/l
Acrolein		G	ND	G	ND		ND <.01	mg/l
Acrylonitrile		G	ND	G	ND		ND	mg/l
Phenol		G	0.0086 <.01	G	0.01 <.01		0.006	mg/l
2-Chlorophenol		G	ND	G	ND		ND	mg/l
2,4-Dimethylphenol		G	ND	G	ND		ND	mg/l
2,4-Dichlorophenol		G	ND	G	ND		ND <.01	mg/l
2-Nitrophenol		G	ND	G	ND		ND	mg/l
4-Nitrophenol		G	ND	G	ND		ND	mg/l
2,4-Dinitrophenol		G	0.05	G	0.089		0.000 (-)	mg/l
2,4,6-Trichlorophenol		G	ND	G	ND		ND	mg/l
Pentachlorophenol		G	ND	G	ND		ND	mg/l
4-Chloro-3-methylphenol		G	ND	G	ND		ND	mg/l
2-Methyl-4,6-dinitrophenol		G	ND	G	ND		ND	mg/l
N-nitrosodimethylamine		G	ND	G	ND		ND <.01	mg/l
Bis(2-chloroethyl)ether		G	ND	G	ND		ND	mg/l
Bis(2-chloroisopropyl)ether		G	ND	G	ND		ND	mg/l
N-nitrosodi-n-propylamine		G	ND	G	ND		ND	mg/l
Hexachloroethane		G	ND	G	ND		ND <.01	mg/l
Nitrobenzene		G	ND	G	ND		ND	mg/l

APR 29 2003

ND = <0.01 FG

METROPOLITAN ST. LOUIS SEWER DISTRICT
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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __x___(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ---->		003		009		099	
DATES ON WHICH SAMPLES WERE COLLECTED ---->		01/09/2003		01/09/2003		calculated	
TIMES AT WHICH SAMPLES WERE COLLECTED ---->		8:00		0.34375			
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow					UNITS
FLOW		E	37400	E	23287	14113	gal/day
Isophorone		G	ND	G	ND	ND	mg/l
Bis(2-chloroethoxy)methane		G	ND	G	ND	ND	mg/l
1,2,4-Trichlorobenzene		G	ND	G	ND	ND	mg/l
Dimethyl phthalate		G	ND	G	ND	ND	mg/l
Hexachlorobutadiene		G	ND	G	ND	ND	mg/l
Hexachlorocyclopentadiene		G	ND	G	ND	ND <.01	mg/l
2-Chloronapthalene		G	ND	G	ND	ND	mg/l
2,6-Dinitrotoluene		G	ND	G	ND	ND	mg/l
2,4-Dinitrotoluene		G	ND	G	ND	ND <.01	mg/l
4-Chlorophenyl-phenylether		G	ND	G	ND	ND	mg/l
4-Bromophenyl-phenylether		G	ND	G	ND	ND	mg/l
Diethyl phthalate		G	ND	G	ND	ND	mg/l
Hexachlorobenzene		G	ND	G	ND	ND <.01	mg/l
N-nitrosodiphenylamine		G	ND	G	ND	ND	mg/l
1,2-Diphenylhydrazine		G	ND	G	ND	ND	mg/l
Di-n-butyl phthalate		G	ND	G	ND	ND	mg/l
3,3-Dichlorobenzidine		G	ND	G	ND	ND	mg/l
Bis(2-ethylhexyl)phthalate		G	0.001 <.01	G	0.013	~~0.000~~ (–)	mg/l
Butyl benzyl phthalate		G	ND	G	ND	ND	mg/l
Di-n-octyl phthalate		G	ND	G	ND	ND	mg/l
Benzidine		G	ND	G	ND	ND	mg/l
Naphthalene		G	ND	G	ND	ND <.01	mg/l
Phenanthrene		G	ND	G	ND	ND	mg/l
Fluorene		G	ND	G	ND	ND	mg/l
Anthracene		G	ND	G	ND	ND	mg/l
Acenapthene		G	ND	G	ND	ND	mg/l
Acenaphthylene		G	ND	G	ND	ND	mg/l
Benzo(a)pyrene		G	ND	G	ND	ND <.01	mg/l
Chrysene		G	ND	G	ND	ND	mg/l
Fluoranthene		G	ND	G	ND	ND	mg/l
Pyrene		G	ND	G	ND	ND	mg/l
Benzo(a)anthracene		G	ND	G	ND	ND	mg/l
Benzo(b)fluoranthene		G	ND	G	ND	ND	mg/l
Benzo(k)fluoranthene		G	ND	G	ND	ND	mg/l
Dibenzo(a,h)anthracene		G	ND	G	ND	ND	mg/l
Benzo(g,h,i)perylene		G	ND	G	ND	ND	mg/l
Ideno(1,2,3-cd)pyrene		G	ND	G	ND	ND	mg/l
Total Toxic Organics	5.52	--	0.14012	--	0.14418	-- 0.171	mg/l
Shaded cells represent known absent or suspected absent.							

TTO = 0.115 FG = 0.102 FG

APR 29 2003

MSD 019700

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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		005	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		01/09/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:30	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW		E	32,000	gal/day
Oil & Grease	200	G	2.3	mg/l
Biochemical Oxygen Demand	****	C	235	mg/l
Chemical Oxygen Demand	****	C	99	mg/l
Total Suspended Solids	****	C	1	mg/l
Temperature	60	G	15	deg C
pH Acidic	5.5	G	7	S.U.
pH Basic	11.5	G	7	S.U.

BOD detection limit = 2 mg/l

TSS detection limit = 10 mg/l

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		005					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		01/09/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	32,000					gal/day
Chloromethane		G	0.0016					mg/l
Vinyl Chloride		G	ND					mg/l
Bromomethane		G	ND					mg/l
Chloroethane		G	ND					mg/l
Methylene Chloride		G	ND					mg/l
Chloroform		G	0.0082					mg/l
1,1-Dichloroethane		G	ND					mg/l
1,2-Dichloroethane		G	0.13					mg/l
1,1-Dichloroethene		G	ND					mg/l
1,2-Dichloropropane		G	ND					mg/l
Carbon Tetrachloride		G	ND					mg/l
cis-1,3-Dichloropropene		G	ND					mg/l
trans-1,3-Dichloropropene		G	ND					mg/l
trans-1,2-Dichloroethene		G	ND					mg/l
Dibromochloromethane		G	ND					mg/l
Bromodichloromethane		G	0.001					mg/l
1,1,1-Trichloroethane		G	ND					mg/l
1,1,2-Trichloroethane		G	ND					mg/l
Benzene		G	ND					mg/l
Toluene		G	0.00099					mg/l
Trichloroethene		G	ND					mg/l
Ethylbenzene		G	ND					mg/l
1,1,2,2-Tetrachloroethane		G	ND					mg/l
Tetrachloroethene		G	ND					mg/l
Chlorobenzene		G	ND					mg/l
1,3-Dichlorobenzene		G	ND					mg/l
1,2-Dichlorobenzene		G	ND					mg/l
1,4-Dichlorobenzene		G	ND					mg/l
Bromoform		G	ND					mg/l
2-Chloroethylvinylether		G	ND					mg/l
Acrolein		G	ND					mg/l
Acrylonitrile		G	ND					mg/l
Phenol		G	ND					mg/l
2-Chlorophenol		G	ND					mg/l
2,4-Dimethylphenol		G	ND					mg/l
2,4-Dichlorophenol		G	ND					mg/l
2-Nitrophenol		G	ND					mg/l
4-Nitrophenol		G	ND					mg/l
2,4-Dinitrophenol		G	ND					mg/l
2,4,6-Trichlorophenol		G	ND					mg/l
Pentachlorophenol		G	ND					mg/l
4-Chloro-3-methylphenol		G	ND					mg/l
2-Methyl-4,6-dinitrophenol		G	ND					mg/l
N-nitrosodimethylamine		G	ND					mg/l
Bis(2-chloroethyl)ether		G	ND					mg/l
Bis(2-chloroisopropyl)ether		G	ND					mg/l
N-nitrosodi-n-propylamine		G	ND					mg/l
Hexachloroethane		G	ND					mg/l
Nitrobenzene		G	0.0052					mg/l

APR 29 2003

MSD 019702

METROPOLITAN ST. LOUIS SEWER DISTRICT
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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		005					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		01/09/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:30					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	32,000					gal/day
Isophorone		G	ND					mg/l
Bis(2-chloroethoxy)methane		G	ND					mg/l
1,2,4-Trichlorobenzene		G	ND					mg/l
Dimethyl phthalate		G	ND					mg/l
Hexachlorobutadiene		G	ND					mg/l
Hexachlorocyclopentadiene		G	ND					mg/l
2-Chloronapthalene		G	ND					mg/l
2,6-Dinitrotoluene		G	ND					mg/l
2,4-Dinitrotoluene		G	ND					mg/l
4-Chlorophenyl-phenylether		G	ND					mg/l
4-Bromophenyl-phenylether		G	ND					mg/l
Diethyl phthalate		G	0.0822					mg/l
Hexachlorobenzene		G	ND					mg/l
N-nitrosodiphenylamine		G	ND					mg/l
1,2-Diphenylhydrazine		G	ND					mg/l
Di-n-butyl phthalate		G	ND					mg/l
3,3-Dichlorobenzidine		G	ND					mg/l
Bis(2-ethylhexyl)phthalate		G	0.022					mg/l
Butyl benzyl phthalate		G	ND					mg/l
Di-n-octyl phthalate		G	ND					mg/l
Benzidine		G	ND					mg/l
Naphthalene		G	ND					mg/l
Phenanthrene		G	ND					mg/l
Fluorene		G	ND					mg/l
Anthracene		G	ND					mg/l
Acenapthene		G	ND					mg/l
Acenaphthylene		G	ND					mg/l
Benzo(a)pyrene		G	ND					mg/l
Chrysene		G	ND					mg/l
Fluoranthene		G	ND					mg/l
Pyrene		G	ND					mg/l
Benzo(a)anthracene		G	ND					mg/l
Benzo(b)fluoranthene		G	ND					mg/l
Benzo(k)fluoranthene		G	ND					mg/l
Dibenzo(a,h)anthracene		G	ND					mg/l
Benzo(g,h,i)perylene		G	ND					mg/l
Ideno(1,2,3-cd)pyrene		G	ND					mg/l
Total Toxic Organics	5.52	--	~~0.17119~~					mg/l
Shaded cells represent known absent or suspected absent								
			0.152 FG					

APR 29 2003

MSD 019703

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By:

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		007					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		NA					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
STORMWATER ONLY								

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		008	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		01/15/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		15:00	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW		E		gal/day
Oil & Grease	200	G	78.0	mg/l
Biochemical Oxygen Demand	****	C	1050.00	mg/l
Chemical Oxygen Demand	****	C	1750.0	mg/l
Temperature	60	G	11.4	deg C
Total Suspended Solids	****		72.0	mg/L
pH Acidic	5.5	G	8.4	S.U.
pH Basic	11.5	G	8.4	S.U.

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		010	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		01/09/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:55	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW		E	2,040,000	gal/day
Oil & Grease	200	G	13	mg/l
Biochemical Oxygen Demand	****	C	>461	mg/l
Chemical Oxygen Demand	****	C	730	mg/l
Total Suspended Solids	****	C	60	mg/l
Temperature	60	G	24	deg C
pH Acidic	5.5	G	see attached	S.U.
pH Basic	11.5	G	see attached	S.U.
Chromium	5	C	0.0097	mg/l
Copper	2.7	C	0.0377	mg/l
Nickel	2.3	C	0.0804	mg/l
Zinc	3	C	0.0579	mg/l

APR 29 2003

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Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	--->		010					
DATES ON WHICH SAMPLES WERE COLLECTED	--->		01/09/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	--->		13:00					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	2,040,000	E		E		gal/day
Chloromethane		G	ND	G		G		mg/l
Vinyl Chloride		G	ND	G		G		mg/l
Bromomethane		G	ND	G		G		mg/l
Chloroethane		G	ND	G		G		mg/l
Methylene Chloride		G	ND	G		G		mg/l
Chloroform		G	ND	G		G		mg/l
1,1-Dichloroethane		G	ND	G		G		mg/l
1,2-Dichloroethane		G	ND	G		G		mg/l
1,1-Dichloroethene		G	ND	G		G		mg/l
1,2-Dichloropropane		G	ND	G		G		mg/l
Carbon Tetrachloride		G	ND	G		G		mg/l
cis-1,3-Dichloropropene		G	ND	G		G		mg/l
trans-1,3-Dichloropropene		G	ND	G		G		mg/l
trans-1,2-Dichloroethene		G	ND	G		G		mg/l
Dibromochloromethane		G	ND	G		G		mg/l
Bromodichloromethane		G	ND	G		G		mg/l
1,1,1-Trichloroethane		G	ND	G		G		mg/l
1,1,2-Trichloroethane		G	ND	G		G		mg/l
Benzene		G	ND	G		G		mg/l
Toluene		G	1.7	G		G		mg/l
Trichloroethene		G	ND	G		G		mg/l
Ethylbenzene		G	ND	G		G		mg/l
1,1,2,2-Tetrachloroethane		G	ND	G		G		mg/l
Tetrachloroethene		G	ND	G		G		mg/l
Chlorobenzene		G	ND	G		G		mg/l
1,3-Dichlorobenzene		G	ND	G		G		mg/l
1,2-Dichlorobenzene		G	ND	G		G		mg/l
1,4-Dichlorobenzene		G	ND	G		G		mg/l
Bromoform		G	ND	G		G		mg/l
2-Chloroethylvinylether		G	ND	G		G		mg/l
Acrolein		G	ND	G		G		mg/l
Acrylonitrile		G	ND	G		G		mg/l
Phenol		G	ND	G		G		mg/l
2-Chlorophenol		G	ND	G		G		mg/l
2,4-Dimethylphenol		G	ND	G		G		mg/l
2,4-Dichlorophenol		G	ND	G		G		mg/l
2-Nitrophenol		G	ND	G		G		mg/l
4-Nitrophenol		G	ND	G		G		mg/l
2,4-Dinitrophenol		G	ND	G		G		mg/l
2,4,6-Trichlorophenol		G	ND	G		G		mg/l
Pentachlorophenol		G	ND	G		G		mg/l
4-Chloro-3-methylphenol		G	ND	G		G		mg/l
2-Methyl-4,6-dinitrophenol		G	ND	G		G		mg/l
N-nitrosodimethylamine		G	ND	G		G		mg/l
Bis(2-chloroethyl)ether		G	0.044	G		G		mg/l
Bis(2-chloroisopropyl)ether		G	ND	G		G		mg/l
N-nitrosodi-n-propylamine		G	ND	G		G		mg/l
Hexachloroethane		G	ND	G		G		mg/l
Nitrobenzene		G	ND	G		G		mg/l

FE=1.36

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __x__(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) ____(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	--->		010					
DATES ON WHICH SAMPLES WERE COLLECTED	--->		01/09/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	--->		13:00					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	2,040,000	E		E		gal/day
Isophorone		G	ND	G		G		mg/l
Bis(2-chloroethoxy)methane		G	ND	G		G		mg/l
1,2,4-Trichlorobenzene		G	ND	G		G		mg/l
Dimethyl phthalate		G	ND	G		G		mg/l
Hexachlorobutadiene		G	ND	G		G		mg/l
Hexachlorocyclopentadiene		G	ND	G		G		mg/l
2-Chloronaphthalene		G	ND	G		G		mg/l
2,6-Dinitrotoluene		G	ND	G		G		mg/l
2,4-Dinitrotoluene		G	ND	G		G		mg/l
4-Chlorophenyl-phenylether		G	ND	G		G		mg/l
4-Bromophenyl-phenylether		G	ND	G		G		mg/l
Diethyl phthalate		G	ND	G		G		mg/l
Hexachlorobenzene		G	ND	G		G		mg/l
N-nitrosodiphenylamine		G	ND	G		G		mg/l
1,2-Diphenylhydrazine		G	ND	G		G		mg/l
Di-n-butyl phthalate		G	ND	G		G		mg/l
3,3-Dichlorobenzidine		G	ND	G		G		mg/l
Bis(2-ethylhexyl)phthalate		G	0.011	G		G		mg/l
Butyl benzyl phthalate		G	ND	G		G		mg/l
Di-n-octyl phthalate		G	ND	G		G		mg/l
Benzidine		G	ND	G		G		mg/l
Naphthalene		G	ND	G		G		mg/l
Phenanthrene		G	ND	G		G		mg/l
Fluorene		G	ND	G		G		mg/l
Anthracene		G	ND	G		G		mg/l
Acenapthene		G	ND	G		G		mg/l
Acenapthylene		G	ND	G		G		mg/l
Benzo(a)pyrene		G	ND	G		G		mg/l
Chrysene		G	ND	G		G		mg/l
Fluoranthene		G	ND	G		G		mg/l
Pyrene		G	ND	G		G		mg/l
Benzo(a)anthracene		G	ND	G		G		mg/l
Benzo(b)fluoranthene		G	ND	G		G		mg/l
Benzo(k)fluoranthene		G	ND	G		G		mg/l
Dibenzo(a,h)anthracene		G	ND	G		G		mg/l
Benzo(g,h,i)perylene		G	ND	G		G		mg/l
Ideno(1,2,3-cd)pyrene		G	ND	G		G		mg/l
Total Toxic Organics	5.52	--	1.755		0		0	mg/l
Shaded cells represent known absent or suspected absent								

OK

FG

APR 29 2003

MSD 019708

Mallinckrodt pH monitoring Sample Point 010 - January 2003					
Date	Time	pH	Total for Event in Minutes	Month-Year	
01/02/2003	14:40	5.2	2	January-03	
01/02/2003	14:44	4.3	2	January-03	
01/02/2003	18:34	5.4	2	January-03	
01/06/2003	9:26	4		January-03	
01/06/2003	9:28	3.9	4	January-03	
01/06/2003	9:32	3.9		January-03	
01/06/2003	9:34	3.9	4	January-03	
01/09/2003	11:28	11.9		January-03	
01/09/2003	11:30	11.9		January-03	
01/09/2003	11:32	11.9		January-03	
01/09/2003	11:34	11.7		January-03	
01/09/2003	11:36	11.6	10	January-03	
01/17/2003	12:12	5	2	January-03	
01/17/2003	12:18	12.3		January-03	
01/17/2003	12:20	12.3		January-03	
01/17/2003	12:22	12.2		January-03	
01/17/2003	12:24	12		January-03	
01/17/2003	12:26	11.8		January-03	
01/17/2003	12:28	11.6	12	January-03	
01/22/2003	14:38	11.6		January-03	
01/22/2003	14:40	11.6		January-03	
01/22/2003	14:42	11.6		January-03	
01/22/2003	14:44	11.6		January-03	
01/22/2003	14:46	11.6		January-03	
01/22/2003	14:48	11.6		January-03	
01/22/2003	14:50	11.6		January-03	
01/22/2003	14:52	11.6		January-03	
01/22/2003	14:54	11.6		January-03	
01/22/2003	14:56	11.6		January-03	
01/22/2003	14:58	11.6		January-03	
01/22/2003	15:00	11.6		January-03	
01/22/2003	15:02	11.6		January-03	
01/22/2003	15:04	11.6	28	January-03	
01/22/2003	15:28	4.5	2	January-03	
01/22/2003	15:32	11.6		January-03	
01/22/2003	15:34	11.6		January-03	
01/22/2003	15:36	11.6		January-03	
01/22/2003	15:38	11.6	8	January-03	
01/22/2003	16:08	14		January-03	
01/22/2003	16:10	14		January-03	
01/22/2003	16:12	14		January-03	
01/22/2003	16:14	14		January-03	
01/22/2003	16:16	14		January-03	
01/22/2003	16:18	14		January-03	
01/22/2003	16:20	14		January-03	
01/22/2003	16:22	14		January-03	
01/22/2003	16:24	14		January-03	
01/22/2003	16:26	14		January-03	
01/22/2003	16:28	14		January-03	
01/22/2003	16:30	14		January-03	
01/22/2003	16:32	14		January-03	
01/22/2003	16:34	14		January-03	
01/22/2003	16:36	14		January-03	
01/22/2003	16:38	11.8		January-03	
01/22/2003	16:40	5.3		January-03	

01/22/2003	16:42	5.4		January-03	
01/22/2003	16:44	4	38	January-03	
01/23/2003	23:50	11.8		January-03	
01/23/2003	23:52	11.8		January-03	
01/23/2003	23:54	11.8		January-03	
01/23/2003	23:56	11.7	8	January-03	
01/30/2003	9:34	4.3		January-03	
01/30/2003	9:36	4.1	4	January-03	
01/30/2003	9:42	4.1		January-03	
01/30/2003	9:44	3.9		January-03	
01/30/2003	9:46	3.9	6	January-03	
01/30/2003	9:50	11.7		January-03	
01/30/2003	9:52	11.7		January-03	
01/30/2003	9:54	11.6	6	January-03	
01/31/2003	8:28	5.2	2	January-03	
January Total			140		

Mallinckrodt pH monitoring Sample Point 010 - February 2003					
Date	**Time**	**pH**	**Total for Event in Minutes**	**Month-Year**	
02/02/2003	1:38	11.6		February-03	
02/02/2003	1:40	11.6		February-03	
02/02/2003	1:42	11.6	6	February-03	
02/07/2003	12:52	5.1		February-03	
02/07/2003	12:54	3.8	4	February-03	
02/07/2003	12:58	3.7		February-03	
02/07/2003	13:00	3.5	4	February-03	
02/08/2003	14:16	5.3		February-03	
02/08/2003	14:18	5		February-03	
02/08/2003	14:20	4.5		February-03	
02/08/2003	14:22	4.2		February-03	
02/08/2003	14:24	4		February-03	
02/08/2003	14:26	4		February-03	
02/08/2003	14:28	4.3		February-03	
02/08/2003	14:30	4.9		February-03	
02/08/2003	14:32	5.4	18	February-03	
02/13/2003	10:00	4.2	2	February-03	
02/13/2003	10:06	3.9	2	February-03	
02/15/2003	21:26	5.4	2	February-03	
02/15/2003	21:38	5.3		February-03	
02/15/2003	21:40	5.4	4	February-03	
02/16/2003	1:02	11.6		February-03	
02/16/2003	1:04	11.6		February-03	
02/16/2003	1:06	11.6		February-03	
02/16/2003	1:08	11.6	8	February-03	
02/16/2003	5:16	11.6		February-03	
02/16/2003	5:18	11.7		February-03	
02/16/2003	5:20	11.8		February-03	
02/16/2003	5:22	11.8		February-03	
02/16/2003	5:24	11.8		February-03	
02/16/2003	5:26	11.7		February-03	
02/16/2003	5:28	11.7		February-03	
02/16/2003	5:30	11.6	16	February-03	
02/16/2003	6:24	11.9		February-03	
02/16/2003	6:26	12.1		February-03	
02/16/2003	6:28	12.1		February-03	
02/16/2003	6:30	12.1		February-03	
02/16/2003	6:32	12		February-03	
02/16/2003	6:34	11.9		February-03	
02/16/2003	6:36	11.7	14	February-03	
02/16/2003	20:26	4.6		February-03	
02/16/2003	20:28	4.4		February-03	
02/16/2003	20:30	4.7		February-03	
02/16/2003	20:32	4		February-03	
02/16/2003	20:34	4.4		February-03	

02/16/2003	20:36	4.2		February-03	
02/16/2003	20:38	4.2	14	February-03	
02/16/2003	20:42	4.8		February-03	
02/16/2003	20:44	5.1	4	February-03	
02/16/2003	20:48	4.9	2	February-03	
02/17/2003	5:34	11.6		February-03	
02/17/2003	5:36	11.7		February-03	
02/17/2003	5:38	11.8		February-03	
02/17/2003	5:40	11.8		February-03	
02/17/2003	5:42	11.9		February-03	
02/17/2003	5:44	11.9		February-03	
02/17/2003	5:46	11.9		February-03	
02/17/2003	5:48	11.9		February-03	
02/17/2003	5:50	11.9		February-03	
02/17/2003	5:52	11.9		February-03	
02/17/2003	5:54	11.9		February-03	
02/17/2003	5:56	11.6	24	February-03	
02/17/2003	18:08	11.6		February-03	
02/17/2003	18:10	11.6	4	February-03	
02/18/2003	11:34	11.8		February-03	
02/18/2003	11:36	11.8		February-03	
02/18/2003	11:38	11.8		February-03	
02/18/2003	11:40	11.8		February-03	
02/18/2003	11:42	11.8		February-03	
02/18/2003	11:44	11.8		February-03	
02/18/2003	11:46	11.8		February-03	
02/18/2003	11:48	11.8		February-03	
02/18/2003	11:50	11.8		February-03	
02/18/2003	11:52	11.8		February-03	
02/18/2003	11:54	11.8		February-03	
02/18/2003	11:56	11.8		February-03	
02/18/2003	11:58	11.8		February-03	
02/18/2003	12:00	11.8		February-03	
02/18/2003	12:02	11.8		February-03	
02/18/2003	12:04	11.9		February-03	
02/18/2003	12:06	11.9		February-03	
02/18/2003	12:08	11.9		February-03	
02/18/2003	12:10	11.9		February-03	
02/18/2003	12:12	12		February-03	
02/18/2003	12:14	12		February-03	
02/18/2003	12:16	12		February-03	
02/18/2003	12:18	12		February-03	
02/18/2003	12:20	12		February-03	
02/18/2003	12:22	12		February-03	
02/18/2003	12:24	12		February-03	
02/18/2003	12:26	12		February-03	
02/18/2003	12:28	12		February-03	
02/18/2003	12:30	12		February-03	
02/18/2003	12:32	12		February-03	
02/18/2003	12:34	11.9		February-03	
02/18/2003	12:36	11.9		February-03	

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02/18/2003	12:38	11.9		February-03	
02/18/2003	12:40	11.9		February-03	
02/18/2003	12:42	11.9		February-03	
02/18/2003	12:44	11.9		February-03	
02/18/2003	12:46	11.9		February-03	
02/18/2003	12:48	11.9		February-03	
02/18/2003	12:50	11.9		February-03	
02/18/2003	12:52	11.9		February-03	
02/18/2003	12:54	11.8		February-03	
02/18/2003	12:56	11.8		February-03	
02/18/2003	12:58	11.7		February-03	
02/18/2003	13:00	11.6	88	February-03	
02/18/2003	13:22	3.8	2	February-03	
02/20/2003	2:14	5		February-03	
02/20/2003	2:16	4.8		February-03	
02/20/2003	2:18	4.6		February-03	
02/20/2003	2:20	4.6		February-03	
02/20/2003	2:22	4.6		February-03	
02/20/2003	2:24	4.6		February-03	
02/20/2003	2:26	4.8		February-03	
02/20/2003	2:28	5.1		February-03	
02/20/2003	2:30	5.3	18	February-03	
02/20/2003	9:44	4		February-03	
02/20/2003	9:46	3.8	4	February-03	
02/20/2003	9:50	3.9	2	February-03	
02/27/2003	10:06	4.1		February-03	
02/27/2003	10:08	4.1		February-03	
02/27/2003	10:10	4	6	February-03	
02/27/2003	10:16	4		February-03	
02/27/2003	10:18	4	4	February-03	
02/27/2003	13:18	11.7		February-03	
02/27/2003	13:20	11.6		February-03	
02/27/2003	13:22	11.6	6	February-03	
February Total			258		

Mallinckrodt pH monitoring Sample Point 010 - March 2003

Date	Time	pH	Total for Event in Minutes	Month-Year
03/01/2003	20:42	11.6		March-03
03/01/2003	20:44	11.6		March-03
03/01/2003	20:46	11.6		March-03
03/01/2003	20:48	11.6		March-03
03/01/2003	20:50	11.6		March-03
03/01/2003	20:52	11.6		March-03
03/01/2003	20:54	11.6	14	March-03
03/03/2003	14:02	11.6		March-03
03/03/2003	14:04	11.6		March-03
03/03/2003	14:06	11.6		March-03
03/03/2003	14:08	11.6		March-03
03/03/2003	14:10	11.6		March-03
03/03/2003	14:12	11.6		March-03
03/03/2003	14:14	11.6	14	March-03
03/04/2003	15:14	11.6		March-03
03/04/2003	15:16	11.6		March-03
03/04/2003	15:18	11.6		March-03
03/04/2003	15:20	11.6		March-03
03/04/2003	15:22	11.6		March-03
03/04/2003	15:24	11.6		March-03
03/04/2003	15:26	11.6		March-03
03/04/2003	15:28	11.6		March-03
03/04/2003	15:30	11.6		March-03
03/04/2003	15:32	11.6		March-03
03/04/2003	15:34	11.6		March-03
03/04/2003	15:36	11.6		March-03
03/04/2003	15:38	11.6		March-03
03/04/2003	15:40	11.6		March-03
03/04/2003	15:42	11.6		March-03
03/04/2003	15:44	11.6		March-03
03/04/2003	15:46	11.6		March-03
03/04/2003	15:48	11.6	36	March-03
03/05/2003	9:54	11.7		March-03
03/05/2003	9:56	11.7		March-03
03/05/2003	9:58	11.7		March-03
03/05/2003	10:00	11.8		March-03
03/05/2003	10:02	11.9		March-03
03/05/2003	10:04	11.9		March-03
03/05/2003	10:06	11.9		March-03
03/05/2003	10:08	12		March-03
03/05/2003	10:10	12		March-03
03/05/2003	10:12	12		March-03
03/05/2003	10:14	12		March-03
03/05/2003	10:16	12		March-03
03/05/2003	10:18	12		March-03
03/05/2003	10:20	12		March-03
03/05/2003	10:22	12		March-03
03/05/2003	10:24	12		March-03
03/05/2003	10:26	12		March-03
03/05/2003	10:28	12		March-03
03/05/2003	10:30	12		March-03

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03/05/2003	10:32	12		March-03
03/05/2003	10:34	12		March-03
03/05/2003	10:36	11.9		March-03
03/05/2003	10:38	11.9		March-03
03/05/2003	10:40	11.8		March-03
03/05/2003	10:42	11.8		March-03
03/05/2003	10:44	11.8		March-03
03/05/2003	10:46	11.7		March-03
03/05/2003	10:48	11.7		March-03
03/05/2003	10:50	11.6	58	March-03
03/05/2003	13:44	11.6		March-03
03/05/2003	13:46	11.7		March-03
03/05/2003	13:48	11.7		March-03
03/05/2003	13:50	11.8		March-03
03/05/2003	13:52	11.8		March-03
03/05/2003	13:54	11.8		March-03
03/05/2003	13:56	11.8		March-03
03/05/2003	13:58	11.7		March-03
03/05/2003	14:00	11.7	18	March-03
03/06/2003	14:08	4	2	March-03
03/06/2003	14:12	4		March-03
03/06/2003	14:14	4	4	March-03
03/06/2003	14:18	11.9		March-03
03/06/2003	14:20	11.7	4	March-03
03/06/2003	14:24	11.8		March-03
03/06/2003	14:26	11.8		March-03
03/06/2003	14:28	11.6		March-03
03/06/2003	14:30	11.7		March-03
03/06/2003	14:32	11.6	10	March-03
03/13/2003	14:46	0	2	March-03
03/14/2003	10:36	0.4		March-03
03/14/2003	10:38	3.1		March-03
03/14/2003	10:40	2.9		March-03
03/14/2003	10:42	2.9		March-03
03/14/2003	10:44	3		March-03
03/14/2003	10:46	3.3		March-03
03/14/2003	10:48	3.9	14	March-03
03/19/2003	16:58	11.6		March-03
03/19/2003	17:00	11.6		March-03
03/19/2003	17:02	11.6		March-03
03/19/2003	17:04	11.6	8	March-03
03/23/2003	12:32	11.6		March-03
03/23/2003	12:34	11.7		March-03
03/23/2003	12:36	11.8		March-03
03/23/2003	12:38	11.8		March-03
03/23/2003	12:40	11.8		March-03
03/23/2003	12:42	11.8		March-03
03/23/2003	12:44	11.7		March-03
03/23/2003	12:46	11.6	16	March-03
03/28/2003	14:18	4		March-03
03/28/2003	14:20	4		March-03
03/28/2003	14:22	4	6	March-03
03/28/2003	14:28	4		March-03
03/28/2003	14:30	4		March-03
03/28/2003	14:32	4	6	March-03
March Total			212	

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __X__(JAN-MAR) ___(APR-JUNE) __(JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		080	081	082	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		01/09/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		8:45			
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW				
PARAMETER	LIMIT		G=grab,C=compo	G=grab,C=composite,M=measured flow,E=e		UNITS
FLOW		E	10,775			gal/day
Oil & Grease	200	G	1.7			mg/l
Biochemical Oxygen Demand	****	C	< 11.0			mg/l
Chemical Oxygen Demand	****	C	13.0			mg/l
Total Suspended Solids	****	C	13.0			mg/l
Temperature	60	G	7			deg C
pH Acidic	5.5	G	7			S.U.
pH Basic	11.5	G	8			S.U.
Total Toxic Organics	5.52	G	0.01682			mg/l

APR 29 2003

MSD 019716

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _X___(JAN-MAR) ____(APR-JUNE) ____ (JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		080					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		01/09/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:45					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E						gal/day
Chloromethane		G	ND					mg/l
Vinyl Chloride		G	ND					mg/l
Bromomethane		G	ND					mg/l
Chloroethane		G	ND					mg/l
Methylene Chloride		G	ND					mg/l
Chloroform		G	0.0053					mg/l
1,1-Dichloroethane		G	ND					mg/l
1,2-Dichloroethane		G	ND					mg/l
1,1-Dichloroethene		G	ND					mg/l
1,2-Dichloropropane		G	ND					mg/l
Carbon Tetrachloride		G	ND					mg/l
cis-1,3-Dichloropropene		G	ND					mg/l
trans-1,3-Dichloropropene		G	ND					mg/l
trans-1,2-Dichloroethene		G	ND					mg/l
Dibromochloromethane		G	0.0043					mg/l
Bromodichloromethane		G	0.0052					mg/l
1,1,1-Trichloroethane		G	ND					mg/l
1,1,2-Trichloroethane		G	ND					mg/l
Benzene		G	ND					mg/l
Toluene		G	0.00082					mg/l
Trichloroethene		G	ND					mg/l
Ethylbenzene		G	ND					mg/l
1,1,2,2-Tetrachloroethane		G	ND					mg/l
Tetrachloroethene		G	ND					mg/l
Chlorobenzene		G	ND					mg/l
1,3-Dichlorobenzene		G	ND					mg/l
1,2-Dichlorobenzene		G	ND					mg/l
1,4-Dichlorobenzene		G	ND					mg/l
Bromoform		G	0.0012					mg/l
2-Chloroethylvinylether		G	ND					mg/l
Acrolein		G	ND					mg/l
Acrylonitrile		G	ND					mg/l
Phenol		G	ND					mg/l
2-Chlorophenol		G	ND					mg/l
2,4-Dimethylphenol		G	ND					mg/l
2,4-Dichlorophenol		G	ND					mg/l
2-Nitrophenol		G	ND					mg/l
4-Nitrophenol		G	ND					mg/l
2,4-Dinitrophenol		G	ND					mg/l
2,4,6-Trichlorophenol		G	ND					mg/l
Penta-Chlorophenol		G	ND					mg/l
4-Chloro-3-methylphenol		G	ND					mg/l
2-Methyl-4,6-dinitrophenol		G	ND					mg/l
N-nitrosodimethylamine		G	ND					mg/l
Bis(2-chloroethyl)ether		G	ND					mg/l
Bis(2-chloroisopropyl)ether		G	ND					mg/l
N-nitroso-di-n-propylamine		G	ND					mg/l
Hexachloroethane		G	ND					mg/l
Nitrobenzene		G	ND					mg/l
Isophorone		G	ND					mg/l
Bis(2-chloroethoxy)methane		G	ND					mg/l
1,2,4-Trichlorobenzene		G	ND					mg/l
Dimethyl Phthalate		G	ND					mg/l
Hexachlorobutadiene		G	ND					mg/l
Hexachlorocyclopentadiene		G	ND					mg/l
2-Chloronaphthalene		G	ND					mg/l
2,6-Dinitrotoluene		G	ND					mg/l

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120598-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _X___(JAN-MAR) ____(APR-JUNE) ____ (JULY-SEPT) ___(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	---->		080					
DATES ON WHICH SAMPLES WERE COLLECTED	---->		01/09/2003					
TIMES AT WHICH SAMPLES WERE COLLECTED	---->		8:45					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E						gal/day
2,4-Dinitrotoluene		G	ND					mg/l
4-Chlorophenyl-phenylether		G	ND					mg/l
4-Bromophenyl-phenylether		G	ND					mg/l
Diethyl phthalate		G	ND					mg/l
Hexachlorobenzene		G	ND					mg/l
N-nitrosodiphenylamine		G	ND					mg/l
1,2-Diphenylhydrazine		G	ND					mg/l
Di-n-butyl phthalate		G	ND					mg/l
3,3-Dichlorobenzidine		G	ND					mg/l
Bis(2-ethylhexyl)phthalate		G	ND					mg/l
Butyl benzyl phthalate		G	ND					mg/l
Di-n-octyl phthalate		G	ND					mg/l
Benzidine		G	ND					mg/l
Naphthalene		G	ND					mg/l
Phenanthrene		G	ND					mg/l
Fluorene		G	ND					mg/l
Anthracene		G	ND					mg/l
Acenaphthene		G	ND					mg/l
Acenaphthylene		G	ND					mg/l
Benzo(a)pyrene		G	ND					mg/l
Chrysene		G	ND					mg/l
Fluoranthene		G	ND					mg/l
Pyrene		G	ND					mg/l
Benzo(a)anthracene		G	ND					mg/l
Benzo(k)fluoranthene		G	ND					mg/l
Benzo(b)fluoranthene		G	ND					mg/l
Dibenzo(a,h)anthracene		G	ND					mg/l
Benzo(g,h,i)perylene		G	ND					mg/l
Indeno(1,2,3-cd)pyrene		G	ND					mg/l
Total Toxic Organics	5.52	–	0.01682					mg/l
Shaded cells represent known absent or suspected absent								

APR 29 2003

MSD 019718

Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 080/081/082; Building 98

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
Peptides				MSD		n/a	No
Cleanouts		01/06/2003	01/07/2003				
		02/14/2003	02/18/2003				
Leuprolide	Pharmaceutical	01/08/2003	01/10/2003				
		01/13/2003	01/17/2003				
		01/21/2003	01/24/2003				
		01/27/2003	01/31/2003				
		02/03/2003	02/07/2003				
		02/10/2003	02/13/2003				
Prospatide	Pharmaceutical	03/19/2003	03/28/2003				
		03/31/2003	03/31/2003				
Naltrexone MeBr	Narcotic	02/24/2003	03/22/2003				
		03/24/2003	03/28/2003				

APR 29 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: __x__(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) ___(OCT-DEC

Samples Collected By: Malinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			---->		905		
DATES ON WHICH SAMPLES WERE COLLECT			---->		01/09/2003		
TIMES AT WHICH SAMPLES WERE COLLECT			---->		9:10		
		LIMIT (ave)	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW			
PARAMETER		(gm/day)	(gm/day)		M=measured flow	UNITS	Lab results mg/L
FLOW				M	131,840	gal/day	
Chloromethane		52.41	140.56	G	1.497	gm/day	0.003
Vinyl Chloride		46.22	81.96	G	4.990	gm/day	0.01
Chloroethane		52.41	140.56	G	4.990	gm/day	0.01
Methylene Chloride		17.15	81	G	2.495	gm/day	0.005
Chloroform		52.89	154.86	G	2.495	gm/day	0.005
1,1-Dichloroethane		10.48	28.11	G	2.495	gm/day	0.005
1,2-Dichloroethane		85.77	273.51	G	2.495	gm/day	0.005
1,1-Dichloroethene		10.48	28.59	G	2.495	gm/day	0.005
1,2-Dichloropropane		93.39	378.33	G	2.495	gm/day	0.005
Carbon Tetrachloride		67.66	181.07	G	2.495	gm/day	0.005
cis-1,3-Dichloropropene		93.39	378.33	G	2.495	gm/day	0.005
trans-1,3-Dichloropropene		93.39	378.33	G	2.495	gm/day	0.005
trans-1,2-Dichloroethene		11.91	31.45	G	2.495	gm/day	0.005
1,1,1-Trichloroethane		10.48	28.11	G	2.495	gm/day	0.005
1,1,2-Trichloroethane		15.25	60.51	G	2.495	gm/day	0.005
Benzene		27.16	63.85	G	2.495	gm/day	0.005
Toluene		13.34	35.26	G	2.495	gm/day	0.005
Trichloroethene		12.39	32.88	G	2.495	gm/day	0.005
Ethylbenzene		67.66	181.07	G	2.495	gm/day	0.005
Tetrachloroethene		24.78	78.14	G	2.495	gm/day	0.005
Chlorobenzene		67.66	181.07	G	2.495	gm/day	0.005
1,3-Dichlorobenzene		67.66	181.07	G	2.495	gm/day	0.005
1,2-Dichlorobenzene		93.39	378.33	G	2.495	gm/day	0.005
1,4-Dichlorobenzene		67.66	181.07	G	2.495	gm/day	0.005
2-Nitrophenol		30.97	110.07	G	24.951	gm/day	0.05
4-Nitrophenol		77.19	274.46	G	19.961	gm/day	0.04
2-Methyl-4,6-dinitrophenol		37.17	131.99	G	6.986	gm/day	0.014
Hexachloroethane		93.39	378.33	G	24.951	gm/day	0.05
Nitrobenzene		1065.91	3050.49	G	24.951	gm/day	0.05
1,2,4-Trichlorobenzene		93.39	378.33	G	24.951	gm/day	0.05
Dimethyl phthalate		9.05	22.4	G	2.495	gm/day	0.005
Hexachlorobutadiene		67.66	181.066	G	24.951	gm/day	0.05
Diethyl phthalate		21.92	53.84	G	4.491	gm/day	0.009
Hexachlorobenzene		93.39	378.33	G	24.951	gm/day	0.05
Di-n-butyl phthalate		9.53	20.49	G	8.483	gm/day	0.017
Bis(2-ethylhexyl)phthalate		45.27	122.93	G	7.485	gm/day	0.015
Naphthalene		9.05	22.4	G	3.992	gm/day	0.008
Phenanthrene		9.05	22.4	G	6.986	gm/day	0.014
Fluorene		9.05	22.4	G	5.489	gm/day	0.011
Anthracene		9.05	22.4	G	6.986	gm/day	0.014
Acenapthene		9.05	22.4	G	6.487	gm/day	0.013
Fluoranthene		10.48	25.73	G	7.984	gm/day	0.016
Pyrene		9.53	22.87	G	8.982	gm/day	0.018

Shaded values represent detection limits

LAB RESULTS

All lab results were non detect. Reporting or method detection limits were used as lab results.

APR 29 2003

MSD 019720

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	_X__(JAN-MAR) ____(APR-JUNE) __(JULY-SEPT) ___(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		912
DATES ON WHICH SAMPLES WERE COLLECTED	----->		See attached
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW	
PARAMETER	LIMIT	G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW		M	See attached	gal/day
DMAC (daily max)	7091	C	See attached	lb/day
DMAC (monthly average)	5459	C	See attached	lb/day
Dimethyl Sulfide(daily average)	*	C	See attached	lb/day

* Monitoring requirement only.

APR 29 2003

DMAC and DMS Analysis and Mass Loadings
Jan-03

Date	Flow	DMAC	
	(gal/day)	mg/l	lb/day
01-Jan			0
02-Jan	40783	5,200	1,772
03-Jan			0
04-Jan			0
05-Jan			0
06-Jan			0
07-Jan			0
08-Jan			0
09-Jan	32144	3,700	994
10-Jan			0
11-Jan			0
12-Jan			0
13-Jan			0
14-Jan			0
15-Jan			0
16-Jan	35839	6,700	2,006
17-Jan			0
18-Jan			0
19-Jan			0
20-Jan			0
21-Jan			0
22-Jan			0
23-Jan	31834	5,900	1,569
24-Jan			0
25-Jan			0
26-Jan			0
27-Jan			0
28-Jan			0
29-Jan	64831	4,400	2,383
30-Jan			0
31-Jan			0
Avg (weighted):	41,086	5,180	1,778
Max:	64,831	6,700	2,383
Min:	31,834	3,700	0
Monthly Limit:	n/a	n/a	5,459
Daily Max:	n/a	n/a	7,091

APR 29 2004

DMAC and DMS Analysis and Mass Loadings
Feb-03

		T-450 for Bldg. 504		Bldg. 505 sump
Date	**Flow**	**DMAC**		**DMAC**
	(gal/day)	**mg/l**	**lb/day**	**mg/l**
01-Feb			0	
02-Feb			0	
03-Feb			0	
04-Feb			0	
05-Feb			0	
06-Feb			0	
07-Feb	46020	7,400	2,845	
08-Feb			0	
09-Feb			0	
10-Feb			0	ND
11-Feb			0	ND
12-Feb			0	ND
13-Feb	30700	4,600	1,180	ND
14-Feb			0	
15-Feb			0	
16-Feb			0	
17-Feb			0	
18-Feb			0	
19-Feb			0	ND
20-Feb			0	
21-Feb	39381	13000	4,278	ND
22-Feb			0	
23-Feb			0	
24-Feb			0	
25-Feb	34835	6,400	1,863	
26-Feb	35294	7,100	2,094	
27-Feb	37573	30,000	9,418	ND
28-Feb			0	
Avg (weighted):	37,301	11,417	3,558	
Max:	46,020	30,000	9,418	
Min:	30,700	4,600	0	
Monthly Limit:	n/a	n/a	5,459	
Daily Max:	n/a	n/a	7,091	

DMAC and DMS Analysis and Mass Loadings
Mar-03

Bldg. 505 sump

Date	Flow	DMAC		DMAC
	(gal/day)	mg/l	lb/day	mg/l
01-Mar	41412	7,700	2,664	
02-Mar	42429	6,600	2,340	
03-Mar			0	
04-Mar			0	
05-Mar			0	
06-Mar	31300	9,600	2,511	
07-Mar	29178	9,600	2,340	ND
08-Mar			0	
09-Mar			0	
10-Mar			0	
11-Mar			0	
12-Mar			0	
13-Mar	40445	7,800	2,636	ND
14-Mar			0	
15-Mar			0	
16-Mar			0	
17-Mar			0	
18-Mar			0	
19-Mar			0	
20-Mar	33080	6100	1,686	ND
21-Mar			0	
22-Mar			0	
23-Mar			0	
24-Mar			0	
25-Mar			0	
26-Mar			0	
27-Mar	43036	3,000	1,079	ND
28-Mar				
29-Mar			0	
30-Mar			0	
31-Mar			0	
Avg (weighted)	37,269	7,200	2,242	
Max:	43,036	9,600	2,664	
Min:	29,178	3,000	0	
Monthly Limit:	n/a	n/a	5,459	
Daily Max:	n/a	n/a	7,091	

APR 29 2003

	METROPOLIT[redacted]T. LOUIS SEWER DISTRICT - INDUSTRIAL SE[redacted]ONITORING REPORT							
PART I: IDENTIFYING INFORMATION								
Company Name:		Mallinckrodt Inc.						
Permit No.:		21120596-00						
Premise Address:		3600 North Second St., St. Louis, MO 63147						
Monitoring Period:	__X__(JAN-MAR)		____(APR-JUN)		____(JULY-SEP)		____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc						
Analysis Performed By:		Lancaster Labs						
Part II: ANALYTICAL RESULTS OF SELF MONITORING								
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 913				
DATES ON WHICH SAMPLES WERE COLLECTED			----->	01/09/2003				
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	4:00				
SAMPLE TYPE				Grab				
FLOW		E	5,400					
PARAMETER								
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result				
Acetone	524.2	20.70	8.20	<0.300				
Benzene	524.2	3.00	0.70	<0.010				
Chlorobenzene	524.2	3.00	0.70	<0.010				
Chloroform	524.2	0.10	0.03	0.026 J				
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010				
1,2-Dichloroethane	524.2	20.70	8.20	<0.010				
Ethyl Acetate	1666	20.70	8.20	<0.010				
n-Hexane	1666	3.00	0.70	<0.010				
Methylene chloride	524.2	3.00	0.70	<0.030				
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010				
Tetrahydrofuran	1666	9.20	3.40	<0.010				
Toluene	524.2	0.30	0.20	0.017 J				
Xylenes	1666	3.00	0.70	<0.020				
Isobutyraldehyde	1666	20.70	8.20	0.0826 J				
n-Amyl acetate	1666	20.70	8.20	<0.010				
n-Butyl acetate	1666	20.70	8.20	<0.010				
Isopropyl acetate	1666	20.70	8.20	<0.010				
Methyl cellosolve	1671	275.00	59.70	<6.7				
Isopropyl ether	1666	20.70	8.20	<0.010				
n-Heptane	1666	3.00	0.70	<0.020				
Methyl formate	1666	20.70	8.20	<0.050				
Diethyl amine	1671	255.00	100.00	<17.0				
Triethyl amine	1671	255.00	100.00	<17.0				

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	__X__(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 914
DATES ON WHICH SAMPLES WERE COLLECTED				----->	01/16/2003
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	23:00
SAMPLE TYPE					GRAB
FLOW				E	450
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	<0.010	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	0.0336 J	
n-Hexane	1666	3.00	0.70	<0.010	
Methylene chloride	524.2	3.00	0.70	<0.010	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
Tetrahydrofuran	1666	9.20	3.40	<0.010	
Toluene	524.2	0.30	0.20	<0.010	
Xylenes	1666	3.00	0.70	<0.020	
Isobutyraldehyde	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
n-Butyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Methyl cellosolve	1671	275.00	59.70	<6.7	
Isopropyl ether	1666	20.70	8.20	<0.010	
n-Heptane	1666	3.00	0.70	<0.020	
Methyl formate	1666	20.70	8.20	<0.050	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by lab				1, 10	

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	__X___(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 915	
DATES ON WHICH SAMPLES WERE COLLECTED				----->	01/09/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	10:00	
SAMPLE TYPE					Grab	
FLOW				E	2,700	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result		
Acetone	524.2	20.70	8.20	<0.300		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	<0.010		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	<0.100		
n-Hexane	1666	3.00	0.70	<0.100		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100		
Tetrahydrofuran	1666	9.20	3.40	<0.100		
Toluene	524.2	0.30	0.20	<0.010		
Xylenes	1666	3.00	0.70	<0.020		
Isobutyraldehyde	1666	20.70	8.20	0.0478 J		
n-Amyl acetate	1666	20.70	8.20	<0.100		
n-Butyl acetate	1666	20.70	8.20	<0.100		
Isopropyl acetate	1666	20.70	8.20	<0.100		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.010		
n-Heptane	1666	3.00	0.70	<0.020		
Methyl formate	1666	20.70	8.20	<0.050		
Diethyl amine	1671	255.00	100.00	<17.0		
Triethyl amine	1671	255.00	100.00	<17.0		
Dilution by lab				1		

APR 29 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT

INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	_X__(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 916
DATES ON WHICH SAMPLES WERE COLLECTED				----->	01/09/2003
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	3:00
SAMPLE TYPE					Grab
FLOW				E	800
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	<0.010	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Hexane	1666	3.00	0.70	<0.010	
Methylene chloride	524.2	3.00	0.70	<0.030	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
Tetrahydrofuran	1666	9.20	3.40	<0.010	
Toluene	524.2	0.30	0.20	<0.010	
Xylenes	1666	3.00	0.70	<0.020	
Isobutyraldehyde	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
n-Butyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Methyl cellosolve	1671	275.00	59.70	<6.7	
Isopropyl ether	1666	20.70	8.20	<0.010	
n-Heptane	1666	3.00	0.70	<0.020	
Methyl formate	1666	20.70	8.20	<0.050	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by Lab				1, 10	

	METROPOLITAN ST. LOUIS SEWER DISTRICT						
	INDUSTRIAL USER SELF MONITORING REPORT						
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT							
PART I: IDENTIFYING INFORMATION							
Company Name:		Mallinckrodt Inc.					
Permit No.:		21120596-00					
Premise Address:		3600 North Second St., St. Louis, MO 63147					
Monitoring Period:	__X__(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)		
Samples Collected By:		Mallinckrodt Inc					
Analysis Performed By:		Lancaster Labs					
Part II: ANALYTICAL RESULTS OF SELF MONITORING							
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 917			
DATES ON WHICH SAMPLES WERE COLLECTED			----->	01/08/2003			
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	9:30			
SAMPLE TYPE				Grab			
FLOW		E	5000 GPD				
PARAMETER							
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result			
Acetone	524.2	20.70	8.20	<0.030			
Benzene	524.2	3.00	0.70	<0.001			
Chlorobenzene	524.2	3.00	0.70	<0.001			
Chloroform	524.2	0.10	0.03	0.005 J			
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001			
1,2-Dichloroethane	524.2	20.70	8.20	<0.001			
Ethyl Acetate	1666	20.70	8.20	<0.001			
n-Hexane	1666	3.00	0.70	<0.001			
Methylene chloride	524.2	3.00	0.70	<0.003			
4-Methyl-2-pentanone	1666	20.70	8.20	0.0014 J			
Tetrahydrofuran	1666	9.20	3.40	<0.02			
Toluene	524.2	0.30	0.20	<0.001			
Xylenes	1666	3.00	0.70	<0.02			
Isobutyraldehyde	1666	20.70	8.20	<0.001			
n-Amyl acetate	1666	20.70	8.20	<0.001			
n-Butyl acetate	1666	20.70	8.20	<0.001			
Isopropyl acetate	1666	20.70	8.20	<0.001			
Methyl cellosolve	1671	275.00	59.70	<6.7			
Isopropyl ether	1666	20.70	8.20	<0.001			
n-Heptane	1666	3.00	0.70	<0.002			
Methyl formate	1666	20.70	8.20	<0.005			
Diethyl amine	1671	255.00	100.00	<17.0			
Triethyl amine	1671	255.00	100.00	<17.0			
Dilution factor by lab				1			

	METROPOLITAN ST. LOUIS SEWER DISTRICT						
	INDUSTRIAL USER SELF MONITORING REPORT						
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT							
PART I: IDENTIFYING INFORMATION							
Company Name:		Mallinckrodt Inc.					
Permit No.:		21120596-00					
Premise Address:		3600 North Second St., St. Louis, MO 63147					
Monitoring Period:	__X__(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)		
Samples Collected By:		Mallinckrodt Inc					
Analysis Performed By:		Lancaster Labs					
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 918			
DATES ON WHICH SAMPLES WERE COLLECTED			----->	01/09/2003	02/05/2003	03/03/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	21:00	17:30	16:20	
SAMPLE TYPE				Grab	Grab	Grab	
FLOW			E	8,000	8,000	8,000	
PARAMETER							
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	1/9/03 Result	02/05/2003 Result	3/3/03 Result	
Acetone	524.2	20.70	8.20	<3.000			
Benzene	524.2	3.00	0.70	<0.100			
Chlorobenzene	524.2	3.00	0.70	<0.100			
Chloroform	524.2	0.10	0.03	<0.100			
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.100			
1,2-Dichloroethane	524.2	20.70	8.20	<0.100			
Ethyl Acetate	1666	20.70	8.20	0.361 J			
n-Hexane	1666	3.00	0.70	<0.100			
Methylene chloride	524.2	3.00	0.70	<0.300			
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100			
Tetrahydrofuran	1666	9.20	3.40	<0.100			
Toluene	524.2	0.30	0.20	19	0.028 J	0.110	
Xylenes	1666	3.00	0.70	0.369 J			
Isobutyraldehyde	1666	20.70	8.20	<0.100			
n-Amyl acetate	1666	20.70	8.20	<0.100			
n-Butyl acetate	1666	20.70	8.20	<0.100			
Isopropyl acetate	1666	20.70	8.20	<0.100			
Methyl cellosolve	1671	275.00	59.70	<6.7			
Isopropyl ether	1666	20.70	8.20	<0.100			
n-Heptane	1666	3.00	0.70	<0.200			
Methyl formate	1666	20.70	8.20	<0.500			
Diethyl amine	1671	255.00	100.00	<17.0			
Triethyl amine	1671	255.00	100.00	<17.0			
Dilution by lab				1, 100, 1000	100	20	
Exceeds daily max & monthly avg							

APR 29 2003

MSD 019730

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	__X___(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	____(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				SP 919		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	01/15/2003	02/06/2003	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	9:00	9:30	
SAMPLE TYPE			----->	Grabs	Grabs	
FLOW			E	6,000	6,000	
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily Limit	Avg Monthly Limit	1/15/03 Result	2/6/03 Result	
Acetone	524.2	20.70	8.20	0.03		
Benzene	524.2	3.00	0.70	<0.010		
Chlorobenzene	524.2	3.00	0.70	<0.010		
Chloroform	524.2	0.10	0.03	0.066		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010		
1,2-Dichloroethane	524.2	20.70	8.20	<0.010		
Ethyl Acetate	1666	20.70	8.20	0.0313 J		
n-Hexane	1666	3.00	0.70	<0.001		
Methylene chloride	524.2	3.00	0.70	<0.030		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001		
Tetrahydrofuran	1666	9.20	3.40	<0.001		
Toluene	524.2	0.30	0.20	0.082		
Xylenes	1666	3.00	0.70	<0.002		
Isobutyraldehyde	1666	20.70	8.20	<0.001		
n-Amyl acetate	1666	20.70	8.20	<0.001		
n-Butyl acetate	1666	20.70	8.20	<0.001		
Isopropyl acetate	1666	20.70	8.20	<0.001		
Methyl cellosolve	1671	275.00	59.70		<6.7	
Isopropyl ether	1666	20.70	8.20	<0.001		
n-Heptane	1666	3.00	0.70	<0.002		
Methyl formate	1666	20.70	8.20	<0.005		
Diethyl amine	1671	255.00	100.00		<17.0	
Triethyl amine	1671	255.00	100.00		<17.0	
Dilution by Lab				1, 10	1	

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: __X__(JAN-MAR) ____(APR-JUN) ____(JULY-SEP) ____(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->	SP 920
DATES ON WHICH SAMPLES WERE COLLECTED	----->	01/21/2003
TIMES AT WHICH SAMPLES WERE COLLECTED	----->	16:00
SAMPLE TYPE		Grabs
FLOW	E	36,000

PARAMETER Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result
Acetone	524.2	20.70	8.20	<0.300
Benzene	524.2	3.00	0.70	<0.010
Chlorobenzene	524.2	3.00	0.70	<0.010
Chloroform	524.2	0.10	0.03	<0.010
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010
1,2-Dichloroethane	524.2	20.70	8.20	<0.010
Ethyl Acetate	1666	20.70	8.20	<0.010
n-Hexane	1666	3.00	0.70	<0.010
Methylene chloride	524.2	3.00	0.70	<0.030
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010
Tetrahydrofuran	1666	9.20	3.40	<0.010
Toluene	524.2	0.30	0.20	<0.010
Xylenes	1666	3.00	0.70	<0.020
Isobutyraldehyde	1666	20.70	8.20	<0.010
n-Amyl acetate	1666	20.70	8.20	<0.010
n-Butyl acetate	1666	20.70	8.20	<0.010
Isopropyl acetate	1666	20.70	8.20	<0.010
Methyl cellosolve	1671	275.00	59.70	<6.7
Isopropyl ether	1666	20.70	8.20	<0.010
n-Heptane	1666	3.00	0.70	<0.020
Methyl formate	1666	20.70	8.20	<0.050
Diethyl amine	1671	255.00	100.00	<17
Triethyl amine	1671	255.00	100.00	<17
Dilution by lab				1, 10

Mallinckrodt, Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Points 981/982; Building 97

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Diphenoxylate	Pharmaceutical	01/17/03	02/03/03	MSD	NA	No	No
Meperidine	Pharmaceutical	01/13/03	02/01/03	MSD	NA	No	No
Meperidine	Pharmaceutical	02/15/03	03/06/03	MSD	NA	No	No
Methylphendiate	Pharmaceutical	01/03/03	01/16/03	MSD	NA	No	No
Methylphenidate	Pharmaceutical	02/02/03	02/13/03	MSD	NA	No	No
Methylphenidate Base	Pharmaceutical	03/12/03	03/31/03	MSD	NA	No	No
Nalbuphine	Pharmaceutical	02/14/03	02/28/03	MSD	NA	No	No
Dihydrothebaine	Pharmaceutical	03/02/03	03/20/03	MSD	NA	No	No
Thebaine SFH	Pharmaceutical	03/20/03	03/25/03	MSD	NA	No	No
Thebaine from Taz	Pharmaceutical	03/26/03	03/31/03	MSD	NA	No	No

APR 29 2003

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

April 24, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: Comments to Permit Revisions for Permit No. 21120596-00

Fab, YOU'LL NEED TO DISCUSS THESE W/HER FIRST. DMM

Dear Mr. Grabski:

I am in receipt of the draft permit revision dated April 16, 2003. I have a few minor comments as follows:

KEEP "AS IS" IN PMT.

1) Page 42 Item 6 – expand authorization for grab samples to include all the 40 CFR 439 sample points (914, 915, 916, 917, 918, 919, 920, 927 and 928) since the parameters are all volatile organic compounds, or eliminate this as it is covered under I .A.3.b. — point of S.C is to address low flow, not pull list.
2) Page ~~42~~ 3 Item 3 – add sample point 928 to the list. -OK, But 927 should not be on list (Sub B) ✓
3) Page ~~42~~ 3 – Item 4 – drop 40 CFR 415, subpart BK. This is no longer an existing source. -They have removed the process?? Jason's memo says otherwise?

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you, 415 LINE MOVED TO MEXICO. IF STARTED AGAIN, 415 WILL BE "PSNS". ∴, REMOVE O.C.E.20. FG

+928 & -927. OK

Karen Siebenberger
Principal HSE Engineer

FACT SHEET & ECIMS UPDATED. FG

RECEIVED
APR 28 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

Metropolitan Saint Louis Sewer District
2350 Market Street
Saint Louis, Missouri 63103-2555

MALLINCKRODT INC
3600 N 2nd St

St. Louis, MO 63147

MSD ACCOUNT #: W2112059600

INVOICE

Invoice Number: PDP-2731

Invoice Date: 4/4/03

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2002 through September 30, 2003 issued in accordance with the Metropolitan St. Louis Sewer District Ordinance #8660 for the location at 3600 N 2nd St.

Basecharge @ $150.00 per permit		150.00
Volume charge (computed on average daily ccf's)	1,180.480 ccfs @ $.72 per ccf	849.95
Sample Point Charge 26 points @ $100.00 per sample point.		2,600.00
	Total Fee Due:	$3,599.95

Remit to the above address. Mailing payment to any other address or facility of the Metropolitan St. Louis Sewer District could result in a delay in applying payment. If not paid by the due date a late charge of 1.5% will be added to the unpaid balance. For inquiries about this invoice please call (314) 768-6200 Ext.6494.

OEC

PMT FILE

From: Doug Mendoza
To: Fabian Grabski; Jason Gill
Date: 4/2/03 12:53PM
Subject: 21120596-00 Mallinckrodt permit revision

We finally received all the info. from Mallinckrodt re. their SP912/926 and SP913/927/928 revisions.

See memos/e-mails/letters in industry file from late Feb. to late March for details.

Jason - you need to add 926, 927 and 928 to the map; delete 913; add a special sampling note that for 927 and 928 the company will collect samples while we observe the collection (for safety purposes)

Fabian - need to revise SP912's flow, discharge description and discharge quantity. Add SP~~916~~ 926, including special condition noted in 3/4/03 e-mail. Delete 913 (and inactivate all the associated stuff in ECIMS for the SP, limits, components, etc.). Add SPs 927 and 928 (including a special condition to collect represenatative samples directly from the tanks when discharing). Revise SP010 discharge components description.

tyco
Healthcare
Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

March 7, 2003

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Follow-up for SP918 toluene failure in January
Permit No. 21120596-00

SEE 5/6/03 NOV. FG

This letter is to update MSD with recent monitoring data for SP918. The sample collected at SP918 on January 9 failed for toluene at 19 mg/L. This sample point was resampled on February 5 and again on March 3 and both samples passed at 0.03 mg/L and 0.11 mg/L toluene respectively. As communicated in our initial notification to MSD, the process running at the time used no toluene. Further investigation included contacting the raw material supplier, who confirmed toluene was used in their manufacturing process. It is believed that this raw material triggered the failure. This wastewater will be discharged to the PEG system in the future.

If you have any questions, please call me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECEIVED
MAR 12 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

PMT FILE

From: Doug Mendoza
To: Fabian Grabski; Jason Gill
Date: 3/4/03 10:11AM
Subject: Mallinckrodt and permit revisions

I received a letter from Mallinckrodt with details re. bldgs 504/505 (SP912/926) and the DMAC process. I talked with Karen S. about it, and what we will wind up doing is keeping the SP912 limits the same. The SP926 limit will be "non-detect up to <5 mg/L" for both daily max and monthly avg. They can also estimate the flow at SP926, like they do for most other points. The limit is the detection level for DMAC. (At 160,000 gpd, this works out to about 7 lb/day potential.) Sampling will be required weekly at SP926, just like at SP912.

A special condition also will need to be added stating:

SP912 and SP926 must be sampled at the same time;

For SP926 a detected value or a DL above 5 mg/l is a violation;

If a violation at SP926 occurs, the limit at SP912 applies to the total from both SP912 and SP926 - and the estimated SP 926 DMAC discharge will be added to SP912's DMAC to calculate potential violation of SP912's limit;

Karen also will be submitting some information regarding revision of SP913 and the associated 40 CFR 439 subparts. After that is received, we can revise the permit for both SP 913 and SPs 912/926.

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

February 21, 2003

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC.
P.O. Box 470158
St. Louis, MO 63147

Dear Ms. Siebenberger:

The Metropolitan St. Louis Sewer District is required to track the status of compliance of all industrial users with the terms of the federal pretreatment regulations (40 CFR 403), MSD Ordinance 8472 and the user's industrial wastewater discharge permit. On a semi-annual basis, the District is required to identify those users who are in significant noncompliance (SNC) as defined in the ordinance.

Using the criteria defined in the ordinance, the Mallinckrodt Inc. facility at **3600 N. Second St., St. Louis, MO 63147** has been found to be in SNC for the six month period July 1, 2002 through December 31, 2002.

> At sample point 913, the monthly average limitation for chloroform has been exceeded for three of four months in which samples were analyzed, resulting in a chronic noncompliance rate of 75.0 %. Three of the four months also exceeded the Technical Review Criteria (TRC), resulting in a TRC noncompliance rate of 75.0 %.

In accordance with the provisions of Section 403.8(f)(5) of the federal regulations, the District has developed an Enforcement Response Plan. That plan has been approved by the Missouri Department of Natural Resources and incorporated as an integral part of the District's pretreatment program. The Plan requires the District to make an annual newspaper publication of the names of all users found to be in SNC, and to initiate additional enforcement action if necessary.

We recognize that your engineers have optimized the process for chloroform removal in the knockout pots, through adjustment of temperatures and levels in the pots to improve retention times. In addition, the most recent samples by you have indicated chloroform levels in your wastewater discharge to be in compliance. Consequently, we have determined that the annual newspaper publication is the only District action required at this time.

If you have any questions regarding this matter, please contact me at 314-436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

file-permit

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt Permit File

ACCT #: 21120596-00

FROM: Doug Mendoza

DATE: February 20, 2003

RE: ACTIONS TO CORRECT CHLOROFORM EXCEEDANCES AT SP913

On 2/20/03, Karen Siebenberger of Mallinckrodt and I discussed the above. She said that the bldg's Engineer had optimized the operation. There were 3 knockout pots/stills that were supposed to remove chloroform. The retention times were not being hit. He varied the temperatures and levels in the pots to optimize, and now has settings that will efficiently remove the chloroform.

tyco
Healthcare

Mallinckrodt

HSE Department

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

Tele: 314 654-2000
Fax: 314 654-1251

January 28, 2003

Mr. Fabian Grabski
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Re: 2002 4th Quarter Self-Monitoring Report for Permit No. 21120596-00

Dear Mr. Grabski:

Enclosed is Mallinckrodt Inc.'s self-monitoring report for 4th quarter 2002.

As has been previously communicated, please note sample point 912 failures. SP 912 is monitored on a weekly basis for dimethylacetamide (DMAC) discharge. Analytical results are multiplied by the flow to calculate pounds DMAC discharged per day. Three weekly sample results (Oct 31 – 7986#; Nov 7 – 7136#; and Nov 20 – 12074#) were in excess of the daily maximum limits. Mallinckrodt has launched an investigation into this matter. Review of the operating parameters, the DMAC recovery system, tank levels, and DMAC raw material usage do not support the exceedance values. Reserve samples taken around the dates of exceedance were also sent out for analysis with no additional exceedances. Other steps are being undertaken to verify accurate flow measurements and if the samples were representative.

Also, as communicated in a November 4th phone call to Doug Mendoza, chloroform results for sample point 913 in October were excess of the monthly average limit of 0.03 mg/L, with the October 22, 2002 value of 0.139 mg/L also being in excess of the maximum daily limit. The single November sample, on 11/6 (0.047 mg/L) was in excess of the monthly limit. Two December samples passed. There is ongoing work at this sample point to optimize operating parameters. An October 30 resample also failed the daily maximum limit for toluene at 1.39 mg/L and caused an exceedance of the October monthly average limit. November and December resamples passed.

Sample point 917 was monitored in all three months of the quarter for toluene with passing results. This was in response to a failing toluene value in the 3rd quarter that had been attributed to a design flaw in the system that was corrected.

Sample point 919 was also monitored for toluene during all three months of the quarter and likewise had all passing values. Dead legs in the system identified in the 3rd quarter have been addressed.

If you have any questions or require additional information, please contact me at (314) 654-1920.

Thank you,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

RECD 1.31.03
FGG

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt - Tyco Healthcare

Permit No: 21120596-00

Premise Address: 3600 N Second St. St. Louis, MO 63147

Reporting Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☒(OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
TOTAL ACTIVITY DISCHARGED:	0

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print/type name of signing official: Brian Donley

Title: Director, HSE Telephone: 314-654-1412

Signature: Date: 1-27-03

radrpt.doc 2/00

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify one or more of the following. Please review your permit and PLACE YOUR INITIALS IN THE BOXES NEXT TO THOSE CERTIFICATIONS WHICH ARE APPLICABLE TO YOUR FACILITY. If permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

(A) If your permit special conditions waive monitoring at any sample point(s) specified in your permit, you are required to make the following certification:

[BDW] I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) 001, 002, 007, 082

(B) If your permit special conditions waive monitoring at active connection points which are not specified as sample points in your permit, you are required to make the following certification:

[BDW] I certify, since the last discharge monitoring report, there has been no change in the character of wastes discharged at those active connection points which are not specified in my permit .

C. If your permit special conditions waive monitoring at inactive connection points, you are required to make the following certification:

[ ] I certify, since the permit issue date, there has been no change in the status of connection points identified as inactive. These points remain inactive and no discharge occurred during the period covered by this report.

(D) If your permit special conditions authorize grab sample collection in lieu of composite sampling at any sample point(s), you are required to make the following certification:

[BDW] I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) 905 _____.

(E) If your permit special conditions prohibit discharge of wastes which are subject to certain categorical pretreatment standards, you are required to make the following certification :

[BDW] I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR 414 for SP080

(F) Discharges subject to Pharmaceutical Categorical Standards (40 CFR 439) can be exempted from limitations and monitoring for Total Cyanide at the Pharmaceutical sample point(s) subject to the following certification:

[BDW] I certify, since the last discharge monitoring report, cyanide has not been used or generated in any pharmaceutical manufactu.. process subject to Categorical Standards in 40 CFR 439. for SP005, 010, 080, 082, 912, 913, 914 915, 916, 917, 918, 919 and 920.

G. Discharges Subject to Categorical Standards for Electroplating (40 CFR 413), Metal Finishing (40 CFR 433) or Electrical & Electronic Components (40 CFR 469) can be exempted from TTO monitoring only at the Electroplating, Metal Finishing or Electrical & Electronic Components sample point(s) subject to the following certification:

[ ] Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to MSD.

PART IV: GENERAL CERTIFICATION STATEMENTS

Initial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

A. Discharges at sample points subject only to MSD Ordinance limits can be exempted from TTO monitoring subject to the following certification:

[ ] In lieu of monitoring for TTO at sample point(s) _____, I certify that to the best of my knowledge and belief, no toxic organics have been used at this premise or discharged into the wastewaters since filing of the last discharge monitoring report.

B. DISCHARGE MONITORING REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: Brian Donley

Title: Director, HSE Telephone: 314-654-1412

Signature: [signature] Date: 1-27-03

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By:

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		001					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
Oil & Grease	200	G						mg/l
Biochemical Oxygen Demand	****	C						mg/l
Chemical Oxygen Demand	****	C						mg/l
Total Suspended Solids	****	C						mg/l
Temperature	60	G						deg C
pH Acidic	5.5	G						S.U.
pH Basic	11.5	G						S.U.
NO MONITORING REQUIRED								
SANITARY ONLY								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: _____(JAN-MAR) ____(APR-JUNE) __(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt Inc

Analysis Performed By: _____

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		002					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->							
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,800					gal/day
NO MONITORING REQUIRED								
SANITARY ONLY								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) X (OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

			DWN		UPS				
MSD SAMPLE POINT REFERENCE NUMBERS		---->	003		009		099		
DATES ON WHICH SAMPLES WERE COLLECTED		---->	10/15/2002		10/15/2002		calculated		
TIMES AT WHICH SAMPLES WERE COLLECTED		---->	11:00		11:30				
			RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW						
PARAMETER	LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		M	27,646	M	18,933	E	8713		gal/day
Oil & Grease	200	G	11	G	20	E	0.000 (-)		mg/l
Biochemical Oxygen Demand	****	C	40.0	C	94.9	E	0.000 (-)		mg/l
Chemical Oxygen Demand	****	C	138	C	154	E	103.233		mg/l
Total Suspended Solids	****	C	1	C	42	E	0.000 (-)		mg/l
Temperature	60	G	24	G	24	E	~~24~~		deg C
pH Acidic	5.5	G	7	G	7	E	~~7~~	N/A	S.U.
pH Basic	11.5	G	7	G	7	E	~~7~~		S.U.

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		005	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		10/15/2002	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		11:45	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow	UNITS
FLOW		E	32,000	gal/day
Oil & Grease	200	G	ND	mg/l
Biochemical Oxygen Demand	****	C	ND	mg/l
Chemical Oxygen Demand	****	C	53	mg/l
Total Suspended Solids	****	C	5	mg/l
Temperature	60	G	27	deg C
pH Acidic	5.5	G	7	S.U.
pH Basic	11.5	G	7	S.U.

BOD detection limit = 2 mg/l

TSS detection limit = 10 mg/l

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By:

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		007					
DATES ON WHICH SAMPLES WERE COLLECTED	----->		NA					
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		NA					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW G=grab,C=composite,M=measured flow,E=estimated flow						UNITS
FLOW		E	1,000					gal/day
NO MONITORING REQUIRED								
STORMWATER ONLY								

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ___(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS		----->		008	008	
DATES ON WHICH SAMPLES WERE COLLECTED		----->		11/07/2002	11/15/2002	
TIMES AT WHICH SAMPLES WERE COLLECTED		----->		11:30	12:30	
			RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW			
PARAMETER		LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow		UNITS
FLOW			E	500,000	750000	gal/day
Oil & Grease		200	G	7.5	<1.0	mg/l
Biochemical Oxygen Demand		****	C	564.00	45.2	mg/l
Chemical Oxygen Demand		****	C	820.0	90	mg/l
Temperature		60	G	28.0	26	deg C
Total Suspended Solids		****		23.0	20	mg/L
pH Acidic		5.5	G	10	8.4	S.U.
pH Basic		11.5	G	10	8.4	S.U.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) _X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		010	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		10/15/2002	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		11:00	
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow	UNITS
FLOW		E	2,040,000	gal/day
Oil & Grease	200	G	12	mg/l
Biochemical Oxygen Demand	****	C	367	mg/l
Chemical Oxygen Demand	****	C	880	mg/l
Total Suspended Solids	****	C	43	mg/l
Temperature	60	G	33	deg C
pH Acidic	5.5	G	see attached	S.U.
pH Basic	11.5	G	see attached	S.U.
Chromium	5	C	0.0128	mg/l
Copper	2.7	C	0.0197	mg/l
Nickel	2.3	C	0.0275	mg/l
Zinc	3	C	0.0547	mg/l

Mallinckrodt pH monitoring Sample Point 010 - October 2002						
Date	Time	pH	Event Time	Total For Event		
			in Minutes	in Minutes		
10/02/2002	11:00	4.2	2			
10/02/2002	11:02	4.2	2	4		
10/02/2002	11:08	4	2	2		
10/04/2002	2:18	11.6	2			
10/04/2002	2:20	11.7	2			
10/04/2002	2:22	11.8	2			
10/04/2002	2:24	11.8	2			
10/04/2002	2:26	11.7	2			
10/04/2002	2:28	11.6	2			
10/04/2002	2:30	11.6	2	14		
10/04/2002	14:18	11.6	2			
10/04/2002	14:20	11.6	2			
10/04/2002	14:22	11.6	2			
10/04/2002	14:24	11.9	2			
10/04/2002	14:26	12.1	2			
10/04/2002	14:28	12.1	2			
10/04/2002	14:30	12.1	2			
10/04/2002	14:32	12.1	2			
10/04/2002	14:34	12.1	2			
10/04/2002	14:36	12.1	2			
10/04/2002	14:38	11.9	2			
10/04/2002	14:40	11.9	2			
10/04/2002	14:42	11.8	2			
10/04/2002	14:44	11.7	2			
10/04/2002	14:46	11.7	2			
10/04/2002	14:48	11.6	2			
10/04/2002	14:50	11.6	2	34		
10/06/2002	15:52	5	2	2		
10/10/2002	14:32	4.1	2	2		
10/10/2002	14:36	3.9	2	2		
10/11/2002	4:04	5.2	2	2		
10/11/2002	13:36	12.3	2			
10/11/2002	13:38	12.2	2			
10/11/2002	13:40	12.2	2			
10/11/2002	13:42	12.2	2			
10/11/2002	13:44	12.1	2			
10/11/2002	13:46	12.1	2			
10/11/2002	13:48	12	2			
10/11/2002	13:50	11.9	2			
10/11/2002	13:52	11.9	2			
10/11/2002	13:54	11.8	2			
10/11/2002	13:56	11.7	2			
10/11/2002	13:58	11.6	2			
10/11/2002	14:00	11.6	2	26		
10/12/2002	12:02	11.7	2			
10/12/2002	12:04	11.9	2			
10/12/2002	12:06	11.8	2			
10/12/2002	12:08	11.8	2			
10/12/2002	12:10	11.8	2			
10/12/2002	12:12	11.7	2			
10/12/2002	12:14	11.7	2			
10/12/2002	12:16	11.6	2	16		
10/15/2002	10:40	4.9	2	2		
10/15/2002	10:46	3.9	2	2		

10/16/2002	18:16	5.4	2	2		
10/18/2002	7:16	4.6	2	2		
10/18/2002	11:50	11.6	2	2		
10/18/2002	12:00	4.3	2	2		
10/18/2002	23:46	5.2	2	2		
10/20/2002	11:56	11.8	2			
10/20/2002	11:58	11.8	2	4		
10/20/2002	12:40	4.8	2	2		
10/21/2002	8:02	5.3	2	2		
10/21/2002	8:06	11.7	2	2		
10/22/2002	13:30	11.7	2	2		
10/22/2002	19:52	5.1	2	2		
10/23/2002	13:24	11.6	2	2		
10/25/2002	7:42	12.1	2	2		
10/25/2002	7:54	12.1	2			
10/25/2002	7:56	11.8	2	4		
10/25/2002	10:20	4.3	2	2		
10/25/2002	10:26	3.9	2	2		
10/25/2002	10:30	12.7	2			
10/25/2002	10:32	12.8	2			
10/25/2002	10:34	12.7	2			
10/25/2002	10:36	12.6	2			
10/25/2002	10:38	12.4	2			
10/25/2002	10:40	11.8	2	12		
10/25/2002	15:08	5.4	2	2		
10/25/2002	15:30	11.7	2	2		
10/25/2002	20:02	4.3	2	2		
10/26/2002	14:42	5	2	2		
10/27/2002	23:34	5.2	2	2		
10/27/2002	23:44	4.8	2	2		
10/29/2002	13:32	11.7	2			
10/29/2002	13:34	11.6	2	4		
10/30/2002	0:44	5.3	2	2		
10/31/2002	13:04	3.9	2	2		
10/31/2002	13:10	3.9	2	2		
10/31/2002	13:16	11.8	2			
10/31/2002	13:18	12.5	2			
10/31/2002	13:20	12.5	2			
10/31/2002	13:22	12.4	2			
10/31/2002	13:24	12.4	2			
10/31/2002	13:26	12.3	2			
10/31/2002	13:28	4	2	14		
10/31/2002	13:32	11.7	2			
10/31/2002	13:34	11.6	2	4		
10/31/2002	17:20	5.3	2			
10/31/2002	17:22	5	2			
10/31/2002	17:24	4.8	2			
10/31/2002	17:26	4.7	2			
10/31/2002	17:28	4.6	2			
10/31/2002	17:30	4.5	2			
10/31/2002	17:32	4.4	2			
10/31/2002	17:34	4.4	2			
10/31/2002	17:36	4.3	2			
10/31/2002	17:38	4.3	2	18		
10/31/2002	23:30	4.7	2	2		
October Total				216		

Mallinckrodt pH monitoring Sample Point 010 - November 2002					
Date	Time	pH	Event Time	Total For Event	
			in Minutes	in Minutes	
11/04/2002	20:52	5.3	2	2	
11/04/2002	21:10	5.2	2	2	
11/07/2002	9:06	4.1	2		
11/07/2002	9:08	3.9	2	4	
11/15/2002	10:48	5.3	2	2	
11/16/2002	2:00	5	2	2	
11/20/2002	7:04	5.3	2	2	
11/20/2002	13:40	5.3	2	2	
11/22/2002	10:40	4	2	2	
11/22/2002	10:44	4	2	2	
11/26/2002	11:24	4.2	2	2	
11/26/2002	11:28	4	2	2	
November Total				24	

Mallinckrodt pH monitoring Sample Point 010 - December 2002					
Date	Time	pH	Event Time	Total For Event	
			in Minutes	in Minutes	
12/03/2002	14:00	5.4	2		
12/03/2002	14:02	5.1	2		
12/03/2002	14:04	4.9	2		
12/03/2002	14:06	4.7	2		
12/03/2002	14:08	4.7	2		
12/03/2002	14:10	4.7	2		
12/03/2002	14:12	4.7	2		
12/03/2002	14:14	4.6	2		
12/03/2002	14:16	4.6	2		
12/03/2002	14:18	4.7	2		
12/03/2002	14:20	4.8	2		
12/03/2002	14:22	4.8	2		
12/03/2002	14:24	4.6	2		
12/03/2002	14:26	4	2		
12/03/2002	14:28	3.5	2		
12/03/2002	14:30	3.2	2		
12/03/2002	14:32	3.4	2	34	
12/03/2002	14:42	4.8	2	2	
12/04/2002	7:08	4.5	2	2	
12/04/2002	7:12	11.8	2		
12/04/2002	7:14	11.6	2	4	
12/04/2002	7:20	4	2		
12/04/2002	7:22	4.5	2		
12/04/2002	7:26	12.1	2		
12/04/2002	7:28	12.1	2		
12/04/2002	7:30	12	2		
12/04/2002	7:32	11.9	2		
12/04/2002	7:34	11.8	2		
12/04/2002	7:36	11.7	2		
12/04/2002	7:38	11.6	2	18	
12/04/2002	10:20	11.7	2	2	
12/04/2002	10:34	5.3	2		
12/04/2002	10:36	11.7	2		
12/04/2002	10:38	11.6	2	6	
12/04/2002	10:52	11.6	2	2	
12/04/2002	11:06	11.7	2		
12/04/2002	11:08	11.7	2	4	
12/04/2002	17:18	11.6	2	2	
12/10/2002	10:44	4.2	2		
12/10/2002	10:46	4.2	2	4	
12/10/2002	10:50	4	2	2	
12/10/2002	12:30	5.4	2		
12/10/2002	12:32	5.3	2	4	
12/11/2002	16:56	4.9	2	2	
12/12/2002	15:36	0	2	2	
12/17/2002	9:30	0	2	2	
12/17/2002	18:58	4.6	2	2	
12/18/2002	12:56	3.4	2		
12/18/2002	12:58	4.6	2	4	
12/20/2002	8:04	5.3	2	2	
12/20/2002	8:12	4.9	2		
12/20/2002	8:14	5.1	2	4	
12/20/2002	10:10	3.9	2	2	

12/20/2002	10:14	4.1	2		
12/20/2002	10:16	3.9	2	4	
12/24/2002	11:52	5.3	2	2	
12/25/2002	8:50	5.3	2	2	
12/25/2002	9:02	4.7	2	2	
12/25/2002	9:46	4.9	2	2	
12/25/2002	21:40	4.8	2	2	
12/25/2002	21:54	5	2	2	
12/25/2002	22:06	5	2	2	
12/25/2002	22:26	4.7	2	2	
12/25/2002	22:32	4.8	2	2	
12/25/2002	22:38	4.9	2	2	
12/25/2002	22:40	4.1	2	2	
12/25/2002	22:48	11.6	2		
12/25/2002	22:50	11.6	2	4	
12/26/2002	16:52	4.6	2	2	
12/26/2002	17:02	4.9	2	2	
12/26/2002	17:28	4.3	2	2	
12/26/2002	17:38	3.9	2	2	
12/26/2002	17:44	4.2	2	2	
12/27/2002	0:54	5.3	2	2	
12/27/2002	1:26	5	2	2	
12/27/2002	1:32	4.1	2	2	
12/27/2002	1:38	4.4	2	2	
12/27/2002	1:44	5	2	2	
12/27/2002	1:48	3.8	2		
12/27/2002	1:50	5.2	2	4	
12/27/2002	9:26	4.2	2	2	
12/27/2002	9:30	4	2	2	
12/27/2002	20:50	5	2	2	
12/30/2002	5:28	5.3	2	2	
December Total				168	

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

Permit No.: 21120596-00

Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ___(APR-JUNE) __(JULY-SEPT) __X__(OCT-DEC)

Samples Collected By: Mallinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		080	081	082	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		10/15/2002			
TIMES AT WHICH SAMPLES WERE COLLECTED	----->		11:50			
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW				
PARAMETER	LIMIT		G=grab,C=comp	G=grab,C=composite,M=measured flow,E=e		UNITS
FLOW		E	10,775			gal/day
Oil & Grease	200	G	4.7			mg/l
Biochemical Oxygen Demand	****	C	ND <2			mg/l
Chemical Oxygen Demand	****	C	23.0			mg/l
Total Suspended Solids	****	C	17.0			mg/l
Temperature	60	G	38			deg C
pH Acidic	5.5	G	7			S.U.
pH Basic	11.5	G	7			S.U.
Total Toxic Organics	5.52	G	Not run this qtr			mg/l

N/A

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

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PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.

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Premise Address: 3600 North Second St., St. Louis, MO 63147

Monitoring Period: ____(JAN-MAR) ____(APR-JUNE) ____(JULY-SEPT) X___(OCT-DEC

Samples Collected By: Malinckrodt

Analysis Performed By: STL

Part II: ANALYTICAL RESULTS OF SELF MONITORING

IN EDMS ALREADY.
FGL

MSD SAMPLE POINT REFERENCE NUMBERS			---->		905		
DATES ON WHICH SAMPLES WERE COLLECT			---->		10/15/2002		
TIMES AT WHICH SAMPLES WERE COLLECT			---->		13:31		
PARAMETER	LIMIT (ave) (gm/day)	LIMIT (gm/day)		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW M=measured flow		UNITS	Lab results mg/L
FLOW				M	80,776	gal/day	
Chloromethane	52.41	140.56		G	3.057	gm/day	0.01
Vinyl Chloride	46.22	81.96		G	3.057	gm/day	0.01
Chloroethane	52.41	140.56		G	3.057	gm/day	0.01
Methylene Chloride	17.15	81		G	0.611	gm/day	0.002
Chloroform	52.89	154.86		G	1.529	gm/day	0.005
1,1-Dichloroethane	10.48	28.11		G	1.529	gm/day	0.005
1,2-Dichloroethane	85.77	273.51		G	1.529	gm/day	0.005
1,1-Dichloroethene	10.48	28.59		G	1.529	gm/day	0.005
1,2-Dichloropropane	93.39	378.33		G	1.529	gm/day	0.005
Carbon Tetrachloride	67.66	181.07		G	1.529	gm/day	0.005
cis-1,3-Dichloropropene	93.39	378.33		G	1.529	gm/day	0.005
trans-1,3-Dichloropropene	93.39	378.33		G	1.529	gm/day	0.005
trans-1,2-Dichloroethene	11.91	31.45		G	1.529	gm/day	0.005
1,1,1-Trichloroethane	10.48	28.11		G	1.529	gm/day	0.005
1,1,2-Trichloroethane	15.25	60.51		G	1.529	gm/day	0.005
Benzene	27.16	63.85		G	1.529	gm/day	0.005
Toluene	13.34	35.26		G	1.529	gm/day	0.005
Trichloroethene	12.39	32.88		G	1.529	gm/day	0.005
Ethylbenzene	67.66	181.07		G	1.529	gm/day	0.005
Tetrachloroethene	24.78	78.14		G	1.529	gm/day	0.005
Chlorobenzene	67.66	181.07		G	1.529	gm/day	0.005
1,3-Dichlorobenzene	67.66	181.07		G	1.529	gm/day	0.005
1,2-Dichlorobenzene	93.39	378.33		G	1.529	gm/day	0.005
1,4-Dichlorobenzene	67.66	181.07		G	1.529	gm/day	0.005
2-Nitrophenol	30.97	110.07		G	3.057	gm/day	0.01
4-Nitrophenol	77.19	274.46		G	15.287	gm/day	0.05
2-Methyl-4,6-dinitrophenol	37.17	131.99		G	15.287	gm/day	0.05
Hexachloroethane	93.39	378.33		G	3.057	gm/day	0.01
Nitrobenzene	1065.91	3050.49		G	3.057	gm/day	0.01
1,2,4-Trichlorobenzene	93.39	378.33		G	3.057	gm/day	0.01
Dimethyl phthalate	9.05	22.4		G	3.057	gm/day	0.01
Hexachlorobutadiene	67.66	181.066		G	3.057	gm/day	0.01
Diethyl phthalate	21.92	53.84		G	3.057	gm/day	0.01
Hexachlorobenzene	93.39	378.33		G	3.057	gm/day	0.01
Di-n-butyl phthalate	9.53	20.49		G	3.057	gm/day	0.01
Bis(2-ethylhexyl)phthalate	45.27	122.93		G	3.057	gm/day	0.01
Naphthalene	9.05	22.4		G	3.057	gm/day	0.01
Phenanthrene	9.05	22.4		G	3.057	gm/day	0.01
Fluorene	9.05	22.4		G	3.057	gm/day	0.01
Anthracene	9.05	22.4		G	3.057	gm/day	0.01
Acenapthene	9.05	22.4		G	3.057	gm/day	0.01
Fluoranthene	10.48	25.73		G	3.057	gm/day	0.01
Pyrene	9.53	22.87		G	3.057	gm/day	0.01

Shaded values represent detection limits

LAB RESULTS

All lab results were non detect or less than reporting limit. Reporting limits were used as lab results.

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: F2J160318

Mallinckrodt Chemical Inc
Mallinckrodt
Project Number: NPDES

Date Reported: PAGE 10/21/02

Client Sample ID: SP905
Sample #: 001 Date Sampled: 10/15/02 15:00 Date Received: 10/16/02 Matrix: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	Reviewed
Purgeables					
Acrylonitrile	ND	25	ug/L	CFR136A 624	
Acrolein	ND	100	ug/L	CFR136A 624	
Chloromethane	**1.7 J**	**10**	**ug/L**	**CFR136A 624**	
Vinyl chloride	ND	10	ug/L	CFR136A 624	
Bromomethane	ND	10	ug/L	CFR136A 624	
Chloroethane	ND	10	ug/L	CFR136A 624	
Trichlorofluoromethane	ND	10	ug/L	CFR136A 624	
1,1-Dichloroethene	ND	5.0	ug/L	CFR136A 624	
Methylene chloride	**2.0 J**	**5.0**	**ug/L**	**CFR136A 624**	
trans-1,2-Dichloroethene	ND	5.0	ug/L	CFR136A 624	
1,1-Dichloroethane	ND	5.0	ug/L	CFR136A 624	
Chloroform	ND	5.0	ug/L	CFR136A 624	
1,1,1-Trichloroethane	ND	5.0	ug/L	CFR136A 624	
Carbon tetrachloride	ND	5.0	ug/L	CFR136A 624	
1,2-Dichloroethane	ND	5.0	ug/L	CFR136A 624	
Benzene	ND	5.0	ug/L	CFR136A 624	
Trichloroethene	ND	5.0	ug/L	CFR136A 624	
1,2-Dichloropropane	ND	5.0	ug/L	CFR136A 624	
Bromodichloromethane	ND	5.0	ug/L	CFR136A 624	
2-Chloroethyl vinyl ether	ND	50	ug/L	CFR136A 624	
cis-1,3-Dichloropropene	ND	5.0	ug/L	CFR136A 624	
Toluene	ND	5.0	ug/L	CFR136A 624	
trans-1,3-Dichloropropene	ND	5.0	ug/L	CFR136A 624	
1,1,2-Trichloroethane	ND	5.0	ug/L	CFR136A 624	
Tetrachloroethene	ND	5.0	ug/L	CFR136A 624	
Dibromochloromethane	ND	5.0	ug/L	CFR136A 624	
Chlorobenzene	ND	5.0	ug/L	CFR136A 624	
Ethylbenzene	ND	5.0	ug/L	CFR136A 624	
Bromoform	ND	5.0	ug/L	CFR136A 624	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	CFR136A 624	
1,3-Dichlorobenzene	ND	5.0	ug/L	CFR136A 624	
1,4-Dichlorobenzene	ND	5.0	ug/L	CFR136A 624	
1,2-Dichlorobenzene	ND	5.0	ug/L	CFR136A 624	

J Estimated result. Result is less than RL.

(Continued on next page)

SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Mallinckrodt Chemical Inc
Mallinckrodt
Project Number: NPDES

Lot #: F2J160318 **Date Reported:** 10/21/02 PAGE

Client Sample ID: SP905
Sample #: 001 Date Sampled: 10/15/02 15:00 Date Received: 10/16/02 Matrix: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Purgeables					Reviewed
Acrylonitrile	ND	25	ug/L	CFR136A 624	
Acrolein	ND	100	ug/L	CFR136A 624	
Chloromethane	ND	10	ug/L	CFR136A 624	
Vinyl chloride	ND	10	ug/L	CFR136A 624	
Bromomethane	ND	10	ug/L	CFR136A 624	
Chloroethane	ND	10	ug/L	CFR136A 624	
Trichlorofluoromethane	ND	10	ug/L	CFR136A 624	
1,1-Dichloroethene	ND	5.0	ug/L	CFR136A 624	
Methylene chloride	**5.8**	**5.0**	**ug/L**	**CFR136A 624**	
trans-1,2-Dichloroethene	ND	5.0	ug/L	CFR136A 624	
1,1-Dichloroethane	ND	5.0	ug/L	CFR136A 624	
Chloroform	ND	5.0	ug/L	CFR136A 624	
1,1,1-Trichloroethane	ND	5.0	ug/L	CFR136A 624	
Carbon tetrachloride	ND	5.0	ug/L	CFR136A 624	
1,2-Dichloroethane	ND	5.0	ug/L	CFR136A 624	
Benzene	ND	5.0	ug/L	CFR136A 624	
Trichloroethene	ND	5.0	ug/L	CFR136A 624	
1,2-Dichloropropane	ND	5.0	ug/L	CFR136A 624	
Bromodichloromethane	ND	5.0	ug/L	CFR136A 624	
2-Chloroethyl vinyl ether	ND	50	ug/L	CFR136A 624	
cis-1,3-Dichloropropene	ND	5.0	ug/L	CFR136A 624	
Toluene	ND	5.0	ug/L	CFR136A 624	
trans-1,3-Dichloropropene	ND	5.0	ug/L	CFR136A 624	
1,1,2-Trichloroethane	ND	5.0	ug/L	CFR136A 624	
Tetrachloroethene	ND	5.0	ug/L	CFR136A 624	
Dibromochloromethane	ND	5.0	ug/L	CFR136A 624	
Chlorobenzene	ND	5.0	ug/L	CFR136A 624	
Ethylbenzene	ND	5.0	ug/L	CFR136A 624	
Bromoform	ND	5.0	ug/L	CFR136A 624	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	CFR136A 624	
1,3-Dichlorobenzene	ND	5.0	ug/L	CFR136A 624	
1,4-Dichlorobenzene	ND	5.0	ug/L	CFR136A 624	
1,2-Dichlorobenzene	ND	5.0	ug/L	CFR136A 624	
Base/Neutrals and Acids					In Review
Phenol	ND	10	ug/L	CFR136A 625	
bis(2-Chloroethyl)-ether	ND	10	ug/L	CFR136A 625	

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Mallinckrodt Chemical Inc
Mallinckrodt
Project Number: NPDES

Lot #: F2J160318 Date Reported: 10/21/02

Client Sample ID: SP905
Sample #: 001 Date Sampled: 10/15/02 15:00 Date Received: 10/16/02 Matrix: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Base/Neutrals and Acids					In Review
2-Chlorophenol	ND	10	ug/L	CFR136A 625	
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	CFR136A 625	
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	CFR136A 625	
Hexachloroethane	ND	10	ug/L	CFR136A 625	
Nitrobenzene	ND	10	ug/L	CFR136A 625	
Isophorone	ND	10	ug/L	CFR136A 625	
2-Nitrophenol	ND	10	ug/L	CFR136A 625	
2,4-Dimethylphenol	ND	10	ug/L	CFR136A 625	
bis(2-Chloroethoxy) methane	ND	10	ug/L	CFR136A 625	
2,4-Dichlorophenol	ND	10	ug/L	CFR136A 625	
1,2,4-Trichloro-benzene	ND	10	ug/L	CFR136A 625	
Naphthalene	ND	10	ug/L	CFR136A 625	
Hexachlorobutadiene	ND	10	ug/L	CFR136A 625	
4-Chloro-3-methylphenol	ND	10	ug/L	CFR136A 625	
Hexachlorocyclopenta-diene	ND	50	ug/L	CFR136A 625	
2,4,6-Trichloro-phenol	ND	10	ug/L	CFR136A 625	
2-Chloronaphthalene	ND	10	ug/L	CFR136A 625	
Dimethyl phthalate	ND	10	ug/L	CFR136A 625	
Acenaphthylene	ND	10	ug/L	CFR136A 625	
2,6-Dinitrotoluene	ND	10	ug/L	CFR136A 625	
Acenaphthene	ND	10	ug/L	CFR136A 625	
2,4-Dinitrophenol	ND	50	ug/L	CFR136A 625	
4-Nitrophenol	ND	50	ug/L	CFR136A 625	
2,4-Dinitrotoluene	ND	10	ug/L	CFR136A 625	
Diethyl phthalate	ND	10	ug/L	CFR136A 625	
Fluorene	ND	10	ug/L	CFR136A 625	
4-Chlorophenyl phenyl ether	ND	10	ug/L	CFR136A 625	
4,6-Dinitro-2-methylphenol	ND	50	ug/L	CFR136A 625	
N-Nitrosodiphenylamine	ND	10	ug/L	CFR136A 625	
Hexachlorobenzene	ND	10	ug/L	CFR136A 625	

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SEVERN TRENT LABORATORIES, INC.

PRELIMINARY DATA SUMMARY

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Mallinckrodt Chemical Inc
Mallinckrodt
Project Number: NPDES

Lot #: F2J160318 **Date Reported:** 10/21/02

Client Sample ID: SP905
Sample #: 001 Date Sampled: 10/15/02 15:00 Date Received: 10/16/02 Matrix: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD	
Base/Neutrals and Acids					In Review
Pentachlorophenol	ND	50	ug/L	CFR136A 625	
Phenanthrene	ND	10	ug/L	CFR136A 625	
Anthracene	ND	10	ug/L	CFR136A 625	
Di-n-butyl phthalate	ND	10	ug/L	CFR136A 625	
Fluoranthene	ND	10	ug/L	CFR136A 625	
Benzidine	ND	100	ug/L	CFR136A 625	
Pyrene	ND	10	ug/L	CFR136A 625	
Benzo(a)anthracene	ND	10	ug/L	CFR136A 625	
3,3'-Dichlorobenzidine	ND	50	ug/L	CFR136A 625	
Butyl benzyl phthalate	ND	10	ug/L	CFR136A 625	
Chrysene	ND	10	ug/L	CFR136A 625	
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	CFR136A 625	
Di-n-octyl phthalate	ND	10	ug/L	CFR136A 625	
Benzo(b)fluoranthene	ND	10	ug/L	CFR136A 625	
Benzo(k)fluoranthene	ND	10	ug/L	CFR136A 625	
Benzo(a)pyrene	ND	10	ug/L	CFR136A 625	
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	CFR136A 625	
Benzo(ghi)perylene	ND	10	ug/L	CFR136A 625	
Dibenzo(a,h)anthracene	ND	10	ug/L	CFR136A 625	
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	ug/L	CFR136A 625	

MALLINCKRODT CHEMICAL INC

Client Sample ID: SP905

GC/MS Volatiles

Lot-Sample #...: F2J160318-001 Work Order #...: E96EN2AA Matrix.....: WATER
Date Sampled...: 10/15/02 15:00 Date Received..: 10/16/02
Prep Date.....: 10/17/02 Analysis Date..: 10/18/02
Prep Batch #...: 2291173 Analysis Time..: 00:22
Dilution Factor: 1

Method.....: CFR136A 624

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acrylonitrile	ND	25	ug/L	
Acrolein	ND	100	ug/L	9.2
Chloromethane	ND	10	ug/L	0.53
Vinyl chloride	ND	10	ug/L	0.42
Bromomethane	ND	10	ug/L	2.3
Chloroethane	ND	10	ug/L	0.52
Trichlorofluoromethane	ND	10	ug/L	0.75
1,1-Dichloroethene	ND	5.0	ug/L	0.73
Methylene chloride	**5.8 B**	**5.0**	**ug/L**	**1.4**
trans-1,2-Dichloroethene	ND	5.0	ug/L	0.73
1,1-Dichloroethane	ND	5.0	ug/L	0.38
Chloroform	ND	5.0	ug/L	0.65
1,1,1-Trichloroethane	ND	5.0	ug/L	0.95
Carbon tetrachloride	ND	5.0	ug/L	0.73
1,2-Dichloroethane	ND	5.0	ug/L	0.84
Benzene	ND	5.0	ug/L	0.88
Trichloroethene	ND	5.0	ug/L	0.48
1,2-Dichloropropane	ND	5.0	ug/L	0.62
Bromodichloromethane	ND	5.0	ug/L	0.49
2-Chloroethyl vinyl ether	ND	50	ug/L	0.39
cis-1,3-Dichloropropene	ND	5.0	ug/L	0.61
Toluene	ND	5.0	ug/L	0.49
trans-1,3-Dichloropropene	ND	5.0	ug/L	2.1
1,1,2-Trichloroethane	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	5.0	ug/L	0.45
Dibromochloromethane	ND	5.0	ug/L	1.0
Chlorobenzene	ND	5.0	ug/L	0.63
Ethylbenzene	ND	5.0	ug/L	0.61
Bromoform	ND	5.0	ug/L	0.66
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	0.37
1,3-Dichlorobenzene	ND	5.0	ug/L	0.64
1,4-Dichlorobenzene	ND	5.0	ug/L	0.86
1,2-Dichlorobenzene	ND	5.0	ug/L	0.35

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	102	(80 - 125)
Toluene-d8	99	(83 - 113)
4-Bromofluorobenzene	88	(72 - 110)

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

MALLINCKRODT CHEMICAL INC

Client Sample ID: SP905

GC/MS Semivolatiles

Lot-Sample #...: F2J160318-001 Work Order #...: E96EN1AC Matrix.....: WATER
Date Sampled...: 10/15/02 15:00 Date Received..: 10/16/02
Prep Date.....: 10/17/02 Analysis Date..: 10/19/02
Prep Batch #...: 2290443 Analysis Time..: 07:31
Dilution Factor: 1

Method.....: CFR136A 625

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	2.2
bis(2-Chloroethyl)-ether	ND	10	ug/L	4.8
2-Chlorophenol	ND	10	ug/L	4.6
2,2'-oxybis(1-Chloropropane)	ND	10	ug/L	4.4
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	4.5
Hexachloroethane	ND	10	ug/L	3.6
Nitrobenzene	ND	10	ug/L	5.2
Isophorone	ND	10	ug/L	4.2
2-Nitrophenol	ND	10	ug/L	5.5
2,4-Dimethylphenol	ND	10	ug/L	4.8
bis(2-Chloroethoxy) methane	ND	10	ug/L	4.7
2,4-Dichlorophenol	ND	10	ug/L	5.4
1,2,4-Trichloro-benzene	ND	10	ug/L	3.2
Naphthalene	ND	10	ug/L	3.7
Hexachlorobutadiene	ND	10	ug/L	4.0
4-Chloro-3-methylphenol	ND	10	ug/L	4.1
Hexachlorocyclopenta-diene	ND	50	ug/L	2.6
2,4,6-Trichloro-phenol	ND	10	ug/L	7.3
2-Chloronaphthalene	ND	10	ug/L	4.1
Dimethyl phthalate	ND	10	ug/L	5.2
Acenaphthylene	ND	10	ug/L	4.7
2,6-Dinitrotoluene	ND	10	ug/L	5.2
Acenaphthene	ND	10	ug/L	4.3
2,4-Dinitrophenol	ND	50	ug/L	2.3
4-Nitrophenol	ND	50	ug/L	3.4
2,4-Dinitrotoluene	ND	10	ug/L	5.5
Diethyl phthalate	ND	10	ug/L	1.2
Fluorene	ND	10	ug/L	4.4
4-Chlorophenyl phenyl ether	ND	10	ug/L	4.2
4,6-Dinitro-2-methylphenol	ND	50	ug/L	6.1

(Continued on next page)

MALLINCKRODT CHEMICAL INC

Client Sample ID: SP905

GC/MS Semivolatiles

Lot-Sample #...: F2J160318-001 Work Order #...: E96EN1AC Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
N-Nitrosodiphenylamine	ND	10	ug/L	5.4
Hexachlorobenzene	ND	10	ug/L	4.8
Pentachlorophenol	ND	50	ug/L	7.3
Phenanthrene	ND	10	ug/L	5.4
Anthracene	ND	10	ug/L	5.5
Di-n-butyl phthalate	ND	10	ug/L	1.2
Fluoranthene	ND	10	ug/L	5.5
Benzidine	ND	100	ug/L	2.2
Pyrene	ND	10	ug/L	7.4
Benzo(a)anthracene	ND	10	ug/L	7.1
3,3'-Dichlorobenzidine	ND	50	ug/L	6.3
Butyl benzyl phthalate	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	7.4
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	8.8
Di-n-octyl phthalate	ND	10	ug/L	7.0
Benzo(b)fluoranthene	ND	10	ug/L	6.1
Benzo(k)fluoranthene	ND	10	ug/L	8.6
Benzo(a)pyrene	ND	10	ug/L	6.9
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	6.6
Benzo(ghi)perylene	ND	10	ug/L	8.8
Dibenzo(a,h)anthracene	ND	10	ug/L	9.7
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	ug/L	

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorobiphenyl	88	(33 - 107)
2-Fluorophenol	41	(10 - 105)
2,4,6-Tribromophenol	97	(43 - 116)
Nitrobenzene-d5	86	(33 - 101)
Phenol-d5	27	(10 - 118)
Terphenyl-d14	0.0 *	(24 - 115)

NOTE(S):

* Surrogate recovery is outside stated control limits.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.			
Permit No.:	21120596-00			
Premise Address:	3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	____(JAN-MAR)	____(APR-JUNE)	__(JULY-SEPT)	__X_(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc			
Analysis Performed By:	STL			

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->		912	
DATES ON WHICH SAMPLES WERE COLLECTED	----->		See attached	
TIMES AT WHICH SAMPLES WERE COLLECTED	----->			
		RECORD SAMPLE TYPES (G,C,M OR E) & RESULTS BELOW		
PARAMETER	LIMIT		G=grab,C=composite,M=measured flow,E=estimated flow	UNITS
FLOW		M	See attached	gal/day
DMAC (daily max)	7091	C	See attached	lb/day
DMAC (monthly average)	5459	C	See attached	lb/day
Dimethyl Sulfide(daily average)	*	C	See attached	lb/day

* Monitoring requirement only.

DMAC and DMS Analysis and Mass Loadings					
Oct-02					
Date	Flow	DMAC		DMS	DMS
	(gal/day)	mg/l	lb/day	mg/l	lb/day
01-Oct			0		0
02-Oct			0		0
03-Oct	226813	1,100	2,085	<0.010	0
04-Oct			0		0
05-Oct			0		0
06-Oct			0		0
07-Oct			0		0
08-Oct			0		0
09-Oct			0		0
10-Oct	133931	1,100	1,231		0
11-Oct			0		0
12-Oct			0		0
13-Oct			0		0
14-Oct			0		0
15-Oct			0		0
16-Oct			0		0
17-Oct	131400	660	725		0
18-Oct			0		0
19-Oct			0		0
20-Oct			0		0
21-Oct			0		0
22-Oct			0		0
23-Oct			0		0
24-Oct	187123.0313	1,700	2,658		0
25-Oct			0		0
26-Oct			0		0
27-Oct			0		0
28-Oct	8514.130859	3,500	249		0
29-Oct			0		0
30-Oct			0		0
31-Oct	195068.7656	4,900	7,986		0
Avg (weight	147,142	2,160	2,656	0	0.00
Max:	226,813	4,900	7,986	0	0.00
Min:	8,514	660	0	0	0.00
Monthly Li	n/a	n/a	5,459	n/a	n/a
Daily Max:	n/a	n/a	7,091	n/a	n/a

DMAC and DMS Analysis and Mass Loadings					
Nov-02					
Date	Flow	DMAC		DMS	DMS
	(gal/day)	mg/l	lb/day	mg/l	lb/day
01-Nov	203335.5156	2,500	4,247		0
02-Nov			0		0
03-Nov			0		0
04-Nov	168826.1719	950	1,340		0
05-Nov			0		0
06-Nov			0		0
07-Nov	152516.9531	5,600	7,136		0
08-Nov			0		0
09-Nov	144540.2813	750	906		0
10-Nov			0		0
11-Nov			0		0
12-Nov			0		0
13-Nov			0		0
14-Nov			0		0
15-Nov	150321.5625	910	1,143		0
16-Nov			0		0
17-Nov			0		0
18-Nov			0		0
19-Nov	178784.6406	1200	1,793		0
20-Nov	187667.5156	7700	12,074		0
21-Nov	167475.9688	1200	1,679		0
22-Nov			0		0
23-Nov			0		0
24-Nov			0		0
25-Nov			0		0
26-Nov			0		0
27-Nov	63877.25	2,400	1,281		0
28-Nov			0	<0.010	0
29-Nov			0		0
30-Nov			0		0
Avg (weighted):	157,483	2,579	3,393	<0.010	0.00
Max:	203,336	7,700	12,074	0	0.00
Min:	63,877	750	0	0	0.00
Monthly Limit:	n/a	n/a	5,459	n/a	n/a
Daily Max:	n/a	n/a	7,091	n/a	n/a

DMAC and DMS Analysis and Mass Loadings					
Dec-02					
Date	Flow	DMAC		DMS	DMS
	(gal/day)	mg/l	lb/day	mg/l	lb/day
01-Dec			0		0
02-Dec			0		0
03-Dec			0		0
04-Dec			0		0
05-Dec	50528.82422	3,600	1,520		0
06-Dec			0		0
07-Dec			0		0
08-Dec			0		0
09-Dec			0		0
10-Dec			0		0
11-Dec			0		0
12-Dec	29180.26563	7,200	1,755		0
13-Dec			0		0
14-Dec			0		0
15-Dec			0		0
16-Dec			0		0
17-Dec			0		0
18-Dec			0		0
19-Dec	31548.29883	7500	1,977		0
20-Dec			0		0
21-Dec			0		0
22-Dec			0		0
23-Dec			0		0
24-Dec			0		0
25-Dec			0		0
26-Dec			0		0
27-Dec	7287.10596	750	46		0
28-Dec			0		0
29-Dec			0		0
30-Dec			0		0
31-Dec			0		0
Avg (weight	29,636	4,763	1,179	0	0.00
Max:	50,529	7,500	1,977	0	0.00
Min:	7,287	750	0	0	0.00
Monthly Li	n/a	n/a	5,459	n/a	n/a
Daily Max:	n/a	n/a	7,091	n/a	n/a

METROPOLITAN ST. LOUIS SEWER DISTRICT - INDUSTRIAL SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name:	Mallinckrodt Inc.
Permit No.:	21120596-00
Premise Address:	3600 North Second St., St. Louis, MO 63147
Monitoring Period:	____(JAN-MAR) ____(APR-JUN) ___(JULY-SEP) __X__(OCT-DEC)
Samples Collected By:	Mallinckrodt Inc
Analysis Performed By:	Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 913						
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/22/2002	10/30/2002		11/06/2002	12/04/2002	12/04/2002	
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	11:00			13:00	0:15	22:35	
SAMPLE TYPE				Grab	Grab		Grab	Grab	Grab	
FLOW		E	5,400							
PARAMETER										
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	10/22 Result	10/30 Result	OCT Monthly Average	06-Nov	12/4/02 0:15	12/04/2002 22:35	Dec Avg
Acetone	524.2	20.70	8.20	<0.300	<0.300	<0.300				
Benzene	524.2	3.00	0.70	<0.010	<0.010	<0.010				
Chlorobenzene	524.2	3.00	0.70	<0.010	<0.010	<0.010				
Chloroform	524.2	0.10	0.03	0.139	<0.010	0.075	0.047*	0.024 J	0.009J	0.017
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	<0.10	<0.10				
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	<0.010	<0.010				
Ethyl Acetate	1666	20.70	8.20		<0.100					
n-Hexane	1666	3.00	0.70		<0.100					
Methylene chloride	524.2	3.00	0.70	<0.030	<0.030	<0.030				
4-Methyl-2-pentanone	1666	20.70	8.20		<0.100					
Tetrahydrofuran	1666	9.20	3.40		<0.100					
Toluene	524.2	0.30	0.20	0.035	1.3	0.675	<0.050	<0.010	0.022	0.016
Xylenes	1666	3.00	0.70		<0.200					
Isobutyraldehyde	1666	20.70	8.20		0.124J					
n-Amyl acetate	1666	20.70	8.20		<0.100					
n-Butyl acetate	1666	20.70	8.20		<0.100					
Isopropyl acetate	1666	20.70	8.20		<0.100					
Methyl cellosolve	1671	275.00	59.70		<34					
Isopropyl ether	1666	20.70	8.20		<0.100					
n-Heptane	1666	3.00	0.70		<0.200					
Methyl formate	1666	20.70	8.20		<0.500					
Diethyl amine	1671	255.00	100.00		<85					
Triethyl amine	1671	255.00	100.00		<85					
Exceeds daily max										
Exceeds monthly avg										

*This is a net value after accounting for 0.012 mg/L chloroform in the city water sample.

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	__X__(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 914
DATES ON WHICH SAMPLES WERE COLLECTED				----->	10/29/2002
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	5:50
SAMPLE TYPE					GRAB
FLOW				E	450
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	<0.010	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Hexane	1666	3.00	0.70	<0.010	
Methylene chloride	524.2	3.00	0.70	<0.010	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
Tetrahydrofuran	1666	9.20	3.40	<0.010	
Toluene	524.2	0.30	0.20	<0.010	
Xylenes	1666	3.00	0.70	<0.020	
Isobutyraldehyde	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
n-Butyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Methyl cellosolve	1671	275.00	59.70	<6.7	
Isopropyl ether	1666	20.70	8.20	<0.010	
n-Heptane	1666	3.00	0.70	<0.020	
Methyl formate	1666	20.70	8.20	<0.050	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by lab				1, 10	

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	__X__(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 915
DATES ON WHICH SAMPLES WERE COLLECTED				----->	10/16/2002
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	14:30
SAMPLE TYPE					Grab
FLOW				E	2,700
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	<0.010	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	<0.100	
n-Hexane	1666	3.00	0.70	<0.100	
Methylene chloride	524.2	3.00	0.70	<0.030	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.100	
Tetrahydrofuran	1666	9.20	3.40	<0.100	
Toluene	524.2	0.30	0.20	<0.010	
Xylenes	1666	3.00	0.70	<0.200	
Isobutyraldehyde	1666	20.70	8.20	<0.100	
n-Amyl acetate	1666	20.70	8.20	<0.100	
n-Butyl acetate	1666	20.70	8.20	<0.100	
Isopropyl acetate	1666	20.70	8.20	<0.100	
Methyl cellosolve	1671	275.00	59.70	<25.0	
Isopropyl ether	1666	20.70	8.20	<0.100	
n-Heptane	1666	3.00	0.70	<0.200	
Methyl formate	1666	20.70	8.20	<0.500	
Diethyl amine	1671	255.00	100.00	<6.7	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by lab				1	

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	__X__(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
Part II: ANALYTICAL RESULTS OF SELF MONITORING					
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 916
DATES ON WHICH SAMPLES WERE COLLECTED				----->	10/24/2002
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	6:18
SAMPLE TYPE					Grab
FLOW				E	800
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.300	
Benzene	524.2	3.00	0.70	<0.010	
Chlorobenzene	524.2	3.00	0.70	<0.010	
Chloroform	524.2	0.10	0.03	<0.010	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010	
1,2-Dichloroethane	524.2	20.70	8.20	<0.010	
Ethyl Acetate	1666	20.70	8.20	<0.010	
n-Hexane	1666	3.00	0.70	<0.010	
Methylene chloride	524.2	3.00	0.70	<0.030	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010	
Tetrahydrofuran	1666	9.20	3.40	0.033 J	
Toluene	524.2	0.30	0.20	<0.010	
Xylenes	1666	3.00	0.70	<0.020	
Isobutyraldehyde	1666	20.70	8.20	<0.010	
n-Amyl acetate	1666	20.70	8.20	<0.010	
n-Butyl acetate	1666	20.70	8.20	<0.010	
Isopropyl acetate	1666	20.70	8.20	<0.010	
Methyl cellosolve	1671	275.00	59.70	<6.7	
Isopropyl ether	1666	20.70	8.20	<0.010	
n-Heptane	1666	3.00	0.70	<0.020	
Methyl formate	1666	20.70	8.20	<0.050	
Diethyl amine	1671	255.00	100.00	<17.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by Lab				1, 10	

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		____(JULY-SEP)	__X_(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS			----->	SP 917		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/16/2002	11/06/2002	12/04/2002
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	10:00	9:15	15:00
SAMPLE TYPE				Grab	Grab	Grab
FLOW		E	5000 GPD			
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	10/16 Result	11/6 Result	12/4 Result
Acetone	524.2	20.70	8.20	<0.030		
Benzene	524.2	3.00	0.70	<0.001		
Chlorobenzene	524.2	3.00	0.70	<0.001		
Chloroform	524.2	0.10	0.03	<0.005		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001		
1,2-Dichloroethane	524.2	20.70	8.20	<0.001		
Ethyl Acetate	1666	20.70	8.20	0.179		
n-Hexane	1666	3.00	0.70	<0.001		
Methylene chloride	524.2	3.00	0.70	<0.003		
4-Methyl-2-pentanone	1666	20.70	8.20	0.471		
Tetrahydrofuran	1666	9.20	3.40	<0.02		
Toluene	524.2	0.30	0.20	0.019	0.170	0.015
Xylenes	1666	3.00	0.70	<0.02		
Isobutyraldehyde	1666	20.70	8.20	<0.001		
n-Amyl acetate	1666	20.70	8.20	<0.001		
n-Butyl acetate	1666	20.70	8.20	<0.001		
Isopropyl acetate	1666	20.70	8.20	<0.001		
Methyl cellosolve	1671	275.00	59.70	<6.7		
Isopropyl ether	1666	20.70	8.20	<0.001		
n-Heptane	1666	3.00	0.70	<0.002		
Methyl formate	1666	20.70	8.20	<0.005		
Diethyl amine	1671	255.00	100.00	<50.0		
Triethyl amine	1671	255.00	100.00	<17.0		
Dilution factor by lab				1		

	METROPOLITAN ST. LOUIS SEWER DISTRICT				
	INDUSTRIAL USER SELF MONITORING REPORT				
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT					
PART I: IDENTIFYING INFORMATION					
Company Name:		Mallinckrodt Inc.			
Permit No.:		21120596-00			
Premise Address:		3600 North Second St., St. Louis, MO 63147			
Monitoring Period:	____(JAN-MAR)	____(APR-JUN)		__X__(JULY-SEP)	__X__(OCT-DEC)
Samples Collected By:		Mallinckrodt Inc			
Analysis Performed By:		Lancaster Labs			
MSD SAMPLE POINT REFERENCE NUMBERS				----->	SP 918
DATES ON WHICH SAMPLES WERE COLLECTED				----->	10/16/2002
TIMES AT WHICH SAMPLES WERE COLLECTED				----->	13:30
SAMPLE TYPE					Grab
FLOW				E	8,000
PARAMETER					
Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result	
Acetone	524.2	20.70	8.20	<0.030	
Benzene	524.2	3.00	0.70	<0.001	
Chlorobenzene	524.2	3.00	0.70	<0.001	
Chloroform	524.2	0.10	0.03	0.0059	
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.001	
1,2-Dichloroethane	524.2	20.70	8.20	<0.001	
Ethyl Acetate	1666	20.70	8.20	<0.001	
n-Hexane	1666	3.00	0.70	<0.001	
Methylene chloride	524.2	3.00	0.70	<0.003	
4-Methyl-2-pentanone	1666	20.70	8.20	<0.001	
Tetrahydrofuran	1666	9.20	3.40	<0.001	
Toluene	524.2	0.30	0.20	<0.001	
Xylenes	1666	3.00	0.70	<0.002	
Isobutyraldehyde	1666	20.70	8.20	<0.001	
n-Amyl acetate	1666	20.70	8.20	<0.001	
n-Butyl acetate	1666	20.70	8.20	<0.001	
Isopropyl acetate	1666	20.70	8.20	<0.001	
Methyl cellosolve	1671	275.00	59.70	<6.7	
Isopropyl ether	1666	20.70	8.20	<0.001	
n-Heptane	1666	3.00	0.70	<0.002	
Methyl formate	1666	20.70	8.20	<0.005	
Diethyl amine	1671	255.00	100.00	<50.0	
Triethyl amine	1671	255.00	100.00	<17.0	
Dilution by lab				1	

	METROPOLITAN ST. LOUIS SEWER DISTRICT					
	INDUSTRIAL USER SELF MONITORING REPORT					
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT						
PART I: IDENTIFYING INFORMATION						
Company Name:		Mallinckrodt Inc.				
Permit No.:		21120596-00				
Premise Address:		3600 North Second St., St. Louis, MO 63147				
Monitoring Period:	____(JAN-MAR)	___(APR-JUN)		___(JULY-SEP)	__X__(OCT-DEC)	
Samples Collected By:		Mallinckrodt Inc				
Analysis Performed By:		Lancaster Labs				
Part II: ANALYTICAL RESULTS OF SELF MONITORING						
MSD SAMPLE POINT REFERENCE NUMBERS				SP 919		
DATES ON WHICH SAMPLES WERE COLLECTED			----->	10/16/2002	11/08/2002	12/04/2002
TIMES AT WHICH SAMPLES WERE COLLECTED			----->	11:00	13:30	9:00
SAMPLE TYPE			----->	Grabs	Grab	Grab
FLOW			E	6,000	6,000	6,000
PARAMETER						
Results reported in mg/l (ppm)	EPA Method	Max Daily Limit	Avg Monthly Limit	10/16 Result	11/8 13:30 Resample	12/4 Resample
Acetone	524.2	20.70	8.20	<0.050		
Benzene	524.2	3.00	0.70	<0.005		
Chlorobenzene	524.2	3.00	0.70	<0.005		
Chloroform	524.2	0.10	0.03	<0.005		
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.005		
1,2-Dichloroethane	524.2	20.70	8.20	<0.005		
Ethyl Acetate	1666	20.70	8.20	<0.010		
n-Hexane	1666	3.00	0.70	<0.010		
Methylene chloride	524.2	3.00	0.70	<0.010		
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010		
Tetrahydrofuran	1666	9.20	3.40	<0.020		
Toluene	524.2	0.30	0.20	0.099	0.073	0.004J
Xylenes	1666	3.00	0.70	<0.010		
Isobutyraldehyde	1666	20.70	8.20	<0.010		
n-Amyl acetate	1666	20.70	8.20	<0.005		
n-Butyl acetate	1666	20.70	8.20	<0.005		
Isopropyl acetate	1666	20.70	8.20	<0.010		
Methyl cellosolve	1671	275.00	59.70	<20.0		
Isopropyl ether	1666	20.70	8.20	<0.005		
n-Heptane	1666	3.00	0.70	<0.010		
Methyl formate	1666	20.70	8.20	<0.100		
Diethyl amine	1671	255.00	100.00	<50.0		
Triethyl amine	1671	255.00	100.00	<50.0		

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Mallinckrodt Inc.
Permit No.: 21120596-00
Premise Address: 3600 North Second St., St. Louis, MO 63147
Monitoring Period: _____(JAN-MAR) ____(APR-JUN) ____(JULY-SEP) __X__(OCT-DEC)
Samples Collected By: Mallinckrodt Inc
Analysis Performed By: Lancaster Labs

Part II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS	----->	SP 920
DATES ON WHICH SAMPLES WERE COLLECTED	----->	11/14/2002
TIMES AT WHICH SAMPLES WERE COLLECTED	----->	11:30
SAMPLE TYPE		Grabs
FLOW	E	36,000

PARAMETER Results reported in mg/l (ppm)	EPA Method	Max Daily	Avg Monthly	Result
Acetone	524.2	20.70	8.20	<0.300
Benzene	524.2	3.00	0.70	<0.010
Chlorobenzene	524.2	3.00	0.70	<0.010
Chloroform	524.2	0.10	0.03	<0.010
1,2-Dichlorobenzene	524.2	20.70	8.20	<0.010
1,2-Dichloroethane	524.2	20.70	8.20	<0.010
Ethyl Acetate	1666	20.70	8.20	<0.010
n-Hexane	1666	3.00	0.70	<0.010
Methylene chloride	524.2	3.00	0.70	<0.030
4-Methyl-2-pentanone	1666	20.70	8.20	<0.010
Tetrahydrofuran	1666	9.20	3.40	<0.010
Toluene	524.2	0.30	0.20	<0.010
Xylenes	1666	3.00	0.70	<0.020
Isobutyraldehyde	1666	20.70	8.20	<0.010
n-Amyl acetate	1666	20.70	8.20	<0.010
n-Butyl acetate	1666	20.70	8.20	<0.010
Isopropyl acetate	1666	20.70	8.20	<0.010
Methyl cellosolve	1671	275.00	59.70	<6.7
Isopropyl ether	1666	20.70	8.20	<0.010
n-Heptane	1666	3.00	0.70	<0.020
Methyl formate	1666	20.70	8.20	<0.050
Diethyl amine	1671	255.00	100.00	<17
Triethyl amine	1671	255.00	100.00	<17
Dilution by lab				1, 10

Mallinckrodt Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Point 080/081/082; Building 98

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF-Cyanide, Zinc, Lead	Pharmaceutical-Cyanide
Peptides				MSD		n/a	No
System Test		11/21/2002 11/26/2002	11/21/2002 11/26/2002				
Calcitonin	Pharmaceutical	12/09/2002 12/17/2002 12/26/2002	12/13/2002 12/20/2002 12/27/2002				
Exendin	Pharmaceutical	11/04/2002 11/14/2002 11/18/2002	11/06/2002 11/15/2002 11/19/2002				
Oxycodone Terephthalate	Narcotic	11/14/2002	11/15/2002				

Mallinckrodt, Inc.
St. Louis Plant

St. Louis Metropolitan Sewer District
Industrial User Self-Monitoring Report
(Attachment)

Sample Points 981/982; Building 97

Process/ Product	Pharmaceutical OCPSF Non-Regulated	Date Start	Date End	Wastewater Disposition	Wastewater Sample Date	OCPSF- Cyanide, Zinc, Lead	Pharmaceutical - Cyanide
Meperidine	Pharmaceutical	10/1/02	10/21/02	MSD	NA	No	No
Meperidine	Pharmaceutical	10/26/02	10/30/02	MSD	NA	No	No
Meperidine	Pharmaceutical	11/3/02	11/25/02	MSD	NA	No	No
Meperidine	Pharmaceutical	11/30/02	12/22/02	MSD	NA	No	No
Meperidine	Pharmaceutical	11/26/02	12/28/02	MSD	NA	No	No
Methylphenidate	Pharmaceutical	10/1/02	10/21/02	MSD	NA	No	No
Methylphenidate	Pharmaceutical	12/5/02	12/22/02	MSD	NA	No	No
Nalbuphine	Pharmaceutical	10/26/02	10/30/02	MSD	NA	No	No
Nalbuphine	Pharmaceutical	11/19/02	11/25/02	MSD	NA	No	No
Nalbuphine	Pharmaceutical	12/1/02	12/6/02	MSD	NA	No	No
Diphenoxylate	Pharmaceutical	11/3/02	11/18/02	MSD	NA	No	No

Note: Several holiday shutdowns during this quarter as well as for project work.

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

February 7, 2003

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT INC.
P.O. Box 470158
St. Louis, MO 63147

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 21120596-00
For premise at: 3600 N. Second Street
St. Louis, MO 63147

Dear Ms. Siebenberger:

Thank you for your January 28, 2003 letter advising us of the results of recent monitoring of your wastewater discharge. That letter accompanied the fourth quarter 2002 self-monitoring report required under the terms of the above referenced permit. The following violations of permit limitations, terms or conditions were identified:

VIOLATIONS OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMP PT	SAMPLE TYPE	PARAMETER	PERMIT LIMIT	LIMIT TYPE	VALUE REPORTED
10-31-02	0800	912	Grab	DMAC	7,091 lbs/day	DM	7,986 lbs/day
11-07-02	0800	912	Grab	DMAC	7,091 lbs/day	DM	7,136 lbs/day*
11-20-02	0800	912	Grab	DMAC	7,091 lbs/day	DM	12,074 lbs/day***
10-22-02	1100	913	Grab	Chloroform	0.1 mg/l	DM	0.139 mg/l**
Oct 2002		913		Chloroform	0.03 mg/l	MA	<0.0745 mg/l***
Nov 2002		913		Chloroform	0.03 mg/l	MA	0.047 mg/l***
10-30-02	1100	913	Grab	Toluene	0.3 mg/l	DM	1.3 mg/l**
Oct 2002		913		Toluene	0.2 mg/l	MA	0.6675 mg/l**

< = Less than indicated value
mg/l = milligrams per liter
lbs/day = Pounds per Day
DM = Daily Maximum
MA = Monthly Average

The aforementioned monthly average values are the average of Mallinckrodt's samples within a particular month. Please note that if only one sample was collected within a month, the result of analysis equates to the monthly average.

REQUIRED ACTION/RESPONSE:

Pursuant to your letter, we acknowledge that resampling events for DMAC, Chloroform, and Toluene occurred subsequent to the aforementioned exceedences. The results of analysis reported are within permit limitations. Concomitantly, we recognize that:

- Investigations have been initiated to address the origin of the DMAC and Toluene exceedences; and
- Operations personnel are working to maximize performance of a stripper system that impacts Chloroform concentrations within your effluent.

Please keep the District apprised of your progress.

Refer to the enclosure for information on potential enforcement actions should noncompliance continue. The enclosure also explains the meaning of any asterisks which appear in the Value Reported column above. You should consider the percentages applicable to Significant Noncompliance when planning for additional sampling.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

pc: Suspense file

cc: Douglas Mendoza
Permit file

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt Permit File

ACCT #: 21120596-00

FROM: Doug Mendoza

DATE: January 28, 2003

RE: Telephone Notification of Self-Monitoring Violation

On 1/28/03, Karen Siebenberger of Mallinckrodt called and reported a self-monitoring violation at SP918. Toluene was 19 mg/l! The sample was taken 1/9/03 at 2100 hrs. They are investigating, and will resample and report.

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt Permit File - 3600 N. 2nd St.

ACCT #: 21120596-00

FROM: Doug Mendoza

DATE: January 6, 2003

RE: Telephone Notification of Self-Monitoring Violation

On 1/3/03 at 6 pm, Karen Siebenberger of Mallinckrodt left a telephone message. She just received results of sampling for SP912. The following results exceeded the daily maximum limit:

10/31/02	DMAC = 7986 lbs/day
11/07/02	DMAC = 7136 lbs/day
11/20/02	DMAC = 12074 lbs/day

The daily maximum limit is 7091 lbs/day. Only the 11/20/02 result is a TRC violation. No monthly average limits were exceeded.

Metropolitan
St. Louis Se r
District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

March 25, 2004

Karen Siebenberger
HS&E Engineer
MALLINCKRODT INC.
3600 N. 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 N. 2nd Street

Dear Ms. Siebenberger:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on May 1, 2003, for the premise identified above, is hereby modified as per the attached pages 21, 22, 34A, and 34B. This modification replaces sampling point 916 with new sampling point 929. This letter and the revised pages 21, 22, 34A, and 34B should be affixed to your permit as your official record and become a part thereof. These changes were identified pursuant to recent communication between Mallinckrodt and the District.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please note that the District is aware that additional changes to your permit will occur in the near future. These changes will be incorporated into the March 25, 2004 modification date. The District will forward Mallinckrodt the additional permit modification pages when all data has been received justifying the modifications. These modified pages will include revisions of the permit special conditions which, will cite that grabs samples may be used at sampling point 929. Finally, we ask that Mallinckrodt be sure to monitor the discharge at sampling point 929 for the first quarter reporting period.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

Enclosurers

cc: Permit file

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 916

SAMPLING POINT LOCATION: Sump receiving centrifuge 639 effluent on top floor of bldg 7 along W wall - only when sump is discharging to sewer

AVERAGE WASTEWATER FLOW (GPD): 8[illegible]0

WASTEWATER SOURCE AND CATEGORY: Categorical (4[illegible]9 Subpart [illegible] PSES)

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DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	[illegible]	Daily Max	Once/3 mo
Benzene [mg/L]	[illegible].7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	[illegible].2	Monthly Avg	
Chlorobenzene [mg/L]	[illegible]	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	[illegible]	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	[illegible]	Monthly Avg	
Isobutyraldehyde [mg/L]	20.[illegible]	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.[illegible]	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **916**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 929

SAMPLING POINT LOCATION: 1/2" stainless steel pipe in sink with effluent from #639 centrifuge, 15' from W wall

AVERAGE WASTEWATER FLOW (GPD): 800

WASTEWATER SOURCE AND CATEGORY: 439 Sub C PSES (CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **929**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT MODIFICATION

Permit to be Modified:

Company Name: Mallinckrodt Inc.

Location: 3600 N. 2nd St. 63147

Permit No: 21120596-00 Original Effective Date: 6/1/2006

Modification Effective Date: 6/26/2007

What is to be Modified:

Briefly explain what is to be modified and then list the pages affected.

Add sampling point 937 and modify affected SP010, SP920 and related special conditions

- **new modification date and new sampling point 937 on page 1,**
- **addition of sampling point 937 to sampling point 010's wastewater sources on page 8,**
- **updated wastewater flow information for sampling point 920 on page 20,**
- **new sampling point 937 on new page 29C,**
- **updated special condition B.6 to include sampling point 937 on page 37,**
- **updated special condition C.4 to include sampling point 937 on page 38,**
- **updated special condition C.10 to include sampling point 937 on page 40,**

Reasons for Modification:

Cite regulation, policy, etc. and identify any other documents which support the modification.

Company added new sampling point 937 to run in parallel with sampling point 920.

Prepared by: DMM	Date: 6/26/2007	Permit Modified by: DMM	Date: 6/26/2007

Rev 5/07

Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

June 26, 2007

Lisa Meyer
HS&E Engineer
MALLINCKRODT INC
3600 N. 2nd Street
St. Louis, MO 63147

Re: Discharge Permit No: 21120596-00
For premise at: 3600 N 2nd St
St. Louis, MO 63147

Dear Lisa Meyer:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on June 01, 2006, for the premise identified above, is hereby modified as per the attached modified permit.

The modifications made to the permit are as follows:

- new modification date and new sampling point 937 on page 1,
- addition of sampling point 937 to sampling point 010's wastewater sources on page 8,
- updated wastewater flow information for sampling point 920 on page 20,
- new sampling point 937 on new page 29C,
- updated special condition B.6 to include sampling point 937 on page 37,
- updated special condition C.4 to include sampling point 937 on page 38,
- updated special condition C.10 to include sampling point 937 on page 40.

This letter and the modified permit should be affixed to your original permit as your official record and become a part thereof.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please contact us at 314-436-8717, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosures - Industrial Wastewater Discharge Permit modified and new pages

pc Jason Gill

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2006
MODIFICATION DATE: June 26, 2007
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 22
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 920, 927, 930, 932, 933, 935, 936, 937

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 3,001,001

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918, 920, 927, 930, 932-933, 935-937)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 22,000 (represents total volume with SP937)

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.13** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 937

SAMPLING POINT LOCATION: Valve on 2nd level on W side near pipe bridge N of bldg 501

AVERAGE WASTEWATER FLOW (GPD): 22,000 (represents total volume with SP920)

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.13** of the permit conditions.

Where:

DF= downstream flow rate UF = upstream flow rate
DC = downstream concentration UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

5. Monitoring at sampling point **927** shall include the following:

a. Samples collected from sampling point **927** (Tank 308) shall be representative of the contents within Tank 308;

b. Permittee shall collect samples from sampling point **927** while Tank 308 is discharging.

6. At sampling points **080, 915, 918, 920, 927, 930, 932, 933, 935, 936 and 937** the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

7. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

8. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

9. Based on current discharge conditions at sampling point **080**, permittee is only required to self-monitor sampling point **080** when wastewater subject to **40 CFR 439** is being discharged. If no discharge of categorical wastewater occurs during a reporting quarter, permittee shall indicate on the quarterly self-monitoring report that no discharge occurred. Quarterly monitoring of sampling point **080** will not be required if no categorical wastewater was discharged. If no discharge occurs, permittee shall submit, with the quarterly self-monitoring report, a summary of operations for facilities that discharge via sampling point **080** to verify no categorical wastewater discharges occurred. The summary shall be constructed such that it is not confidential. If discharge conditions change at sampling point **080**, such that sampling of non-pharmaceutical wastewater is feasible, the permittee shall notify the District.

10. Prior to discharging categorical wastewater subject to **40 CFR 439** via sampling points **915** and **932**, permittee shall characterize every wastewater batch. Per general permit requirements, permittee must maintain the characterization records for at least three (3) years.

C. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each

pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee is not required to sample discharges at sampling points **001** or **002** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001** or **002** since the last report.

3. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.B.4**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

4. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 920, 932, 935, 936 and 937**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 920, 932, 935, 936 and 937**.

5. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in

MSD Ordinance 8472.
The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

6. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

7. For sampling points **930**, **933**, and **936** permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **930**, **933**, and **936** are adhered to.

8. For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

9. Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

10. Pursuant to the provisions of **40 CFR 439(1)(l)** and **(4)** the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling points **920 and 937** in lieu of certain other pollutants regulated under **40 CFR 439 Subpart C, PSES**. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

11. Based on the determination referenced above and on permittee's verification that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are absent in the process wastewater discharged from pharmaceutical manufacturing operations, this permit requires sampling for those pollutants only once per year, with the results to be reported on the appropriate quarterly self-monitoring report. In addition, each quarterly self-monitoring report shall include a statement certifying that the determination on file, referenced by date, remains valid.

12. The permittee has determined that all pollutants regulated under **40 CFR 439 Subpart B** at sampling point **930**, are neither used nor generated in pharmaceutical manufacturing operations at the permitted facility. The permittee must maintain the documentation for this determination in the facility permit records. An updated determination, based on a review of raw materials and an assessment of process chemistry, products and by-products resulting from each manufacturing process, shall be submitted to the District with each application for permit

ACCOUNT NUMBER: 21120596-00

COMPANY NAME: MALLINCKRODT INC
3600 North Second Street
St. Louis, MO 63147

CORRESPONDENCE

FROM 04-02-03 THRU 06-01-05

☑ CORRESPONDANCE LOCATED
IN ~~OVERFLOW FILE~~
archive cabinet
~~PERMIT OVERFLOW~~

Metropolitan
St. Louis Sewer
District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

June 1, 2005

Karen Siebenberger
Principal HSE Engineer
MALLINCKRODT, INC.
3600 North 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 North 2nd Street

Dear Ms. Siebenberger:

Enclosed is the Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit for the premise identified above. This permit is issued pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001. This permit has been prepared based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the current permit. New sampling point 934 has replaced former sampling point 917. The categorical limitations for sampling point 905 have been amended. Surrogate monitoring has been enacted for sampling point 920 and a related special condition added. The billing surcharge values in special condition II.E.2 have been revised to reflect current information. Special condition II.C.6 has been modified to include all sampling points regulated by 40 CFR 439 Subpart C. Categorical standards have been added to sampling point 080. Sampling points 082 and 929 have been removed. Categorical standards at sampling points 918 and 930 have been changed from 40 CFR 439 Subpart C to Subpart B. Other permit special conditions have been revised pursuant to the above changes. Additionally, Section I of the permit conditions has been reorganized and includes additional clarifying language but does not contain any new requirements. Other minor changes may have been made to improve the overall clarity of the document

The previous permit, effective May 1, 2003, is voided as of the effective date of the enclosed permit.

Monitoring reports required by the conditions of this permit must be submitted quarterly for the life of the permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. Copies of the necessary report forms are enclosed.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed acceptance, by you, of the provisions of this permit.

You may contact us at 436-8756 at any time if you have any question about your permit.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosures

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: June 01, 2005
EXPIRATION DATE: May 31, 2010

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2ND STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 23
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 099, 905, 912, 915, 918, 919, 920, 927, 928, 930, 931, 932, 933, 934

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 2,200

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 57,601

WASTEWATER SOURCE AND CATEGORY: Flow from upstream sample point + Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,000

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + NCCW

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Flow from offsite

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,634,001

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918-920, 927-928, & 930-934)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 14,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98

AVERAGE WASTEWATER FLOW (GPD): 29,100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt) + Sanitary, CWF-No

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **080**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See **Section II** of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 and downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 48,600

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Temperature [Deg C]	60	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Subparts G & H, PSES), (Appendix A-No)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acenaphthene [g/Day]	32.91	Daily Max	Once/3 mo
Acenaphthene [g/Day]	13.3	Monthly Avg	
Anthracene [g/Day]	32.91	Daily Max	Once/3 mo
Anthracene [g/Day]	13.3	Monthly Avg	
Benzene [g/Day]	93.83	Daily Max	Once/3 mo
Benzene [g/Day]	39.91	Monthly Avg	
Bis (2-EthylHexyl) Phthalate [g/Day]	180.66	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	66.52	Monthly Avg	
Carbon Tetrachloride [g/Day]	266.09	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	99.43	Monthly Avg	
Chlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	99.43	Monthly Avg	
Chloroethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloroethane [g/Day]	77.02	Monthly Avg	
Chloroform [g/Day]	227.57	Daily Max	Once/3 mo
Chloroform [g/Day]	77.72	Monthly Avg	
Chloromethane [g/Day]	206.57	Daily Max	Once/3 mo
Chloromethane [g/Day]	77.02	Monthly Avg	
Di-n-butyl Phthalate [g/Day]	30.11	Daily Max	Once/3 mo
Di-n-butyl Phthalate [g/Day]	14.0	Monthly Avg	
1,2-Dichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	137.24	Monthly Avg	
1,3-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,4-Dichlorobenzene [g/Day]	266.09	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	99.43	Monthly Avg	
1,1-Dichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	15.4	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichloroethane [g/Day]	401.93	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	126.04	Monthly Avg	
1,1-Dichloroethene [g/Day]	42.01	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	15.4	Monthly Avg	
Trans-1,2-Dichloroethene [g/Day]	46.21	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	17.51	Monthly Avg	
1,2-Dichloropropane [g/Day]	555.98	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	137.24	Monthly Avg	
(cis & trans) 1,3-Dichloropropene [g/Day]	555.98	Daily Max	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	137.24	Monthly Avg	
Diethyl Phthalate [g/Day]	79.13	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	32.21	Monthly Avg	
Dimethyl Phthalate [g/Day]	32.91	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	13.3	Monthly Avg	
4,6-Dinitro-2-Methylphenol [g/Day]	193.96	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	54.62	Monthly Avg	
Ethylbenzene [g/Day]	266.09	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	99.43	Monthly Avg	
Fluoranthene [g/Day]	37.81	Daily Max	Once/3 mo
Fluoranthene [g/Day]	15.4	Monthly Avg	
Fluorene [g/Day]	32.91	Daily Max	Once/3 mo
Fluorene [g/Day]	13.3	Monthly Avg	
Hexachlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	137.24	Monthly Avg	
Hexachlorobutadiene [g/Day]	266.09	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	99.43	Monthly Avg	
Hexachloroethane [g/Day]	555.98	Daily Max	Once/3 mo
Hexachloroethane [g/Day]	137.24	Monthly Avg	
Methylene Chloride [g/Day]	119.04	Dailly Max	Once/3 mo
Methylene Chloride [g/Day]	77.02	Monthly Avg	
Naphthalene [g/Day]	32.91	Daily Max	Once/3 mo
Naphthalene [g/Day]	13.3	Monthly Avg	
Nitrobenzene [g/Day]	4482.84	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1566.4	Monthly Avg	
2-Nitrophenol [g/Day]	161.75	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	45.51	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
4-Nitrophenol [g/Day]	403.33	Daily Max	Once/3 mo
4-Nitrophenol [g/Day]	113.44	Monthly Avg	
Phenanthrene [g/Day]	32.91	Daily Max	Once/3 mo
Phenanthrene [g/Day]	13.3	Monthly Avg	
Pyrene [g/Day]	33.61	Daily Max	Once/3 mo
Pyrene [g/Day]	14.0	Monthly Avg	
Tetrachloroethene [g/Day]	114.84	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	36.41	Monthly Avg	
Toluene [g/Day]	51.82	Daily Max	Once/3 mo
Toluene [g/Day]	19.61	Monthly Avg	
1,2,4-Trichlorobenzene [g/Day]	555.98	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	137.24	Monthly Avg	
1,1,1-Trichloroethane [g/Day]	41.31	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	15.4	Monthly Avg	
1,1,2-Trichloroethane [g/Day]	88.93	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	22.4	Monthly Avg	
Trichloroethene [g/Day]	48.32	Daily Max	Once/3 mo
Trichloroethene [g/Day]	18.21	Monthly Avg	
Vinyl Chloride [g/Day]	120.44	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	67.92	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 185,000

WASTEWATER SOURCE AND CATEGORY: Process Waste from Buildings 504 & 505

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	7091	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	5459	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Section **II.C.3** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 919

SAMPLING POINT LOCATION: Valve on N side of T-332 at inside E wall of bldg 250, just S of large door

AVERAGE WASTEWATER FLOW (GPD): 2,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **919**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 1,720

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.7** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 928

SAMPLING POINT LOCATION: Tank 309 (lime press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Benzene [mg/L]****	3	Daily Max	Once/3 mo
Benzene [mg/L]****	.7	Monthly Avg	
n-Butyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]****	8.2	Monthly Avg	
Chlorobenzene [mg/L]****	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]****	.7	Monthly Avg	
Chloroform [mg/L]****	.1	Daily Max	Once/3 mo
Chloroform [mg/L]****	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]****	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]****	8.2	Monthly Avg	
Diethylamine [mg/L]****	255	Daily Max	Once/year
Diethylamine [mg/L]****	100	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
n-Heptane [mg/L]****	3	Daily Max	Once/3 mo
n-Heptane [mg/L]****	.7	Monthly Avg	
n-Hexane [mg/L]****	3	Daily Max	Once/3 mo
n-Hexane [mg/L]****	.7	Monthly Avg	
Isobutyraldehyde [mg/L]****	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **928**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	
Methyl Formate [mg/L]****	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]****	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]****	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]****	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]****	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]****	3.4	Monthly Avg	
Toluene [mg/L]****	.3	Daily Max	Once/3 mo
Toluene [mg/L]****	.2	Monthly Avg	
Triethylamine [mg/L]****	255	Daily Max	Once/year
Triethylamine [mg/L]****	100	Monthly Avg	
Xylene [mg/L]****	3	Daily Max	Once/3 mo
Xylene [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.7** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 930

SAMPLING POINT LOCATION: Valve on 4" PVC line inside NW corner of Building 222S, only when sump is discharging from tanks 300 and 355

AVERAGE WASTEWATER FLOW (GPD): 650

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/year
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/year
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/year
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/year
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/year
Methylene Chloride [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 931

SAMPLING POINT LOCATION: Valve on 1" line 4' from Hydrogenator wall and 8' from S wall in SE corner of Building 260

AVERAGE WASTEWATER FLOW (GPD): 15,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **931**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 932

SAMPLING POINT LOCATION: Valve 5' inside N dyke wall 27'W from NE corner of neutralization tank farm wall

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **932**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 933

SAMPLING POINT LOCATION: Valve on Tank #1 10' NW of SE corner of Bldg. 200W - only when disch. 439 waste

AVERAGE WASTEWATER FLOW (GPD): 100

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES; CN-no, NH3 exempt)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **933**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 934

SAMPLING POINT LOCATION: Valve on 1" pipe 1'S, 5'E of exit door (15'E of E inner wall) on N wall of Bldg. 97

AVERAGE WASTEWATER FLOW (GPD): 1,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSNS; CN-no, NH3 exempt) + Laboratory Waste (439 Subpart E NA (no standards)), CWF-No

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/year
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **934**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/year
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.

b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.

c. Daily flows, with dates, for all measurements or estimates made within the quarter.

d. Any certification statements required pursuant to the Special Conditions in Section II.

e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by October 28, 2005.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES:

1. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

B. SPECIAL MONITORING AND REPORTING REQUIREMENTS APPLICABLE TO DISCHARGES FROM PILOT PANT OPERATIONS IN BUILDING 97:

1. All monitoring and reporting of waste discharges from **Building 97** shall be performed as described below.

a. **Sampling point 934:** During each quarter in which any **439** regulated waste is discharged from pilot plant operations in building 97, sampling and analyses shall be performed at least once for the listed pollutants. If no **439** regulated wastes are discharged during an entire reporting quarter the report for sampling point **934** for that quarter shall state that no discharge occurred.

2. The permittee shall submit, with each quarterly self monitoring report required pursuant to section I.A.1 of the permit conditions, summaries of all process activities, in building 97, which generated wastewater for discharge at sampling point **934** during the reporting quarter. The summary should be set up in a tabular form and shall:

a. Identify what activities occurred (**40 CFR 439** Regulated Process, Non-regulated Process, or No operation) and the beginning and ending date for each period of **439** activity. For **439** discharges identify the applicable Subpart from **40 CFR 439**).

b. Identify the days on which wastewater subject to the **439** standards was discharged. If **439** regulated wastewater was generated during the quarter, but not discharged describe the manner of disposal of that waste.

C. OTHER SPECIAL MONITORING AND REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

3. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

4. Sample points **003, 008, 009, 010, 011**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

5. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where: DF= downstream flow rate

DC = downstream concentration
UF = upstream flow rate
UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

6. At sampling points **080**, **915**, **918-920**, and **927-928**, and **930-934**, the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

7. Monitoring at sampling points **927** and **928** shall include the following:

a. Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b. Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

1. The permittee is not required to sample discharges at sampling points **001** or **002** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001** or **002** since the last report.

2. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 919, 920, 928, 931, 932, 933**, and **934**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 919, 920, 928, 931, 932, 933**, and **934**.

4. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This

authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

5. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

6. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

7. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

8. For sampling points **919, 930, 931**, and **933**, permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **919, 930, 931**, and **933** are adhered to.

9. For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

10. Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

11. Pursuant to the provisions of **40 CFR 439(1)(l)** and **(4)** the District has accepted the permittee's recommendation to allow monitoring for surrogate pollutants at sampling point **920** in lieu of certain other pollutants regulated under **40 CFR 439 Subpart C, PSES**. The permittee must maintain the documentation for this recommendation in the facility permit records. An updated recommendation shall be submitted to the District with each application for permit renewal and at any time, during the life of this permit, when changes in raw materials or processes or other factors could result in a change in the status of any pollutant for which monitoring, using a surrogate, has been allowed. In addition, each quarterly self-monitoring report shall include a statement certifying that the recommendation on file, referenced by date, remains valid.

E. SPECIAL BILLING REQUIREMENTS

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **555 mg/l** for **BOD**, **1,236 mg/l** for **COD**, and **131 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

MSD

PERMIT FACT SHEET

Check one:

FIRST TIME PERMIT	
RENEWAL	X
REVISION	

Prepared by: **Fabian Grabski**	Date: 05-26-05
Reviewed by: Doug Mendze	Date: 6-1-05

PERMIT NO: 21120596-00 EFFECTIVE DATE: 06-01-05 EXPIRATION DATE: 05-31-10

MODIFICATION DATES: (1)_____, (2)_____, (3)_____, (4)_____

COMPANY NAME: MALLINCKRODT INC.

PREMISE ADDRESS: 3600 N. 2nd ST. ST. LOUIS, MO 63147

RELATED ACCOUNT NUMBERS: N/A

SIC NUMBERS: 2816, 2819, 2833, 2834, 2835, 2869 ~

TYPE OF OPERATION: REACTION, SEPERATION, DRYING, & PACKAGING

TOTAL NUMBER OF SAMPLING POINTS: 23 or; NO SAMPLE POINT 1(099)

NUMBER OF: ORDINANCE 10 CATEGORICAL 12 COMBINED 1(080)

CATEGORICAL INDUSTRY ? YES ✓ NO ____

If Yes, 40 CFR 414 Subparts G & H PSES ✓ PSNS ____

" " 439 " " B ✓

40 CFR 439 Subpart C PSES ✓ PSNS ✓

" " 415 " " BK ✓

EXTRA STRENGTH SURCHARGE ? YES ✓ NO ____ If Yes, BOD 555 COD 1236 TSS 131

RETURN FACTOR ? YES ✓ NO ____ If Yes, Acct # 21120596-00 RF 0.96

SPECIAL CONDITIONS REQUIRED ? YES ✓ NO ____

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
Pollutant & Limitations Documentation Sheets:	✓		
Permit Preparation Checklist:	✓		
Production Based Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Most Strict Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Combined Wastestream Calculations Sheets:			✓
If Yes, for Sampling Points:			
Other:			

COMMENTS (Include notations of any significant changes from last permit):

SP 934 replaces SP 917. Revised limits for SP 905. Add surrogate monitoring for SP 920 and add E.24 special condition. Surcharge values revised. Special condition D.1 modified to include all 439 SPs. [redacted] SP 080 is now a combined SP. SP 082 removed. SPs 918 & 930 changed from 439 Sub C to Subpart B. Other affected special conditions revised as needed. SP929 REMOVED.

Mallinckrodt Inc.
3600 North Second Street
P.O. Box 470158
St. Louis, MO 63147

tyco
Healthcare

Mallinckrodt

May26, 2005

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Elimination of SP929 in Bldg6/7
PERMIT NO. 21120596-00

Dear Mr. Mendoza,

SP929 is an internal compliance monitoring point in Building 6/7 subject to 40 CFR 439 Subpart C. Discharges from this monitoring location have been permanently routed to the central PEG distillation column, SP920 for treatment. Mallinckrodt does not foresee resuming discharge at SP929 and is requesting SP929 be eliminated from the permit.

If you have any questions, please contact me at (314) 654-1920.

Sincerely,

Karen Siebenberger

Karen Siebenberger
Principal HSE Engineer

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt File

ACCT #: 21120596-00

FROM: Doug Mendoza

DATE: May 25, 2005

RE: Changes to discharges

On 5/24/05 and 5/25/05, I had telephone conversations with Karen Siebenberger to verify information during review of Mallinckrodt's soon-to-be-issued permit. Ms. Siebenberger informed me of the following changes that were in place. The changes have been made effective on PIMS as of the date of the new permit.

The laboratories in bldg 96 discharge both pharmaceutical and non-pharmaceutical R&D wastewater. This affects the discharge components for SP003 (and SP099), but not the permit. Laboratory waste is now specified as: 439 Sub E NA (No Stds) & non-439 R&D. The volume did not change.

Bldg 98 now discharges only pharmaceutical synthesis wastewater (and sanitary). The pilot plant work is now all production materials. Therefore, SP082 is no longer needed as a 439 point. It is inactivated. SP080 covers all discharges now, and is a combined cat/ord point. The categorical discharge is 29,000 GPD of 439 Sub C PSES (CN-no, NH3 exempt)(CWF-no), and the sanitary discharge stays at 100 GPD.

Bldg 97 discharges both pharmaceutical synthesis wastewater and pharmaceutical pilot plant wastewater. Actually it's either one or the other, depending on the day. The total volume of 1000 GPD hasn't changed. But the discharge components are: Laboratory Waste - 439 Sub E NA (No Stds) at 200 GPD, and Categorical - 439 PSNS (CN-no, NH3 exempt)(CWF-no) at 800 GPD. It is called CWF-no because the lab waste would be an unregulated stream under the CWF, and wouldn't change the limits.

All ASI process wastewater is once again flowing through SP912. For a while, it had been only bldg 504's discharge. But bldg 505 is again routed to SP912. The volume at SP912 also has increased to 185,000 GPD.

With the above changes, SP010, the main ordinance sample point, has had a slight change in volume, and the list of categorical SPs flowing to it now includes SP080.

May 25, 2005

Karen Siebenberger
MALLINCKRODT INC.
3600 North Second Street
St. Louis, MO 63147

Re: Requested changes to pharmaceutical discharge limitations

Dear Ms. Siebenberger:

We have reviewed your letters dated April 18, May 20 and May 23, 2005. We also met on May 23, 2005 to discuss the requested changes to pharmaceutical discharge limitations.

Regarding sample point 918, you provided information showing that only wastes subject to 40 CFR 439 Subpart B PSES are discharged through the point. Since the bldg. in which sample point 918 is located also contains processes subject to 40 CFR 439 Subpart C PSES, you also submitted a Standard Operating Procedure which will insure that only wastes subject to 40 CFR 439 Subpart B PSES will be discharged through sample point 918. Therefore, the discharge limits for sample point 918 will be changed to those contained in 40 CFR 439 Subpart B PSES in your upcoming wastewater discharge permit.

Regarding sample point 930, you provided information showing that only wastes subject to 40 CFR 439 Subpart B PSES are discharged through the point. Therefore, the discharge limits for sample point [redacted] 930 will be changed to those contained in 40 CFR 439 Subpart B PSES in your upcoming wastewater discharge permit.

Regarding sample point 928, Mallinckrodt is currently under a compliance order which prohibits discharge through this point. Wastewater from the affected process is currently discharged to the central steam stripper, at sample point 920. We met to discuss ways to reintroduce the discharge into sample point 928. The process involves an extraction procedure (Subpart B), followed by a synthesis procedure (Subpart C). You proposed limiting the discharge to the extraction procedure only, which would not be regulated for chloroform, the problem pollutant. However, your proposal included a recycle stream from the "non-synthesized" phase of a two-phase reaction vessel. For regulatory purposes, both phases are subject to Subpart C. There is contact between the phases; they are not distinct and separate streams. Therefore, we cannot allow sample point 928 to be regulated under 40 CFR 439 Subpart B PSES, as you requested. It will remain under Subpart C, and is still prohibited from receiving discharges under the compliance order. Options for you to consider may include a separate Subpart C discharge point for the recycle stream, or running the recycle stream back to the evaporator portion of its procedure.

If you have any questions, please contact me at 314-436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

---Fabian,

Go ahead and issue as a final permit.

Also will need to revise cover letter to include SP918 and SP930 categorical std. changes to 439 Sub B PSES.

Changes below for permit will also affect Permit Fact Sheets.

I have written a memo dated 5/25/05 detailing changes to SP003 & SP099 (doesn't affect permit), SP010, SP080/082, SP912, and SP934.

My letter dated 5/25/05 details changes to SP918 & SP930. SP919 & SP931 also affected for SOP special conditions, per Mallinckrodt's 5/23/05 letter that prompted my letter.

I believe I've made all necessary changes to PIMS SP's and MSD monitoring requirements. My changes to PIMS have effective dates of 6/1/05, to correspond to new permit date. I also removed NH3 from the limit sets on PIMS, since Mallinckrodt is exempt. You'll need to change permit-related items.

Bldg 98 is now only 439 Sub C (+ sanitary). No more pilot plant. SP080 becomes cat/ord SP, with no CWF due to small sanitary vs. large regulated. SP082 goes away. Components and volumes for SP080 change. SC B's title needs to remove Bldg 98. SC B.1 and B.3 need to be removed. SC B.4 needs to remove bldg 98 and SP 080/082. SC C.6 needs to add 080. SC D.1 needs to be revised to remove 082.

Bldg 97 discharges both 439 C and 439 E (pilot plant) wastewater. Components and individual volumes for SP934 change, but not total volume. "No" CWF due to only regulated and unregulated streams.

Need to add CN-no, NH3 exempt for SPs: 080, 915, 919, 920, 928, 934.

Need to change SP918 and SP930 to Sub B PSES and revise limits. CN & NH3 info. won't apply to these Sub B points.

SP912 includes both bldgs 504 & 505 again. This won't affect the permit. But the volume increase will. Also, SC C.7 (with very/verify typo) is no longer needed. Reference on SP912's page to SC C.7 also is no longer needed.

SP010's volume changed some, due to SP912 volume change, and categorical SP list at SP010 had SP080 added.

There are two page 47s. One with ref. on #6 to 918-920 and 927-934 appears to be the correct one.

SC D.3 - doesn't apply to SP005 or SP010, since 439 isn't applied there. Also need to remove SP918, SP927 and SP930, since they are Sub B.

SP918 - will need special condition like SC D.8 and SC D.9 for SOP to insure only 439 Sub B to SP 918.

SC D.8 - add SP919 & SP931, too.

SC D.10 should specify only at SP920.

Checklist Q30 - I crossed out "all" - since it doesn't fit this situation.

Checklist Q31 - Should be Yes - 415 Sub BK PSES - SP010. E.20 isn't applicable, since we don't ever expect limits to be promulgated.

--- Doug Mendoza 5/25/05

From: Jason Gill
To: Fabian Grabski
Date: 5/16/2005 9:20:22 AM
Subject: Mallinckrodt

Fabian:

Karen Siebenberger of Mallinckrodt 21120596-00 left me a message on 5/12/05 saying that there are no cyanides in any of the 439 processes. So I guess this is the same as no CN at any of the sample points there.

Will this work for confirmation?

JAG

PERMIT NO: 2120596-00

SAMPLING POINT REFERENCE NUMBER: 001 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SANITARY

Flow Rate: 1,000 GPD Basis for Flow Rate: WQ

General Pollutants: BOD * COD * O&GT * pH * Temp * TSS * Ord TTO *

Other: N/A *N/A; SANITARY ONLY (SAME AS CURRENT PERMIT).

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.3, #____, #____, #____, #____, #____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓
Explain:

SAMPLING POINT REFERENCE NUMBER: 002 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SANITARY ✓

Flow Rate: 2,200 GPD Basis for Flow Rate: WQ

General Pollutants: BOD * COD * O&GT * pH * Temp * TSS * Ord TTO *

Other: N/A *N/A; SEE SP 001

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.3, #____, #____, #____, #____, #____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓
Explain:

PERMIT NO: 2\120596-00

SAMPLING POINT REFERENCE NUMBER: 003 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: LAB WASTE + SAN + NON-CAT PROC WASTE + FLOW FROM UPSTREAM SAMPLE POINT

Flow Rate: 51,601 GPD Basis for Flow Rate: WQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: STD PMT POLLUTANTS

Basis for Limitations: MSD ORD #8472

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME + LAB WASTE

Special Conditions: # D.10, # D.11, #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 005 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: LAB WASTE + NCCW

Flow Rate: 32,000 GPD Basis for Flow Rate: WQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: { SEE SP 003 }

Basis for Limitations:

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME & LAB WASTE

Special Conditions: #___, #___, #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 2112059G-00

SAMPLING POINT REFERENCE NUMBER: 008 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PROCESS WASTE (EMERGENCY BY-PASS)

Flow Rate: 1,440,000 GPD (POTENTIAL) Basis for Flow Rate: UQ

General Pollutants: BOD * COD * O&GT * pH * Temp * TSS * Ord TTO *

Other: N/A

* APPLICABLE DURING BY-PASS EVENTS

Priority/Categorical Pollutants: N/A

Basis for Pollutants: {SEE SP 003}

Basis for Limitations: {SEE SP 003}

Basis for Monitoring Frequencies: * SEE ABOVE.

Special Conditions: # NON-STD II.C.2, # D.10, # ~~____~~, # ~~____~~, # ~~____~~, # ~~____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 009 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: FLOW FROM OFF SITE

Flow Rate: UNKNOWN Basis for Flow Rate: UQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: {SEE SP 003}

Basis for Limitations: {SEE SP 003}

Basis for Monitoring Frequencies: UNKNOWN FLOW NATURE; NEEDED 1/2 MOS FOR SP 099.

Special Conditions: # D.10, # D.11, # ~~____~~, # ~~____~~, # ~~____~~, # ~~____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 21120596 —00

SAMPLING POINT REFERENCE NUMBER: 010 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: Boiler Blowdown + Kitchen Waste + Laboratory Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Non Categorical Process Waste + Categorical (from SPs 080, 905, 915, 918-920, 927-928, 930-934

Flow Rate: 1,634,001 GPD Basis for Flow Rate: WQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: Cr, Cu, Ni, Zn; "KP" & DATA SHOWS PRESENCE.

Basis for Pollutants: SEE
Basis for Limitations: SP
Basis for Monitoring Frequencies: 003

Special Conditions: # D.10, #___, #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓
Explain:

SAMPLING POINT REFERENCE NUMBER: 011 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PROCESS WASTE (EMERGENCY BY PASS)

Flow Rate: 14,000 GPD Basis for Flow Rate: WQ

General Pollutants: BOD * COD * O&GT * pH * Temp * TSS * Ord TTO *

Other: N/A * APPLICABLE DURING BY-PASS EVENTS

Priority/Categorical Pollutants: N/A

Basis for Pollutants: SEE SP 003
Basis for Limitations:
Basis for Monitoring Frequencies: * SEE ABOVE.

Special Conditions: # NON-STD I.C.2, # D.10, #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓
Explain:

PERMIT NO: 2120596 -00

SAMPLING POINT REFERENCE NUMBER: 080 **TYPE:** Ord. __ Cat __ Comb ✓

Wastewater Components: CAT (439 SUB C, PSES; CN-no, NH3 exempt) + SANITARY, CNF-No

Flow Rate: 29,100 GPD Basis for Flow Rate: UQ | MEETING

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL POLLUTANT LONG LIST.

Basis for Pollutants: STD PMT POLLUTANTS ~~MSD ORD #8472~~ & 40 CFR 439 SUB C, PSES)

Basis for Limitations: MSD ORD. #8472 & " " " "

Basis for Monitoring Frequencies: 1/3 MONTHS; VOLUME & CATEGORICAL WASTE

Special Conditions: # D.10, # E.15 MOD, # D.1 MOD, # ____, # ____, # ____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: FLOW INCREASE. NOW A COMBINED SP.

SAMPLING POINT REFERENCE NUMBER: 099 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: LAB WASTE + SANITARY + NON CAT PROCESS WASTE

Flow Rate: 48,600 GPD Basis for Flow Rate: GPD

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: SEE UPSTREAM SP 009 & DOWNSTREAM SP 003

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: # D.11, # ____, # ____, # ____, # ____, # ____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 2120596 -00

SAMPLING POINT REFERENCE NUMBER: 905 ✓ TYPE: Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (414 SUB G&H, PSES), (APPENDIX A-NO)

Flow Rate: 185,000 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: OCPSF POLLUTANTS.

Basis for Pollutants: 40 CFR 414 SUBPARTS G & H, PSES

Basis for Limitations: " " " "

Basis for Monitoring Frequencies: 1/3 MOS; CATEGORICAL & VOLUME

Special Conditions: # B.1, # E.19, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit? YES ✓ NO __

Explain: INCREASED FLOW & REVISED LIMITS.

SAMPLING POINT REFERENCE NUMBER: 912 ✓ TYPE: Ord. ✓ Cat __ Comb __

Wastewater Components: PROCESS WASTE FROM BUILDING 504

Flow Rate: 185,000 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: DMAC

Basis for Pollutants: PRODUCTION NATURE.

Basis for Limitations: MSD DERIVED.

Basis for Monitoring Frequencies: 1/WEEK; MSD & MALLINCKRODT CONSENSUS.

Special Conditions: # NON-STD II.C.3, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit? YES ✓ NO __

Explain: FLOW INCREASE; 40,000 → 185,000 GPD.

PERMIT NO: 2120596 -00

SAMPLING POINT REFERENCE NUMBER: 915 ✓ TYPE: Ord. __ Cat ✓ Comb __

Wastewater Components: CATEGORICAL (439 SUB C, PSES; CN-no, NH3 exempt)

Flow Rate: 2,700 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL WASTE.

Special Conditions: # D.1 MOD # E.15 MOD, # ____, # ____, # ____, # ____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain: ____

SAMPLING POINT REFERENCE NUMBER: 918 ✓ TYPE: Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB B, PSES)

Flow Rate: 1,000 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL SHORT LIST (5 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB B, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL WASTE

Special Conditions: # ____, # D.1 MOD, # NON-STD II.D.10, # ____, # ____, # ____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: SP 918 ADDED TO MODIFIED SPECIAL CONDITION D.1. CHANGED FROM SUBPART "C" TO "B".

REV 03/01

PERMIT NO: 2112059G —00

SAMPLING POINT REFERENCE NUMBER: 919✓ TYPE: Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; CN-no, NH3 exempt.)

Flow Rate: 2,000 GPD Basis for Flow Rate: LUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL WASTE

Special Conditions: # E.15 MOD, # D.1 MOD, # NON-STD II.D.8, #_____, #_____, #_____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit? YES ✓ NO __

Explain: SP 919 ADDED TO MODIFIED SPECIAL CONDITION D.1.

SAMPLING POINT REFERENCE NUMBER: 920✓ TYPE: Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES CN-no, NH3 exempt.)

Flow Rate: 1,720 GPD Basis for Flow Rate: LUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: TETRAHYDROFURAN & TOLUENE (SURROGATE MONITORING)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL WASTE

Special Conditions: # E.15 MOD, # D.1 MOD, # E.24, #_____, #_____, #_____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit? YES ✓ NO __

Explain: SURROGATE MONITORING INSTEAD OF 22 POLLUTANTS FROM PHARMACEUTICAL LIST; SP920 ADDED TO MODIFIED SPECIAL CONDITION D.1. INCLUDES FLOW FROM FORMER SP 929.

PERMIT NO: 21205916 -00

SAMPLING POINT REFERENCE NUMBER: 927 ✓ TYPE: Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB B, PSES)

Flow Rate: 2,700 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL SHORT LIST (5 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB B, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL WASTE

Special Conditions: # NON-STD II.C.7, # D.1 MOD, #____, #____, #____, #____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES ✓ NO __

Explain: SP 927 ADDED TO MODIFIED SPECIAL CONDITION D.1.

SAMPLING POINT REFERENCE NUMBER: 928 ✓ TYPE: Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; CN-no, NH3 exempt)

Flow Rate: 2,700 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL WASTE

Special Conditions: # NON-STD II.C.7, # E.15 MOD, # D.1 MOD, #____, #____, #____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: SP 928 ADDED TO MODIFIED SPECIAL CONDITION D.1.

PERMIT NO: 2\120596-00

SAMPLING POINT REFERENCE NUMBER: 930 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB B, PSES)

Flow Rate: 650 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL SHORT LIST (5 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB B, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3mos & 1/4hr BASED ON BMR RESULTS OF ANALYSIS.

Special Conditions: # ~~_____~~, # NON-STD, # D.1 MOD, # ~~_____~~, # ~~_____~~, # ~~_____~~
II.D.8

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: SP 930 ADD TO MODIFIED SPECIAL CONDITION D.1. CHANGED FROM SUBPART "C" TO "B".

SAMPLING POINT REFERENCE NUMBER: 931 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; CN-NO, NH_3 EXEMPT)

Flow Rate: 15,000 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3mos & 1/4hr BASED ON BMR RESULTS OF ANALYSIS.

Special Conditions: # E.15MOD, # D.1 MOD, # NON-STD, # ~~_____~~, # ~~_____~~, # ~~_____~~
II.D.8

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES ✓ NO __

Explain: SP 931 ADDED TO MODIFIED SPECIAL CONDITION D.1.

PERMIT NO: 2120596-00

SAMPLING POINT REFERENCE NUMBER: 932 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; CN-NO, NH3 EXEMPT)

Flow Rate: 100 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos, CATEGORICAL WASTE

Special Conditions: # D.1 MOD # E.15 MOD, # NON-STD II.D.9, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 933 ✓ **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES; CN-NO, NH3 EXEMPT)

Flow Rate: 100 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3 mos & 1/year BASED ON BMR RESULTS OF ANALYSIS.

Special Conditions: # D.1 MOD, # E.15 MOD, # NON-STD II.D.8, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

REV 03/01

PERMIT NO: 2120596-00

SAMPLING POINT REFERENCE NUMBER: 934 ✓ **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: CAT (439 SUB C, PSNS CN-no NH3 exempt) + LAB WASTE (439 SUBPART E NA (NO STDS)), CWF-NO

Flow Rate: 1,000 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: PHARMACEUTICAL LONG LIST (22 POLLUTANTS)

Basis for Pollutants: 40 CFR 439 SUB C, PSNS

Basis for Limitations: " "

Basis for Monitoring Frequencies: 1/3mo & 4 WEEK BASED ON BMR RESULTS OF ANALYSIS

Special Conditions: # NON-STD II.B.2, # NON-STD II.B.4, # E.1 MOD, # D.1 MOD, # ____, # ____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: NEW SP; REPLACES SP 917. SP934 ADDED TO MODIFIED SPECIAL CONDITION D.1.

SAMPLING POINT REFERENCE NUMBER: ____ **TYPE:** Ord. __ Cat __ Comb __

Wastewater Components: ____

Flow Rate: ____ Basis for Flow Rate: ____

General Pollutants: BOD __ COD __ O&GT __ pH __ Temp __ TSS __ Ord TTO __

Other: ____

Priority/Categorical Pollutants: ____

Basis for Pollutants: ____

Basis for Limitations: ____

Basis for Monitoring Frequencies: ____

Special Conditions: # ____, # ____, # ____, # ____, # ____, # ____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO __

Explain: ____

REV 03/01

PERMIT PREPARATION CHECKLIST - PART 1
(Fact Sheet Attachment 2)

Company Name: MALLINCKRODT INC. Permit No.: 21120596-00

Effective Date: 06.01.05 Prepared by: FTG Date: 03.11.05

REVIEW THE PRETREATMENT DATABASE (ECIMS), INDUSTRY FILE AND PERMIT APPLICATION.

ANSWER THE FOLLOWING QUESTIONS AND UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ✓ No ___
   If no, add: ___ delete: ___

2. Is user in surcharge? Yes ✓ No ___
   If yes, date last certified: 09/24/04
   If yes, Special Condition F.2 applies.

3. Does user's premise have more than one MSD account? Yes ___ No ✓
   If yes, were all account numbers correctly listed (including occupant #s)? Yes ___ No ___
   If no, have account numbers been corrected in database before proceeding? Yes ___ No ___

4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ✓ No ___
   If yes, list acct no., RF and date last updated:
   Acct 21120596-00 RF 0.96 Updated 4/21/04
   ~~Acct ___ RF ___ Updated ___~~
   If yes, Special Condition F.1 applies.

5. Does user discharge water from a source not included in the MSD Billing system? Yes ___ No ✓
   If yes, Special Condition F.3 applies.

6. Have you established agreement among permit application, water consumption records and ECIMS on component flows at each SP, total SP flows and total premise flow? Yes ✓ No ___
   If no, explain ___

7. Has user been granted any variances from ordinance limitations? Yes ___ No ✓
   If yes, Parameter(s) ___ at SP(s) ___
   If yes, Special Condition C.4 applies.

8. Does user discharge any radioactive materials? Yes ✓ No ___
   If yes, Special Condition E.18 applies.

9. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ___ No ✓
   If no, explain: UNKNOWN NUMBER OF CONNECTIONS.
   If no, is documentation sufficient to use Special Condition E.5 E.6, E.7 or E.8? Yes ✓ No ___
   If no, is compliance schedule necessary to obtain documentation? Yes ___ No ___
   If yes, Special Condition G.1 is necessary. MODIFIED

10. Does premise require use of "upstream/downstream" sampling? Yes ✓ No ___
    If yes, Upstream SP # 009 & Downstream SP # 003
    If yes, Special Conditions D.11 and E.9 apply.

11. Are there any inactive connections to MSD sewers? Yes ___ No ✓
    If yes, does Special Condition E10. apply? Yes ___ No ___

12. Have you verified, in ECIMS, the SP location descriptions are complete and adequate? Yes ✓ No ___

13. Have you verified, in ECIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ✓ No ___

14. Are any SPs Dry Justified? Yes ___ No ✓
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition E.3 applies.

15. Do any SPs convey stormwater in addition to regulated wastewater? Yes ✓ No ___
If yes, list points 007, 008, 009, 010, 011, 060 and note on P&LD sheets.
If yes, Special Condition D.10 applies.

16. Does user have any discharges subject to NPDES permitting regulations? Yes ___ No ✓
If yes, list points: _____
If yes, Special Condition E.14 applies.

17. Are there some SPs where user discharges only non-process wastewater? Yes ✓ No ___
If yes, does Special Condition E.3 apply? Yes ✓ No ___
If yes, list points 001, 002 and note on P&LD sheets.

18. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ✓ No ___
If yes, list points 080, 915, 918-920, 927-928, 930-934 and note on P&LD sheets.
If yes, Special Condition D.1 applies. MODIFIED.

19. Are there SPs with less than a quarterly self-monitoring frequency for all parameters? Yes ___ No ✓
If yes, Special Condition E.4 applies.

20. Can user be given a waiver from monitoring local limits TTO at any ordinance SPs? Yes ___ No ✓
If yes, list points _____ and explain on P&LD sheets.

21. Does user have a history of compliance problems at this or a previous location ? Yes ___ No ✓
If yes, is a compliance schedule required? Yes ___ No ___
If yes, Special Condition G.1 applies.
Is supporting documentation attached? Yes ___ No ✓

22. Is user required to monitor for Total Phenols at an ordinance SP? Yes ___ No ✓
If yes, does Special Condition D.3 apply? Yes ___ No ___

23. Are special billing conditions, other than the standard Special Conditions, needed? Yes ___ No ✓
If yes, describe: _____

24. Are any Special Conditions, other than the standard special conditions, required? Yes ✓ No ___
If yes, explain: SEE ATTACHED MEMO RELATING TO NON-STD SPECIAL CONDITIONS SPECIFIC TO MALLINCKRODT.
Is supporting documentation attached? Yes ✓ No ___

25. Is user classified as a Categorical Industrial User (CIU)? Yes ✓ No ___
If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit:

#F.1	#E.18	#F.2	#D.11	#E.9	#D.10	#E.3	#D.1 (MODIFIED)	#II.B.1 (NON-STD)	#II.C.2 (NON-STD)	#II.C.3 (NON-STD)
—	—	—	008 009 099	—	003 008 009 010 011 060	001 002	915 918 919 920 927-928 930-934 080	934	008 011	912

#II.B.2 (NON-STD)	#II.C.7 (NON-STD)	#II.C.8 (NON-STD)	#II.C.9 (NON-STD)	#II.C.10 (NON-STD)
934	927 928	919 920 931 933	932	918

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SUPPORTING MEMORANDUM

FROM : FABIAN GRABSKI

TO : PERMIT PREPARATION CHECK LIST

RE : MALLINCKRODT, INC.
3600 NORTH 2nd STREET
ST. LOUIS, MO 63147

PERMIT : 21120596-00

DATE : 05-26-05

The following presents 10 non-standard and 3 modified special conditions for use in Mallinckrodt's draft permit:

SPECIAL MONITORING AND REPORTING REQUIREMENTS APPLICABLE TO DISCHARGES FROM PILOT PANT OPERATIONS IN BUILDINGS 97 AND 98:

Non-Standard

All monitoring and reporting of waste discharges from **Building 97** shall be performed as described below.

a. **Sampling point 934**: During each quarter in which any **439** regulated waste is discharged from pilot plant operations in building 97, sampling and analyses shall be performed at least once for the listed pollutants. If no **439** regulated wastes are discharged during an entire reporting quarter the report for sampling point **934** for that quarter shall state that no discharge occurred.

Non-Standard

The permittee shall submit, with each quarterly self monitoring report required pursuant to section I.A.1 of the permit conditions, summaries of all process activities, in building 97, which generated wastewater for discharge at sampling point **934** during the reporting quarter. The summary should be set up in a tabular form and shall:

a. Identify what activities occurred (**40 CFR 439** Regulated Process, Non-regulated Process, or No operation) and the beginning and ending date for each period of **439** activity. For **439** discharges identify the applicable Subpart from **40 CFR 439**).

b. Identify the days on which wastewater subject to the **439** standards was discharged. If **439** regulated wastewater was generated during the quarter, but not discharged describe the manner of disposal of that waste.

OTHER SPECIAL MONITORING AND REPORTING REQUIREMENTS:

Non-Standard

The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

Non-Standard

Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

Non-Standard

Monitoring at sampling points **927** and **928** shall include the following:

a. Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b. Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

SPECIAL CERTIFICATION & REPORTING REQUIREMENTS:

E.5 Modified

In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

E.15 Modified

The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **080, 915, 919, 920, 928, 931, 932, 933**, and **934**. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **080, 915, 919, 920, 928, 931, 932, 933**, and **934**.

Non-Standard

Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia <u>will not</u> be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

Non-Standard

Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

Non-Standard

For sampling points **919, 930, 931**, and **933**, permittee shall ensure that required monitoring is performed only when process wastewater subject to **40 CFR 439** is being discharged. If no discharge occurs within a reporting period, the submitted self-monitoring report shall state "no discharge occurred". Additionally, permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling points **919, 930, 931**, and **933** are adhered to.

Non-Standard

For sampling point **932**, permittee shall ensure that associated SOPs developed for miscellaneous discharges subject to **40 CFR 439** are adhered to.

Non-Standard

Permittee shall ensure that associated Standard Operating Procedures (SOPs) developed for sampling point **918** are adhered to. Additionally, permittee shall ensure that only process wastewater subject to **40 CFR 439 Subpart B** is discharged via sampling point **918**.

SPECIAL SAMPLING AND ANALYTICAL PROCEDURES:

D.1 Modified

At sampling points **080, 915, 918-920, 927-928,** and **930-934,** the permittee shall perform self-monitoring using grab samples due to the regulated pollutants from **40 CFR 439** all being volatile organic compounds.

PERMIT PREPARATION CHECKLIST - PART 2
(Fact Sheet Attachment 2)

26. Do any SPs have both Ordinance & Categorical limits? Yes ✓ No ___
If yes, which sampling point(s): 080 ~
If yes, Special Condition C.3 is applicable. Is worksheet attached? Yes ___ No ✓
NO, NO OVERLAPPING POLLUTANTS FG

27. Is the Combined Wastestream Formula (CWF) required? Yes ___ No ✓
If yes, which SP(s): ___
If yes, date last calculated: ___
If yes, Special Condition C.2 is applicable. Is CWF worksheet attached?. Yes ___ No ___

28. Are categorical limitations based on production rates? Yes ___ No ✓
If yes, which SP(s): ___
If yes, date last calculated: ___
If yes, does Special Condition C.1__, E1__ or E2__ apply?

29. Are categorical limitations mass limits? Yes ✓ No ___
If yes, which SP(s): 905
If yes, Special Condition E.19 is applicable.

30. Does user discharge only non-categorical wastewater at all SPs? Yes ✓ No ___
If yes, which categorical operations are performed: 905: 40 CFR 414
If yes, does Special Condition B.1 ✓, B.2__ or B.3__ apply? Yes ✓ No ___

31. Are there process discharges, from a categorical operation, for which standards have not been promulgated? Yes ✓ No ___
If yes, for which existing source categorical standard 40 CFR 415 SUB BK PSES
If yes, which SP(s): 010 ~
If yes, is Special Condition E.20 applicable? Yes ___ No ✓

32. Is user a job shop electroplater with >10,000 gpd subject to 40 CFR 413? Yes ___ No ✓
If yes, Special Condition D.2 is applicable.

33. Is user a new source soap and detergent manufacturer subject to 40 CFR 417? Yes ___ No ✓
If yes, is user subject to Subparts O__, P__, Q__ or R__? Yes ___ No ___
If yes, for Subpart O, Special Condition B.4 is applicable.
If yes, for Subpart P, Special Condition B.5 is applicable.
If yes, for Subpart Q, Special Condition B.6 is applicable.
If yes, for Subpart R, Special Condition B.7 is applicable.

34. Is user a leather tanner/finisher subject to 40 CFR 425? Yes ___ No ✓
If yes, is user subject to subpart C (Appendix B)? Yes ___ No ___
If yes, Special Condition D.7 is applicable.
If no, Special Condition D.6 is applicable.

35. Is user a Centralized Waste Treater subject to 40 CFR 437? Yes ___ No ✓
If yes, does user receive any waste that contains cyanide at a concentration greater than 136 mg/l? Yes ___ No ___
If yes, Special Condition 437a is applicable.
If yes, does it performs operations subject to Subpart(s) A__, B__ or C__? Yes ___ No ___
If subject to multiple Subparts, has user requested and been approved for application of Subpart D standards? Yes ___ No ___
If yes, Special Condition 437b is applicable.
If no, Special Condition 437c is applicable.

36. Is user a pharmaceutical manufacturer subject to 40 CFR 439? Yes ✓ No ___
If yes, has user certified to the absence of cyanide? Yes ✓ No ___
If yes, Special Condition E.15 is applicable. → E.15 MOD
If no, must total cyanide limitations be adjusted? Yes ___ No ___
If yes, calculate adjusted limitations. Is worksheet attached? Yes ___ No ✓
If yes, has user certified to the absence of other specific regulated pollutants? Yes ___ No ✓
If yes, Special Conditions E.22 and E.23 are applicable.
If yes, has user requested the use of surrogate pollutants for monitoring? Yes ✓ No ___
If yes, Special Condition E.24 is applicable. → SP920 ONLY

37. Is user a pesticide formulator/packager/repackager subject to 40 CFR 455? Yes ___ No ✓
If yes, has user requested and been approved for the pollution prevention allowable discharge option? Yes ___ No ___
If yes, Special Condition 455a is applicable.

38. Is user a metal molder/caster subject to 40 CFR 464? Yes ___ No ✓
If yes, Special Condition D.4 is applicable.

39. Is user a coil coater subject to 40 CFR 465? Yes ___ No ✓
If yes, is user subject to 40 CFR 465 Subpart(s) A__, B__ or C__? Yes ___ No ___
If yes, Special Condition E.16 is applicable.
If yes, is user subject to 40 CFR 465 Subpart D? Yes ___ No ___
If yes, Special Conditions D.5, D.9 and E.17 are applicable.
If yes, is there a separate categorical SP for the regulated waste?
If yes, include O&G (Hydrocarbon) in the list of parameters at the categorical SP.
If no, and categorical waste discharges at a combined ord/cat SP point, include O&G (Total) and O&G (Hydrocarbon) in the list of parameters at the combined SP.

40. Do any sampling points have both Ordinance & Categorical TTO limits? Yes ___ No ✓
If yes, which SP(s):_____
Is Special Condition E.13 applicable? Yes ___ No ___
If yes, explain:_____.

41. Can user certify, in lieu of monitoring, for categorical TTO at a categorical or combined SP? Yes ___ No ✓
If yes, which SP(s):_____
If yes, Special Condition E.11 __ or E.12 __ is applicable.

42. May user monitor for Oil & Grease, in lieu of TTO, at a categorical SP? Yes ___ No ✓
If yes, which SP(s):_____
If yes, Special Condition D.8 is applicable.
If yes, is a modification of Special Condition E.13 applicable? Yes ___ No ___

List all the Special Conditions from Part 2 that are applicable to this permit:

#E.19 905 #B.1 905 #E.24 920 #E.15 MOD 080 915 #_____ #_____ #_____ #_____ #_____ #_____

919
920
928
931
932
933
934

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Appendix A: OCPSF MASS BASED STANDARDS WORKSHEET

Company:	Mallinckrodt
Acct. #:	21120596-00
SP =	905
Date:	04/14/05
Flow (LPD):	700225

	Flow	Daily Max (ug/l)	Daily Max (Gram/Day)
Acennaphthene	700225	47	32.910575
Anthracene	700225	47	32.910575
Benzene	700225	134	93.83015
Bis (2-Ethylhexyl) Phthalate	700225	258	180.65805
Carbon Tetrachloride	700225	380	266.0855
Chlorobenzene	700225	380	266.0855
Chloroethane	700225	295	206.56638
Chloroform	700225	325	227.57313
Di-N-Butyl Phthalate	700225	43	30.109675
1,2-Dichlorobenzene	700225	794	555.97865
1,3-Dichlorobenzene	700225	380	266.0855
1,4-Dichlorobenzene	700225	380	266.0855
1,1-Dichloroethane	700225	59	41.313275
1,2-Dichloroethane	700225	574	401.92915
1,1-Dichloroethene	700225	60	42.0135
Trans 1,2-Dichloroethene	700225	66	46.21485
1,2-Dichloropropane	700225	794	555.97865
1,3-Dichloropropane	700225	794	555.97865
Diethyl Phthalate	700225	113	79.125425
Dimethyl Phthalate	700225	47	32.910575
4,6-Dinitro-o-Cresol	700225	277	193.96233
Ethylbenzene	700225	380	266.0855
Fluoranthene	700225	54	37.81215

	Flow	Daily Max (ug/l)	Daily Max (Gram/Day)
Fluorene	700225	47	32.91058
Hexachlorobenzene	700225	794	555.9787
Hexachlorobutadiene	700225	380	266.0855
Hexachloroethane	700225	794	555.9787
Methyl Chloride	700225	295	206.5664
Methylene Chlroride	700225	170	119.0383
Naphthalene	700225	47	32.91058
Nitrobenzene	700225	6402	4482.84
2-Nitrophenol	700225	231	161.752
4-Nitrophenol	700225	576	403.3296
Phenanthrene	700225	47	32.91058
Pyrene	700225	48	33.6108
Tetrachloroethene	700225	164	114.8369
Toluene	700225	74	51.81665
[redacted]			
[redacted]			
[redacted]			
1,2,4-Trichlorobenzene	700225	794	555.9787
1,1,1-Trichloroethane	700225	59	41.31328
1,1,2-Trichloroethane	700225	127	88.92858
Trichloroethene	700225	69	48.31553
Vinyl Chloride	700225	172	120.4387

	Flow	MA (ug/l)	MA (Gram/Day)
Acennaphthene	700225	19	13.304275
Anthracene	700225	19	13.304275
Benzene	700225	57	39.912825
Bis (2-Ethylhexyl) Phthalate	700225	95	66.521375
Carbon Tetrachloride	700225	142	99.43195
Chlorobenzene	700225	142	99.43195
Chloroethane	700225	110	77.02475
Chloroform	700225	111	77.724975
Di-N-Butyl Phthalate	700225	20	14.0045
1,2-Dichlorobenzene	700225	196	137.2441
1,3-Dichlorobenzene	700225	142	99.43195
1,4-Dichlorobenzene	700225	142	99.43195
1,1-Dichloroethane	700225	22	15.40495
1,2-Dichloroethane	700225	180	126.0405
1,1-Dichloroethene	700225	22	15.40495
Trans 1,2-Dichloroethene	700225	25	17.505625
1,2-Dichloropropane	700225	196	137.2441
1,3-Dichloropropane	700225	196	137.2441
Diethyl Phthalate	700225	46	32.21035
Dimethyl Phthalate	700225	19	13.304275
4,6-Dinitro-o-Cresol	700225	78	54.61755
Ethylbenzene	700225	142	99.43195
Fluoranthene	700225	22	15.40495

	Flow	MA (ug/l)	MA (Gram/Day)
Fluorene	700225	19	13.30428
Hexachlorobenzene	700225	196	137.2441
Hexachlorobutadiene	700225	142	99.43195
Hexachloroethane	700225	196	137.2441
Methyl Chloride	700225	110	77.02475
Methylene Chlroride	700225	36	25.2081
Naphthalene	700225	19	13.30428
Nitrobenzene	700225	2237	1566.403
2-Nitrophenol	700225	65	45.51463
4-Nitrophenol	700225	162	113.4365
Phenanthrene	700225	19	13.30428
Pyrene	700225	20	14.0045
Tetrachloroethene	700225	52	36.4117
Toluene	700225	28	19.6063
[redacted]			
[redacted]			
[redacted]			
1,2,4-Trichlorobenzene	700225	196	137.2441
1,1,1-Trichloroethane	700225	22	15.40495
1,1,2-Trichloroethane	700225	32	22.4072
Trichloroethene	700225	26	18.20585
Vinyl Chloride	700225	97	67.92183

DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
MEMORANDUM

MEMO TO: Mallinckrodt: Industry File

ACCT #: 21120596-00

FROM: Jason Gill JAG

DATE: 4/12/05

SUBJECT: **Changing Location of Sample Point 917**

Per the request letter from Karen Siebenberger dated 2/17/05, I went to Mallinckrodt to verify a change in Sample Point 917. According to Karen, SP917 was outside Building 97, slightly downstream from a sump system that is exposed to storm water elements. Karen was concerned that storm water could be combined with the process water when sampled at this location.

To fix the problem, Mallinckrodt relocated the sample point so that process wastewater is sampled before reaching the sump system outside. [redacted] SP934 is on a pipe for the process wastestream just inside Building 97.

Metropolitan
St. Louis Sewer
District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

October 23, 2003

Karen Siebenberger
HS&E Engineer
MALLINCKRODT INC.
3600 N. 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 N. 2nd Street

Dear Ms. Siebenberger:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on May 1, 2003, for the premise identified above, is hereby modified as per the attached pages 1,6, 9, 9A, 17, 18, 20, 22, 24, 26, 28, 30, 31, 34, 41, 42, 43, and 44. This modification removes the requirement to monitor and report Methyl Cellosolve at sampling points 915, 916, 917, 918, 919, 920, and 928. Additionally, sampling point 011 has been added and sampling points 007, 914, and 926 removed. Finally, the permit special conditions have been amended to reflect the above changes. This letter and the revised pages 1,6, 9, 9A, 17, 18, 20, 22, 24, 26, 28, 30, 31, 34, 41, 42, 43, and 44 should be affixed to your permit as your official record and become a part thereof. This change was identified pursuant to the partial implementation of the direct rule for 40 CFR 439 and other recent communication between the District and Mallinckrodt Inc.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Doug Mendoza, P.E.
Industrial Waste Engineer

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: May 01, 2003
MODIFICATION DATE: November 01, 2003
EXPIRATION DATE: February 28, 2005

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2ND STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 21
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 008, 009, 010, 011, 080, 082, 099, 905, 912, 915, 916, 917, 918, 919, 920, 927, 928

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: MH in RR spur in Hall St, 8' S of Salisbury (under McKinley Bridge) - total flow

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Stormwater

THIS

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

PAGE

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

VOID

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,860,482

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Categorical (from sampling points 905, & 915-920, & 927-928)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: MH with square lid 18' S from NW corner of bldg 223 under iron ladder

AVERAGE WASTEWATER FLOW (GPD): 14,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 914

SAMPLING POINT LOCATION: Valve on bottom N side of T-652 at outside wall of bldg 6, S of NE building corner

AVERAGE WASTEWATER FLOW (GPD): 450

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **914**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

VOID

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **916**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **917**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **918**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **919**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **920**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 926

SAMPLING POINT LOCATION: MH 13' S, 3' E of Tank #288 near building 505

AVERAGE WASTEWATER FLOW (GPD): 160,000

WASTEWATER SOURCE AND CATEGORY: Production Operations in building 505

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: mg/L]****	<5	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: mg/L]****	<5	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Section **II.C.7** of the permit conditions.

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **928**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	
Methyl Formate [mg/L]****	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]****	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]****	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]****	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]****	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]****	3.4	Monthly Avg	
Toluene [mg/L]****	.3	Daily Max	Once/3 mo
Toluene [mg/L]****	.2	Monthly Avg	
Triethylamine [mg/L]****	255	Daily Max	Once/3 mo
Triethylamine [mg/L]****	100	Monthly Avg	
Xylene [mg/L]****	3	Daily Max	Once/3 mo
Xylene [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.8** of the permit conditions.

3. All monitoring and reporting of waste discharges from building 98 shall be performed as described below.

a. **Sampling point 080:** Sampling and analyses for the listed pollutants shall be performed at least once during each reporting quarter. This sampling shall be performed during a period when **439** regulated wastes are being discharged, **except** if no **439** wastes are discharged at any time during an entire reporting quarter then sampling may be performed at any time that will be representative of the activities occurring within the building during that quarter.

4. The permittee shall submit, with each quarterly self monitoring report required pursuant to section I.A.1 of the permit conditions, summaries of all process activities, in buildings 98 and 97, which generated wastewater for discharge at sampling points **080, 082,** and **917** during the reporting quarter. The summary should be in two parts, one part for building 98 and one part for building 97. Each part should be set up in a tabular form and shall:

a. Identify what activities occurred (**40 CFR 439** Regulated Process, Non-regulated Process, or No operation) and the beginning and ending date for each period of **439** activity. For **439** discharges identify the applicable Subpart from **40 CFR 439**).

b. Identify the days on which wastewater subject to the **439** standards was discharged. If **439** regulated wastewater was generated during the quarter, but not discharged describe the manner of disposal of that waste.

C. OTHER SPECIAL MONITORING AND REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee shall monitor sampling points **008** and **011** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

3. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

4. Sample points **001, 003, 008, 009, 010, 011**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

5. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where: DF= downstream flow rate

DC = downstream concentration
UF = upstream flow rate
UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

6. The permittee is authorized to perform self-monitoring at sampling points **915** and **916** using grab samples in lieu of the composite samples specified in General Condition I.A.3. Each quarterly monitoring report shall include a statement that the grab sample results accurately represent the permittee's average daily discharge.

7. Permittee shall continue in-process monitoring to very absence of **DMAC** in building **505.** Each quarterly report shall include a statement certifying that no discharge of **DMAC** from building **505** has occurred.

8. Monitoring at sampling points **927** and **928** shall include the following:

a. Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b. Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

1. The permittee is not required to sample discharges at sampling points **001, 002,** or **082** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points

001, **002**, or **082** since the last report.

2. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **005**, **010**, **080**, **915**, **916**, **917**, **918**, **919**, **920**, and **928.** Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **005**, **010**, **080**, **915**, **916**, **917**, **918**, **919**, **920**, and **928**.

4. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with <u>state and federal</u> regulations for disposal of radioactive material by release into sanitary sewage.

5. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

6. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **<u>will not</u>** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

7. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

E. SPECIAL BILLING REQUIREMENTS

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **692 mg/l** for **BOD**, **1,524 mg/l** for **COD**, and **360 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

May 6, 2003

Karen Siebenberger
HSE Engineer
MALLINCKRODT INC.
3600 N. 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 N. 2nd Street

Dear Ms. Siebenberger:

Enclosed is the revised Metropolitan St. Louis District Industrial Wastewater Discharge Permit for the premise identified above. This permit is issued pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001. This permit has been prepared based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD Ordinances and state and federal regulations. The permit was revised due to significant changes incurred through the elimination and addition of existing/new sampling points. This revision deletes sampling point 913 and adds sampling points 926, 927, and 928. Two new special conditions have been added relating to new sampling points 926, 927, and 928. The previous special condition relating to 40 CFR 415 Subpart BK has been removed. Additionally, other special conditions have been modified as required.

The previous permit, effective June 1, 2000, is voided as of the effective date of the enclosed permit.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: May 01, 2003
EXPIRATION DATE: February 28, 2005

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2ND STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

SEE PG 1 DTD 11/1/03 FC

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 23
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 007, 008, 009, 010, 080, 082, 099, 905, 912, 914, 915, 916, 917, 918, 919, 920, 926, 927, 928

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,100

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 1,800

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 49,601

WASTEWATER SOURCE AND CATEGORY: Flow from upstream sample point + Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,100

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + NCCW + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: MH in RR spur in Hall St, 8' S of Salisbury (under McKinley Bridge) - total flow

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Stormwater

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

SEE PG 6 DTD 11/1/03
PG

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Flow from offsite

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,860,482

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Categorical (from sampling points 905 & 914-928)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

SEE PG. 9 DTD 1/1/03 FG

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98 (Same location as 082)

AVERAGE WASTEWATER FLOW (GPD): 10,700

WASTEWATER SOURCE AND CATEGORY: Process Waste*****

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See **Section II** of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B** of the permit conditions for special conditions regarding monitoring and reporting at this point.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 082

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98 (Same location as 080)

AVERAGE WASTEWATER FLOW (GPD): 10,700 (Potential)

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSNS) from building 98 Pilot Plant

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***

****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See Sections **II.A.2** and **II.D.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 and downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 49,600

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Temperature [Deg C]	60	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 125,889

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Subparts G & H, PSES), (Appendix A-No)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acenaphthene [g/Day]	22.4	Daily Max	Once/3 mo
Acenaphthene [g/Day]	9.05	Monthly Avg	
Anthracene [g/Day]	22.4	Daily Max	Once/3 mo
Anthracene [g/Day]	9.05	Monthly Avg	
Benzene [g/Day]	63.85	Daily Max	Once/3 mo
Benzene [g/Day]	27.16	Monthly Avg	
Bis (2-EthylHexyl) Phthalate [g/Day]	122.93	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	45.27	Monthly Avg	
Carbon Tetrachloride [g/Day]	181.07	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	67.66	Monthly Avg	
Chlorobenzene [g/Day]	181.07	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	67.66	Monthly Avg	
Chloroethane [g/Day]	140.56	Daily Max	Once/3 mo
Chloroethane [g/Day]	52.41	Monthly Avg	
Chloroform [g/Day]	154.86	Daily Max	Once/3 mo
Chloroform [g/Day]	52.89	Monthly Avg	
Chloromethane [g/Day]	140.56	Daily Max	Once/3 mo
Chloromethane [g/Day]	52.41	Monthly Avg	
Di-n-butyl Phthalate [g/Day]	20.49	Daily Max	Once/3 mo
Di-n-butyl Phthalate [g/Day]	9.53	Monthly Avg	
1,2-Dichlorobenzene [g/Day]	378.33	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	93.39	Monthly Avg	
1,3-Dichlorobenzene [g/Day]	181.07	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	67.66	Monthly Avg	
1,4-Dichlorobenzene [g/Day]	181.07	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	67.66	Monthly Avg	
1,1-Dichloroethane [g/Day]	28.11	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	10.48	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichloroethane [g/Day]	273.51	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	85.77	Monthly Avg	
1,1-Dichloroethene [g/Day]	28.59	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	10.48	Monthly Avg	
Trans-1,2-Dichloroethene [g/Day]	31.45	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	11.91	Monthly Avg	
1,2-Dichloropropane [g/Day]	378.33	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	93.39	Monthly Avg	
(cis & trans) 1,3-Dichloropropene [g/Day]	378.33	Daily Max	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	93.39	Monthly Avg	
Diethyl Phthalate [g/Day]	53.84	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	21.92	Monthly Avg	
Dimethyl Phthalate [g/Day]	22.4	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	9.05	Monthly Avg	
4,6-Dinitro-2-Methylphenol [g/Day]	131.99	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	37.17	Monthly Avg	
Ethylbenzene [g/Day]	181.07	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	67.66	Monthly Avg	
Fluoranthene [g/Day]	25.73	Daily Max	Once/3 mo
Fluoranthene [g/Day]	10.48	Monthly Avg	
Fluorene [g/Day]	22.4	Daily Max	Once/3 mo
Fluorene [g/Day]	9.05	Monthly Avg	
Hexachlorobenzene [g/Day]	378.33	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	93.39	Monthly Avg	
Hexachlorobutadiene [g/Day]	181.066	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	67.66	Monthly Avg	
Hexachloroethane [g/Day]	378.33	Daily Max	Once/3 mo
Hexachloroethane [g/Day]	93.39	Monthly Avg	
Methylene Chloride [g/Day]	81	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	17.15	Monthly Avg	
Naphthalene [g/Day]	22.4	Daily Max	Once/3 mo
Naphthalene [g/Day]	9.05	Monthly Avg	
Nitrobenzene [g/Day]	3050.49	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1065.91	Monthly Avg	
2-Nitrophenol [g/Day]	110.07	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	30.97	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
4-Nitrophenol [g/Day]	274.46	Daily Max	Once/3 mo
4-Nitrophenol [g/Day]	77.19	Monthly Avg	
Pyrene [g/Day]	22.87	Daily Max	Once/3 mo
Pyrene [g/Day]	9.53	Monthly Avg	
Tetrachloroethene [g/Day]	78.14	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	24.78	Monthly Avg	
Toluene [g/Day]	35.26	Daily Max	Once/3 mo
Toluene [g/Day]	13.34	Monthly Avg	
1,2,4-Trichlorobenzene [g/Day]	378.33	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	93.39	Monthly Avg	
1,1,1-Trichloroethane [g/Day]	28.11	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	10.48	Monthly Avg	
1,1,2-Trichloroethane [g/Day]	60.51	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	15.25	Monthly Avg	
Trichloroethene [g/Day]	32.88	Daily Max	Once/3 mo
Trichloroethene [g/Day]	12.39	Monthly Avg	
Vinyl Chloride [g/Day]	81.96	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	46.22	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 40,000

WASTEWATER SOURCE AND CATEGORY: Production Operations in Building 504

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	7091	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	5459	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Sections **II.C.3** and **II.C.7** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 914

SAMPLING POINT LOCATION: Valve on bottom N side of T-652 at outside wall of bldg 6, S of NE building corner

AVERAGE WASTEWATER FLOW (GPD): 450

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

SEE PG 17 DTD 11/1/03

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **914**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

SEE PG 18 DTD 11/1/03

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	SEE PG 20 DTD 11/1/03 20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 916

SAMPLING POINT LOCATION: Sump receiving centrifuge 639 effluent on top floor of bldg 7 along W wall - only when sump is discharging to sewer

AVERAGE WASTEWATER FLOW (GPD): 800

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **916**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L] SEE PG 22 AND 11/13/03	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 917

SAMPLING POINT LOCATION: Valve on line from E side of sump pit, N of bldg 97 NE corner

AVERAGE WASTEWATER FLOW (GPD): 5,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSNS)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **917**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

SEE PG 24 DTD 11/1/03

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 8,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **918**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L] SEE PG 26 DTD 11/1/03	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 919

SAMPLING POINT LOCATION: Valve on N side of T-332 at inside E wall of bldg 250, just S of large door

AVERAGE WASTEWATER FLOW (GPD): 6,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **919**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L] SEE PG 28 DTD 11/1/03	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 36,000

WASTEWATER SOURCE AND CATEGORY: Categorical (Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **920**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L] <SEE PG 30 DTD 11/1/03	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 926

SAMPLING POINT LOCATION: MH 13' S, 3' E of Tank #288 near building 505

AVERAGE WASTEWATER FLOW (GPD): 160,000

WASTEWATER SOURCE AND CATEGORY: Production Operations in building 505

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: mg/L]****	<5	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: mg/L]****	<5	Monthly Avg	

SEE PG 31 DTD 11/1/03

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Section **II.C.7** of the permit conditions.

3. All monitoring and reporting of waste discharges from building 98 shall be performed as described below.

a. **Sampling point 080:** Sampling and analyses for the listed pollutants shall be performed at least once during each reporting quarter. This sampling shall be performed during a period when **439** regulated wastes are being discharged, **except** if no **439** wastes are discharged at any time during an entire reporting quarter then sampling may be performed at any time that will be representative of the activities occurring within the building during that quarter.

4. The permittee shall submit, with each quarterly self monitoring report required pursuant to section I.A.1 of the permit conditions, summaries of all process activities, in buildings 98 and 97, which generated wastewater for discharge at sampling points **080, 082,** and **917** during the reporting quarter. The summary should be in two parts, one part for building 98 and one part for building 97. Each part should be set up in a tabular form and shall:

a. Identify what activities occurred (**40 CFR 439** Regulated Process, Non-regulated Process, or No operation) and the beginning and ending date for each period of **439** activity. For **439** discharges identify the applicable Subpart from **40 CFR 439**).

b. Identify the days on which wastewater subject to the **439** standards was discharged. If **439** regulated wastewater was generated during the quarter, but not discharged describe the manner of disposal of that waste.

C. OTHER SPECIAL MONITORING AND REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee shall monitor sampling point **008** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

3. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

SEE PG 41 DTD 11/1/03

4. Sample points **001, 003, 007, 008, 009, 010**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

5. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where:

DF = downstream flow rate

DC = downstream concentration
UF = upstream flow rate
UC = upstream concentration

SEE PG 42 DTD 1/13

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

6. The permittee is authorized to perform self-monitoring at sampling points **914**, **915**, and **916** using grab samples in lieu of the composite samples specified in General Condition I.A.3. Each quarterly monitoring report shall include a statement that the grab sample results accurately represent the permittee's average daily discharge.

7. For sampling points **912** and **926**:

a. Permittee shall sample both sampling points <u>at the same time</u>;

b. If a violation occurs at sampling point **926,** the limit at sampling point **912** applies to the total DMAC discharge for both sampling points **912** and **926**. Additionally, the estimated sampling point **926** DMAC discharge will be added to sampling point **912**'s DMAC discharge to calculate the potential violation of sampling point **912**'s limit.

8. Monitoring at sampling points **927** and **928** shall include the following:

a. Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b. Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

1. The permittee is not required to sample discharges at sampling points **001, 002, 007**, or **082** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001, 002, 007**, or **082** since the last report.

2. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

SEE PG 43 DTD 11/03

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **005, 010, 080, 914, 915, 916, 917, 918, 919, 920,** and **928.** Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **005, 010, 080, 914, 915, 916, 917, 918, 919, 920**, and **928**.

4. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

5. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

6. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

7. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

E. SPECIAL BILLING REQUIREMENTS

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **692 mg/l** for **BOD**, **1,524 mg/l** for **COD**, and **360 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

SEE PG 44 DTD 1/1/03

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.8** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 928

SAMPLING POINT LOCATION: Tank 309 (lime press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Benzene [mg/L]****	3	Daily Max	Once/3 mo
Benzene [mg/L]****	.7	Monthly Avg	
n-Butyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]****	8.2	Monthly Avg	
Chlorobenzene [mg/L]****	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]****	.7	Monthly Avg	
Chloroform [mg/L]****	.1	Daily Max	Once/3 mo
Chloroform [mg/L]****	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]****	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]****	8.2	Monthly Avg	
Diethylamine [mg/L]****	255	Daily Max	Once/3 mo
Diethylamine [mg/L]****	100	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
n-Heptane [mg/L]****	3	Daily Max	Once/3 mo
n-Heptane [mg/L]****	.7	Monthly Avg	
n-Hexane [mg/L]****	3	Daily Max	Once/3 mo
n-Hexane [mg/L]****	.7	Monthly Avg	
Isobutyraldehyde [mg/L]****	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **928**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]****	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]****	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]****	59.7	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	
Methyl Formate [mg/L]****	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]****	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]****	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]****	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]****	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]**** SEE PG 34 DTD 11/1/03	3.4	Monthly Avg	
Toluene [mg/L]****	.3	Daily Max	Once/3 mo
Toluene [mg/L]****	.2	Monthly Avg	
Triethylamine [mg/L]****	255	Daily Max	Once/3 mo
Triethylamine [mg/L]****	100	Monthly Avg	
Xylene [mg/L]****	3	Daily Max	Once/3 mo
Xylene [mg/L]****	.7	Monthly Avg	

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.8** of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.
b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
c. Daily flows, with dates, for all measurements or estimates made within the quarter.
d. Any certification statements required pursuant to the Special Conditions in Section II.
e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by July 28, 2003.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 350 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES:

1. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

2. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 439** at sampling point **082.** The permittee shall certify on each quarterly self-monitoring report that such wastes are not discharged.

B. SPECIAL MONITORING AND REPORTING REQUIREMENTS APPLICABLE TO DISCHARGES FROM PILOT PANT OPERATIONS IN BUILDINGS 97 AND 98:

1. The process waste discharge sampling point for the pilot plant operations in **Building 98** has been assigned two separate numerical designations to account for the different regulatory standards which apply at different times. These designations are **080** and **082.**

2. All monitoring and reporting of waste discharges from **Building 97** shall be performed as described below.

a. **Sampling point 917:** During each quarter in which any **439** regulated waste is discharged from pilot plant operations in building 97, sampling and analyses shall be performed at least once for the listed pollutants. If no **439** regulated wastes are discharged during an entire reporting quarter the report for sampling point **917** for that quarter shall state that no discharge occurred.

3. All monitoring and reporting of waste discharges from building 98 shall be performed as described below.

a. **Sampling point 080:** Sampling and analyses for the listed pollutants shall be performed at least once during each reporting quarter. This sampling shall be performed during a period when **439** regulated wastes are being discharged, **except** if no **439** wastes are discharged at any time during an entire reporting quarter then sampling may be performed at any time that will be representative of the activities occurring within the building during that quarter.

4. The permittee shall submit, with each quarterly self monitoring report required pursuant to section I.A.1 of the permit conditions, summaries of all process activities, in buildings 98 and 97, which generated wastewater for discharge at sampling points **080, 082,** and **917** during the reporting quarter. The summary should be in two parts, one part for building 98 and one part for building 97. Each part should be set up in a tabular form and shall:

a. Identify what activities occurred (**40 CFR 439** Regulated Process, Non-regulated Process, or No operation) and the beginning and ending date for each period of **439** activity. For **439** discharges identify the applicable Subpart from **40 CFR 439)**.

b. Identify the days on which wastewater subject to the **439** standards was discharged. If **439** regulated wastewater was generated during the quarter, but not discharged describe the manner of disposal of that waste.

C. OTHER SPECIAL MONITORING AND REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee shall monitor sampling point **008** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

3. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

4. Sample points **001, 003, 007, 008, 009, 010**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

5. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where:

DF = downstream flow rate

DC = downstream concentration
UF = upstream flow rate
UC = upstream concentration

Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

6. The permittee is authorized to perform self-monitoring at sampling points **914, 915,** and **916** using grab samples in lieu of the composite samples specified in General Condition I.A.3. Each quarterly monitoring report shall include a statement that the grab sample results accurately represent the permittee's average daily discharge.

7. For sampling points **912** and **926**:

a. Permittee shall sample both sampling points <u>at the same time</u>;

b. If a violation occurs at sampling point **926,** the limit at sampling point **912** applies to the total DMAC discharge for both sampling points **912** and **926**. Additionally, the estimated sampling point **926** DMAC discharge will be added to sampling point **912**'s DMAC discharge to calculate the potential violation of sampling point **912**'s limit.

8. Monitoring at sampling points **927** and **928** shall include the following:

a. Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b. Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

1. The permittee is not required to sample discharges at sampling points **001, 002, 007**, or **082** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001, 002, 007**, or **082** since the last report.

2. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **005, 010, 080, 914, 915, 916, 917, 918, 919, 920,** and **928.** Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **005, 010, 080, 914, 915, 916, 917, 918, 919, 920**, and **928**.

4. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

5. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not

adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

6. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

7. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

E. SPECIAL BILLING REQUIREMENTS

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **692 mg/l** for **BOD**, **1,524 mg/l** for **COD**, and **360 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

April 16, 2003

Karen Siebenberger
HSE Engineer
MALLINCKRODT CHEMICAL INC.
3600 N. 2nd Street
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 N. 2nd Street
St. Louis, MO 63147

Dear Ms. Siebenberger:

Enclosed is a draft copy of the revised Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit proposed for the premise identified above. The permit is being revised due to significant changes incurred through the elimination and addition of existing/new sampling points. This revision deletes sampling point 913 and adds sampling points 926, 927, and 928. Additionally, two new special conditions have been added relating to new sampling points 926, 927, and 928.

This draft has been prepared pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001 and is based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed as acceptance of the draft permit and we will proceed to issue the final permit. If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Permit file
Doug Mendoza

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
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April 16, 2003

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HSE Engineer
MALLINCKRODT CHEMICAL INC.
3600 N. 2nd Street
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This draft has been prepared pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001 and is based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed as acceptance of the draft permit and we will proceed to issue the final permit. If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Permit file
Doug Mendoza

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 21120596-00

EFFECTIVE DATE: May 01, 2003
EXPIRATION DATE: February 28, 2005

ISSUED TO: MALLINCKRODT INC.
3600 NORTH 2ND STREET
ST. LOUIS, MO 63147

SIC NUMBER(S): 2816, 2819, 2833, 2834, 2835, 2869

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 23
SAMPLING PT. REF NUMBER(S): 001, 002, 003, 005, 007, 008, 009, 010, 080, 082, 099, 905, 912, 914, 915, 916, 917, 918, 919, 920, 926, 927, 928

DRAFT

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

REVISION

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: MH (Gatewell) at foot of Destrahan 100' E of RR

AVERAGE WASTEWATER FLOW (GPD): 1,100

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD] ****	***	Daily Avg	***

DRAFT

REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 002

SAMPLING POINT LOCATION: MH 5' S of bldg #96, 30' E of SP 003, (6" pipe from NE, 3' down)

AVERAGE WASTEWATER FLOW (GPD): 1,800

WASTEWATER SOURCE AND CATEGORY: Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD] ****	***	Daily Avg	***

DRAFT

REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: MH in alley at Salisbury, 12' W, 3' S of NW corner of building 91

AVERAGE WASTEWATER FLOW (GPD): 49,601

WASTEWATER SOURCE AND CATEGORY: Flow from upstream sample point + Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

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REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 5' S of building #96, 30' E of SP 003 (Center pipe, 8" dia., 3' down)

AVERAGE WASTEWATER FLOW (GPD): 32,100

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + NCCW + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

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REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: MH in RR spur in Hall St, 8' S of Salisbury (under McKinley Bridge) - total flow

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Stormwater

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD] ****	***	Daily Avg	***

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REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See permit section **II.D.1**.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: Oveflow chamber on N side of pump station on W side of building T

AVERAGE WASTEWATER FLOW (GPD): 1,440,000

WASTEWATER SOURCE AND CATEGORY: Process Waste (Emergency Bypass)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

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REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.2** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in Mallinckrodt St 27' E of Broadway, 4' from S curb

AVERAGE WASTEWATER FLOW (GPD): Unknown

WASTEWATER SOURCE AND CATEGORY: Flow from offsite

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
pH [SU]	***	Instant	Once/3 mo
Temperature [Deg C]	***	Instant	Once/3 mo
Total Suspended Solids [mg/L]	***	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	***	Instant	Once/year

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REVISION

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** See Section I.A.2 of the permit conditions.

*** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: MH w/square lid 50' N of neutralization control building at Hall & Salisbury

AVERAGE WASTEWATER FLOW (GPD): 1,860,482

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Laboratory Waste + Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater + Categorical (from sampling points 905 & 914-928)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

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REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 080

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98 (Same location as 082)

AVERAGE WASTEWATER FLOW (GPD): 10,700

WASTEWATER SOURCE AND CATEGORY: Process Waste*****

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

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REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See **Section II** of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.B** of the permit conditions for special conditions regarding monitoring and reporting at this point.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 082

SAMPLING POINT LOCATION: Inlet to sump (double MH) N of building #98 (Same location as 080)

AVERAGE WASTEWATER FLOW (GPD): 10,700 (Potential)

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSNS) from building 98 Pilot Plant

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD] ****	***	Daily Avg	***

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REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** No monitoring required. See Sections **II.A.2** and **II.D.1** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 099

SAMPLING POINT LOCATION: No sample point available (Represents WW contributions between upstream SP 009 and downstream SP 003)

AVERAGE WASTEWATER FLOW (GPD): 49,600

WASTEWATER SOURCE AND CATEGORY: Laboratory Waste + Non Categorical Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	*****
Chemical Oxygen Demand [mg/L]	****	Daily Avg	*****
Oil and Grease (Total) [mg/L]	200	Instant	*****
pH [SU]	11.5	Instant	*****
pH [SU]	5.5	Instant	*****
Temperature [Deg C]	60	Instant	*****
Total Suspended Solids [mg/L]	****	Daily Avg	*****
Total Toxic Organics [mg/L]	5.52	Instant	*****

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REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** See Section **II.C.5** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 905

SAMPLING POINT LOCATION: MH inside building X, 12' W, 5' S of W door (Total flow out)

AVERAGE WASTEWATER FLOW (GPD): 125,889

WASTEWATER SOURCE AND CATEGORY: Categorical (414 Subparts G & H, PSES), (Appendix A-No)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acenaphthene [g/Day]	22.4	Daily Max	Once/3 mo
Acenaphthene [g/Day]	9.05	Monthly Avg	
Anthracene [g/Day]	22.4	Daily Max	Once/3 mo
Anthracene [g/Day]	9.05	Monthly Avg	
Benzene [g/Day]	63.85	Daily Max	Once/3 mo
Benzene [g/Day]	27.16	Monthly Avg	
Bis (2-EthylHexyl) Phthalate [g/Day]	122.93	Daily Max	Once/3 mo
Bis (2-EthylHexyl) Phthalate [g/Day]	45.27	Monthly Avg	
Carbon Tetrachloride [g/Day]	181.07	Daily Max	Once/3 mo
Carbon Tetrachloride [g/Day]	67.66	Monthly Avg	
Chlorobenzene [g/Day]	181.07	Daily Max	Once/3 mo
Chlorobenzene [g/Day]	67.66	Monthly Avg	
Chloroethane [g/Day]	140.56	Daily Max	Once/3 mo
Chloroethane [g/Day]	52.41	Monthly Avg	
Chloroform [g/Day]	154.86	Daily Max	Once/3 mo
Chloroform [g/Day]	52.89	Monthly Avg	
Chloromethane [g/Day]	140.56	Daily Max	Once/3 mo
Chloromethane [g/Day]	52.41	Monthly Avg	
Di-n-butyl Phthalate [g/Day]	20.49	Daily Max	Once/3 mo
Di-n-butyl Phthalate [g/Day]	9.53	Monthly Avg	
1,2-Dichlorobenzene [g/Day]	378.33	Daily Max	Once/3 mo
1,2-Dichlorobenzene [g/Day]	93.39	Monthly Avg	
1,3-Dichlorobenzene [g/Day]	181.07	Daily Max	Once/3 mo
1,3-Dichlorobenzene [g/Day]	67.66	Monthly Avg	
1,4-Dichlorobenzene [g/Day]	181.07	Daily Max	Once/3 mo
1,4-Dichlorobenzene [g/Day]	67.66	Monthly Avg	
1,1-Dichloroethane [g/Day]	28.11	Daily Max	Once/3 mo
1,1-Dichloroethane [g/Day]	10.48	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
1,2-Dichloroethane [g/Day]	273.51	Daily Max	Once/3 mo
1,2-Dichloroethane [g/Day]	85.77	Monthly Avg	
1,1-Dichloroethene [g/Day]	28.59	Daily Max	Once/3 mo
1,1-Dichloroethene [g/Day]	10.48	Monthly Avg	
Trans-1,2-Dichloroethene [g/Day]	31.45	Daily Max	Once/3 mo
Trans-1,2-Dichloroethene [g/Day]	11.91	Monthly Avg	
1,2-Dichloropropane [g/Day]	378.33	Daily Max	Once/3 mo
1,2-Dichloropropane [g/Day]	93.39	Monthly Avg	
(cis & trans) 1,3-Dichloropropene [g/Day]	378.33	Daily Max	Once/3 mo
(cis & trans) 1,3-Dichloropropene [g/Day]	93.39	Monthly Avg	
Diethyl Phthalate [g/Day]	53.84	Daily Max	Once/3 mo
Diethyl Phthalate [g/Day]	21.92	Monthly Avg	
Dimethyl Phthalate [g/Day]	22.4	Daily Max	Once/3 mo
Dimethyl Phthalate [g/Day]	9.05	Monthly Avg	
4,6-Dinitro-2-Methylphenol [g/Day]	131.99	Daily Max	Once/3 mo
4,6-Dinitro-2-Methylphenol [g/Day]	37.17	Monthly Avg	
Ethylbenzene [g/Day]	181.07	Daily Max	Once/3 mo
Ethylbenzene [g/Day]	67.66	Monthly Avg	
Fluoranthene [g/Day]	25.73	Daily Max	Once/3 mo
Fluoranthene [g/Day]	10.48	Monthly Avg	
Fluorene [g/Day]	22.4	Daily Max	Once/3 mo
Fluorene [g/Day]	9.05	Monthly Avg	
Hexachlorobenzene [g/Day]	378.33	Daily Max	Once/3 mo
Hexachlorobenzene [g/Day]	93.39	Monthly Avg	
Hexachlorobutadiene [g/Day]	181.066	Daily Max	Once/3 mo
Hexachlorobutadiene [g/Day]	67.66	Monthly Avg	
Hexachloroethane [g/Day]	378.33	Daily Max	Once/3 mo
Hexachloroethane [g/Day]	93.39	Monthly Avg	
Methylene Chloride [g/Day]	81	Daily Max	Once/3 mo
Methylene Chloride [g/Day]	17.15	Monthly Avg	
Naphthalene [g/Day]	22.4	Daily Max	Once/3 mo
Naphthalene [g/Day]	9.05	Monthly Avg	
Nitrobenzene [g/Day]	3050.49	Daily Max	Once/3 mo
Nitrobenzene [g/Day]	1065.91	Monthly Avg	
2-Nitrophenol [g/Day]	110.07	Daily Max	Once/3 mo
2-Nitrophenol [g/Day]	30.97	Monthly Avg	

DRAFT REVISION

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **905**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
4-Nitrophenol [g/Day]	274.46	Daily Max	Once/3 mo
4-Nitrophenol [g/Day]	77.19	Monthly Avg	
Pyrene [g/Day]	22.87	Daily Max	Once/3 mo
Pyrene [g/Day]	9.53	Monthly Avg	
Tetrachloroethene [g/Day]	78.14	Daily Max	Once/3 mo
Tetrachloroethene [g/Day]	24.78	Monthly Avg	
Toluene [g/Day]	35.26	Daily Max	Once/3 mo
Toluene [g/Day]	13.54	Monthly Avg	
1,2,4-Trichlorobenzene [g/Day]	378.33	Daily Max	Once/3 mo
1,2,4-Trichlorobenzene [g/Day]	93.39	Monthly Avg	
1,1,1-Trichloroethane [g/Day]	28.11	Daily Max	Once/3 mo
1,1,1-Trichloroethane [g/Day]	10.48	Monthly Avg	
1,1,2-Trichloroethane [g/Day]	60.51	Daily Max	Once/3 mo
1,1,2-Trichloroethane [g/Day]	15.25	Monthly Avg	
Trichloroethene [g/Day]	32.88	Daily Max	Once/3 mo
Trichloroethene [g/Day]	12.39	Monthly Avg	
Vinyl Chloride [g/Day]	81.96	Daily Max	Once/3 mo
Vinyl Chloride [g/Day]	46.22	Monthly Avg	

DRAFT REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 912

SAMPLING POINT LOCATION: Valve on discharge line from outdoor Tank #450 on SE corner of Building 504

AVERAGE WASTEWATER FLOW (GPD): 40,000

WASTEWATER SOURCE AND CATEGORY: Production Operations in Building 504

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	7091	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC: lbs/day]****	5459	Monthly Avg	

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REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Sections **II.C.3** and **II.C.7** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 914

SAMPLING POINT LOCATION: Valve on bottom N side of T-652 at outside wall of bldg 6, S of NE building corner

AVERAGE WASTEWATER FLOW (GPD): 450

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **914**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

DRAFT REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 915

SAMPLING POINT LOCATION: Valve on E side of T-315 at inside NE corner of bldg 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DRAFT REVISION

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **915**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

DRAFT

REVISION

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 916

SAMPLING POINT LOCATION: Sump receiving centrifuge 639 effluent on top floor of bldg 7 along W wall - only when sump is discharging to sewer

AVERAGE WASTEWATER FLOW (GPD): 800

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DRAFT REVISION

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **916**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

DRAFT REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 917

SAMPLING POINT LOCATION: Valve on line from E side of sump pit, N of bldg 97 NE corner

AVERAGE WASTEWATER FLOW (GPD): 5,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSNS)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DRAFT REVISION

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **917**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

DRAFT REVISION

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*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 918

SAMPLING POINT LOCATION: Valve on line under stairwell, on N side of bldg 235, E of generator

AVERAGE WASTEWATER FLOW (GPD): 8,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DRAFT REVISION

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **918**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

DRAFT

REVISION

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*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 919

SAMPLING POINT LOCATION: Valve on N side of T-332 at inside E wall of bldg 250, just S of large door

AVERAGE WASTEWATER FLOW (GPD): 6,000

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DRAFT REVISION

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **919**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

DRAFT REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 920

SAMPLING POINT LOCATION: Valve on discharge line, outside SW corner of diked area E of bldg 512

AVERAGE WASTEWATER FLOW (GPD): 36,000

WASTEWATER SOURCE AND CATEGORY: Categorical (Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]	20.7	Daily Max	Once/3 mo
Acetone [mg/L]	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]	8.2	Monthly Avg	
Benzene [mg/L]	3	Daily Max	Once/3 mo
Benzene [mg/L]	.7	Monthly Avg	
n-Butyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]	8.2	Monthly Avg	
Chlorobenzene [mg/L]	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]	.7	Monthly Avg	
Chloroform [mg/L]	.1	Daily Max	Once/3 mo
Chloroform [mg/L]	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]	8.2	Monthly Avg	
Diethylamine [mg/L]	255	Daily Max	Once/3 mo
Diethylamine [mg/L]	100	Monthly Avg	
Ethyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]	8.2	Monthly Avg	
n-Heptane [mg/L]	3	Daily Max	Once/3 mo
n-Heptane [mg/L]	.7	Monthly Avg	
n-Hexane [mg/L]	3	Daily Max	Once/3 mo
n-Hexane [mg/L]	.7	Monthly Avg	
Isobutyraldehyde [mg/L]	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]	8.2	Monthly Avg	

DRAFT REVISION

DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **920**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]	59.7	Monthly Avg	
Methylene Chloride [mg/L]	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]	.7	Monthly Avg	
Methyl Formate [mg/L]	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]	3.4	Monthly Avg	
Toluene [mg/L]	.3	Daily Max	Once/3 mo
Toluene [mg/L]	.2	Monthly Avg	
Triethylamine [mg/L]	255	Daily Max	Once/3 mo
Triethylamine [mg/L]	100	Monthly Avg	
Xylene [mg/L]	3	Daily Max	Once/3 mo
Xylene [mg/L]	.7	Monthly Avg	

DRAFT

REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 926

SAMPLING POINT LOCATION: MH 13' S, 3' E of Tank #288 near building 505

AVERAGE WASTEWATER FLOW (GPD): 160,000

WASTEWATER SOURCE AND CATEGORY: Production Operations in building 505

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
N,N-Dimethyl Acetamide [DMAC; mg/L]****	<5	Daily Max	Once/wk
N,N-Dimethyl Acetamide [DMAC; mg/L]****	<5	Monthly Avg	

DRAFT

REVISION

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** See Section I.A.2 of the permit conditions.

*** Report a measured total flow for each 24 hour period within which samples are collected for analyses.

**** See Section **II.C.7** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 927

SAMPLING POINT LOCATION: Tank 308 (acid press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart B, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.8** of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 928

SAMPLING POINT LOCATION: Tank 309 (lime press tank) in building 6

AVERAGE WASTEWATER FLOW (GPD): 2,700

WASTEWATER SOURCE AND CATEGORY: Categorical (439 Subpart C, PSES)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Acetone [mg/L]****	20.7	Daily Max	Once/3 mo
Acetone [mg/L]****	8.2	Monthly Avg	
n-Amyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Amyl Acetate [mg/L]****	8.2	Monthly Avg	
Benzene [mg/L]****	3	Daily Max	Once/3 mo
Benzene [mg/L]****	.7	Monthly Avg	
n-Butyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
n-Butyl Acetate [mg/L]****	8.2	Monthly Avg	
Chlorobenzene [mg/L]****	3	Daily Max	Once/3 mo
Chlorobenzene [mg/L]****	.7	Monthly Avg	
Chloroform [mg/L]****	.1	Daily Max	Once/3 mo
Chloroform [mg/L]****	.03	Monthly Avg	
1,2-Dichlorobenzene [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichlorobenzene [mg/L]****	8.2	Monthly Avg	
1,2-Dichloroethane [mg/L]****	20.7	Daily Max	Once/3 mo
1,2-Dichloroethane [mg/L]****	8.2	Monthly Avg	
Diethylamine [mg/L]****	255	Daily Max	Once/3 mo
Diethylamine [mg/L]****	100	Monthly Avg	
Ethyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Ethyl Acetate [mg/L]****	8.2	Monthly Avg	
n-Heptane [mg/L]****	3	Daily Max	Once/3 mo
n-Heptane [mg/L]****	.7	Monthly Avg	
n-Hexane [mg/L]****	3	Daily Max	Once/3 mo
n-Hexane [mg/L]****	.7	Monthly Avg	
Isobutyraldehyde [mg/L]****	20.7	Daily Max	Once/3 mo
Isobutyraldehyde [mg/L]****	8.2	Monthly Avg	
Isopropyl Acetate [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Acetate [mg/L]****	8.2	Monthly Avg	

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DISCHARGE LIMITATIONS CONTINUED FOR SAMPLING POINT REFERENCE NUMBER: **928**

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Isopropyl Ether [mg/L]****	20.7	Daily Max	Once/3 mo
Isopropyl Ether [mg/L]****	8.2	Monthly Avg	
Methyl Cellosolve [mg/L]****	275	Daily Max	Once/3 mo
Methyl Cellosolve [mg/L]****	59.7	Monthly Avg	
Methylene Chloride [mg/L]****	3	Daily Max	Once/3 mo
Methylene Chloride [mg/L]****	.7	Monthly Avg	
Methyl Formate [mg/L]****	20.7	Daily Max	Once/3 mo
Methyl Formate [mg/L]****	8.2	Monthly Avg	
4-Methyl-2-Pentanone [mg/L]****	20.7	Daily Max	Once/3 mo
4-Methyl-2-Pentanone [mg/L]****	8.2	Monthly Avg	
Tetrahydrofuran [mg/L]****	9.2	Daily Max	Once/3 mo
Tetrahydrofuran [mg/L]****	3.4	Monthly Avg	
Toluene [mg/L]****	.3	Daily Max	Once/3 mo
Toluene [mg/L]****	.2	Monthly Avg	
Triethylamine [mg/L]****	255	Daily Max	Once/3 mo
Triethylamine [mg/L]****	100	Monthly Avg	
Xylene [mg/L]****	3	Daily Max	Once/3 mo
Xylene [mg/L]****	.7	Monthly Avg	

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section **II.C.8** of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

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4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed within this permit, for specific parameters.

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7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.

b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.

c. Daily flows, with dates, for all measurements or estimates made within the quarter.

d. Any certification statements required pursuant to the Special Conditions in Section II.

e. Any other data or attachments required pursuant to the Special Conditions in Section II.

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Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by July 28, 2003.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 350 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

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1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

REVISION

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

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D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

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F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system, conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

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J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

REVISION

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

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SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES:

1. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

2. There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 439** at sampling point **082.** The permittee shall certify on each quarterly self-monitoring report that such wastes are not discharged.

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B. SPECIAL MONITORING AND REPORTING REQUIREMENTS APPLICABLE TO DISCHARGES FROM PILOT PANT OPERATIONS IN BUILDINGS 97 AND 98:

1. The process waste discharge sampling point for the pilot plant operations in **Building 98** has been assigned two separate numerical designations to account for the different regulatory standards which apply at different times. These designations are **080** and **082**.

2. All monitoring and reporting of waste discharges from **Building 97** shall be performed as described below.

a. **Sampling point 917:** During each quarter in which any **439** regulated waste is discharged from pilot plant operations in building 97, sampling and analyses shall be performed at least once for the listed pollutants. If no **439** regulated wastes are discharged during an entire reporting quarter the report for sampling point **917** for that quarter shall state that no discharge occurred.

3. All monitoring and reporting of waste discharges from building 98 shall be performed as described below.

a. **Sampling point 080:** Sampling and analyses for the listed pollutants shall be performed at least once during each reporting quarter. This sampling shall be performed during a period when **439** regulated wastes are being discharged, **except** if no **439** wastes are discharged at any time during an entire reporting quarter then sampling may be performed at any time that will be representative of the activities occurring within the building during that quarter.

4. The permittee shall submit, with each quarterly self monitoring report required pursuant to section I.A.1 of the permit conditions, summaries of all process activities, in buildings 98 and 97, which generated wastewater for discharge at sampling points **080, 082,** and **917** during the reporting quarter. The summary should be in two parts, one part for building 98 and one part for building 97. Each part should be set up in a tabular form and shall:

a. Identify what activities occurred (**40 CFR 439** Regulated Process, Non-regulated Process, or No operation) and the beginning and ending date for each period of **439** activity. For **439** discharges identify the applicable Subpart from **40 CFR 439**).

b. Identify the days on which wastewater subject to the **439** standards was discharged. If **439** regulated wastewater was generated during the quarter, but not discharged describe the manner of disposal of that waste.

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C. OTHER SPECIAL MONITORING AND REPORTING REQUIREMENTS:

1. The limitations at sampling point **905** are in mass per day units as per **40 CFR 414.111**. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the flow used to calculate the mass. The flow used in the mass calculation shall be a measured (not estimated) total flow over a 24 hour period which includes the period during which the sample was collected.

In addition, upon notification that the District will be collecting samples at these points, the permittee shall record the total measured flow at each point over a 24 hour period. The 24 hour period, for each point, must include the hours between the start and end times of the MSD sampling. A report of these flow measurements shall be submitted to the District, using a form provided by the District, within fourteen (14) days after the end of the flow measurement period.

2. The permittee shall monitor sampling point **008** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

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3. Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

4. Sample points **001, 003, 007, 008, 009, 010**, and **080,** may, at times, convey stormwater in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by stormwater runoff.

5. No limitations are listed for "upstream" sampling point **009** and "downstream" sampling point **003**. The results of monitoring at these two points will be used to determine the permittee's total pollutant contributions from all of permittee's connections between these two points. Those connections are combined and identified in this permit, for reporting purposes, as sampling point **099**. Permittee shall perform monitoring, at both **009** and **003** on the same day. Monitoring shall consist of sampling for all listed pollutants and flow measurements sufficient to determine the average daily flow at each point. Compliance, at **099**, for each pollutant having a concentration-based limitation, will be based upon the concentration (CONC) calculated using the following formula:

$$CONC = \frac{(DF \times DC) - (UF \times UC)}{DF - UF}$$

Where:

DF = downstream flow rate

DC = downstream concentration
UF = upstream flow rate
UC = upstream concentration

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Permittee shall include, on the self-monitoring reports, the pollutant concentrations and flow rates found at the upstream and downstream points as well as the calculated pollutant concentrations at **099**. Permittee shall ensure that the discharge at each connection between the upstream and downstream points maintains, at all times, a pH within the range of 5.5 to 11.5 s.u. and a temperature no greater than 60 degrees Centigrade.

6. The permittee is authorized to perform self-monitoring at sampling points **914**, **915**, and **916** using grab samples in lieu of the composite samples specified in General Condition I.A.3. Each quarterly monitoring report shall include a statement that the grab sample results accurately represent the permittee's average daily discharge.

7. For sampling points **912** and **926**:

a. Permittee shall sample both sampling points at the same time;

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b. If a violation occurs at sampling point **926**, the limit at sampling point **912** applies to the total DMAC discharge for both sampling points **912** and **926**. Additionally, the estimated sampling point **926** DMAC discharge will be added to sampling point **912**'s DMAC discharge to calculate the potential violation of sampling point **912**'s limit.

8. Monitoring at sampling points **927** and **928** shall include the following:

a. Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b. Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

1. The permittee is not required to sample discharges at sampling points **001**, **002, 007**, or **082** provided the character of wastes discharged does not differ from that identified in the permit application. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes discharged at sampling points **001**, **002**, **007**, or **082** since the last report.

2. In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **005**, **010**, **080, 914**, **915**, **916**, **917**, **918**, **919**, **920,** and **927.** Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **005**, **010**, **080, 914**, **915**, **916**, **917**, **918**, **919**, **920**, and **927**.

4. As an "existing source", under **40 CFR Part 415**, **Subpart BK**, permittee is currently not subject to categorical pretreatment standards in that Part. When "existing source" standards are promulgated, permittee shall, within 180 days after the final effective date of such standards, submit to the District a baseline monitoring report which contains the information required by **40 CFR 403.12(b)(1)** through **(7)**.

5. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

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6. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

7. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

8. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

E. SPECIAL BILLING REQUIREMENTS

1. Pursuant to District Sewer Service Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninty-six (96)** percent of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

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2. Pursuant to District Sewer Service Charge Ordinances, the permittee is currently subject to surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: **692 mg/l** for **BOD**, **1,524 mg/l** for **COD**, and **360 mg/l** for **TSS**. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

REVISION

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT FACT SHEET

Check one:

FIRST TIME PERMIT	
~~RENEWAL~~ REVISION	X
REVISION	

Prepared by:	FG	Date:	04.02.03
Reviewed by:	DMM	Date:	04-16-03

PERMIT NO: 21120596-00 EFFECTIVE DATE: 06.01.03 EXPIRATION DATE: 02.28.05

MODIFICATION DATES: (1) 11/1/03, (2)_____, (3)_____, (4)_____

COMPANY NAME: MALLINCKRODT INC.

PREMISE ADDRESS: 3600 N. 2nd ST. ST. LOUIS, MO 63147

RELATED ACCOUNT NUMBERS: N/A

SIC NUMBERS: 2816, 2819, 2833, 2834, 2835, 2869

TYPE OF OPERATION: REACTION, SEPARATION, DRYING, & PACKAGING

TOTAL NUMBER OF SAMPLING POINTS: 23 or; NO SAMPLE POINT 1 (899)

NUMBER OF: ORDINANCE 11 CATEGORICAL 11 COMBINED —

CATEGORICAL INDUSTRY ? YES ✓ NO ___

If Yes, 40 CFR 439 Subparts C (PSES/PSNS) & B (PSES) ~~PSES~~ ~~PSNS~~

40 CFR 414 Subparts G & H PSES ✓ PSNS ___

415 SUBPARTS BK, PSES

EXTRA STRENGTH SURCHARGE ? YES ✓ NO ___ If Yes, BOD 692 COD 1524 TSS 360

RETURN FACTOR ? YES ✓ NO ___ If Yes, Acct # 21120596-00 RF 0.96

SPECIAL CONDITIONS REQUIRED ? YES ✓ NO ___

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
Pollutant & Limitations Documentation Sheets:	✓		
Permit Preparation Checklist:	✓		✓
Production Based Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Most Strict Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Combined Wastestream Calculations Sheets:			✓
If Yes, for Sampling Points:			
Other:			

COMMENTS (Include notations of any significant changes from last permit):

Changes:

- ➡ SP 913 removed
- ➡ SPs 926, 927, & 928 added.
- ➡ 2 related special conditions added.
- ➡ Flows updated where applicable

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 001 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SANITARY

Flow Rate: 1,100 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD * COD * O&GT * pH * Temp * TSS * Ord TTO *

Other: N/A *N/A; SANITARY ONLY.

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.3, ~~#, #, #, #~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 002 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SANITARY

Flow Rate: 1,800 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD * ~~COD __ O&GT __ pH __ Temp __ TSS __ Ord TTO~~ *

Other: N/A *N/A; SEE 001.

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.3, ~~#, #, #, #, #~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 2112059G-00

SAMPLING POINT REFERENCE NUMBER: 003 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SAN + LAB + NON-CIST PROC + UPSTREAM FLOW

Flow Rate: 49,601 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: STD PMT POLLUTANTS

Basis for Limitations: N/A; DOWNSTREAM SP

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME / NATURE

Special Conditions: # D.10, # D.11, #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 005 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SAN + LAB + NCCW

Flow Rate: 32,100 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: STD PMT POLLUTANTS

Basis for Limitations: MSD ORD # 8472.

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME & LAB WASTE.

Special Conditions: # E.15 (MOD), #, #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 007 **TYPE:** Ord. __ Cat __ Comb __

Wastewater Components: STORMWATER

Flow Rate: UNKNOWN Basis for Flow Rate: IUQ

General Pollutants: BOD * ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ *

Other: N/A *N/A; STORMWATER ONLY

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A VOID 11/1/03 PC

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.3, ~~#~~ __, ~~#~~ __, ~~#~~ __, ~~#~~ __, ~~#~~ __

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 008 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PROC WASTE (EMERGENCY BY-PASS)

Flow Rate: 1,440,000 GPD (POTENTIAL) Basis for Flow Rate: IUQ

General Pollutants: BOD * COD * O&GT * pH * Temp * TSS * Ord TTO *

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: {SEE SP 005}

Basis for Limitations:

Basis for Monitoring Frequencies: FLOW/PH; DAILY. TTO; 1/YR. OTHERS; PER DISCHARGE

Special Conditions: # NON-STD II.C.2, ~~#~~ __, ~~#~~ __, ~~#~~ __, ~~#~~ __, ~~#~~ __

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

MSD 019987

PERMIT NO: 2112059K-00

SAMPLING POINT REFERENCE NUMBER: 009 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: OFF-SITE FLOW

Flow Rate: UNKNOWN Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: SEE 003

Basis for Limitations: N/A; UPSTREAM SP.

Basis for Monitoring Frequencies: SEE 003

Special Conditions: # D.10, # D.11, #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓
Explain:

SAMPLING POINT REFERENCE NUMBER: 010 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Componer Boiler Blowdown + Categorical (from SPs 905 & 914-928) + Kitchen Waste + Laboratory Waste + Non Categorical Process Waste + Non Contact Cooling Water + Plant & Equipment Washdown + Regeneration/Reject Water + Sanitary + Stormwater

Flow Rate: 1,860,480 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: Cr, Cu, Ni, Zn; KP w/ LARGE VOLUMES.

Basis for Pollutants: {SEE SP 005}

Basis for Limitations:

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME & CATEGORICAL

Special Conditions: # D.10, # E.15 (MOD), #___, #___, #___, #___

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓
Explain:

PERMIT NO: 2120596-00

SAMPLING POINT REFERENCE NUMBER: 080 (082) **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PROCESS WASTE

Flow Rate: 10,700 GPD Basis for Flow Rate: WQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: {SEE SP QAS}

Basis for Limitations:

Basis for Monitoring Frequencies. 1/3 mos;

Special Conditions: # D.10, # E.15 (MOD), # NON-STD II.B.1, # NON-STD II.B.3, # ——, # ——

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 082 (080) **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: CAT (439 SUB C, PSNS)

Flow Rate: 10,700 GPD (POTENTIAL) Basis for Flow Rate: WQ

General Pollutants: BOD ~~*~~ ~~COD~~ ~~O&GT~~ ~~pH~~ ~~Temp~~ ~~TSS~~ ~~Ord TTO~~ *

Other: N/A *N/A; NO MONITORING REQ'D.

Priority/Categorical Pollutants: N/A

Basis for Pollutants: N/A

Basis for Limitations: N/A

Basis for Monitoring Frequencies: N/A

Special Conditions: # E.15 (MOD), # B.1 (MOD), # E.3, # NON-STD II.B.1, # NON-STD II.B.3, # ——

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain: NOTE: POLLUTANTS REMOVED 4/8/02. LETTER STATES 439 WASTEWATER NOT DISCHARGED.

*SEE PG 13 OF FACT SHEET FOR SP 099.

PERMIT NO: 21D0596-00

SAMPLING POINT REFERENCE NUMBER: 905 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (414 SUB G & H, PSES)

Flow Rate: 125,889 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: OCPSF ~

Basis for Pollutants: 40 CFR 414 SUB G & H, PSES

Basis for Limitations: " " " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL

Special Conditions: # E.19, # B.1 (MOD), # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 912 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PRODUCTION OPS IN BLDGS 504 & 505

Flow Rate: 40,000 GPD Basis for Flow Rate: WQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: DMAC → 1/WEEK FREQ.

Basis for Pollutants: PRODUCTION NATURE

Basis for Limitations: MSD DERIVED.

Basis for Monitoring Frequencies: 1/WEEK; MSD/MALLINCKRODT CONSENT.

Special Conditions: # NON-STD II.C.3, # NON STD II.C.7, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES ✓ NO __

Explain: (1) FLOW; 200,000 → 40,000.
(2) NEW NON-STD RELATING TO NEW SP 926.

✓ SPECIAL CONDITION

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 914 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUBC, PSES)

Flow Rate: 450 GPD Basis for Flow Rate: 1UQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: 40 CFR 439 SUB C, PSES (LONG LIST)

Basis for Pollutants: 40 CFR 439 SUB C, PSES

Basis for Limitations: " " " " VOID 11/1/99 PC

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL

Special Conditions: # D.1, # E.15 (MOD), # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

NOTE: SEE DMM MEMO IN PMT FILE ABOUT EXCLUSION OF NH_4 & Cu LIMITS.

SAMPLING POINT REFERENCE NUMBER: 915 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUBC, PSES)

Flow Rate: 2,700 GPD Basis for Flow Rate: 1UQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: SEE SP 914 ~

Basis for Pollutants: SEE SP 914

Basis for Limitations: SEE SP 914

Basis for Monitoring Frequencies: SEE SP 914

Special Conditions: # E.15 (MOD), # D.1, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

MSD 019991

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 916 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT(439 SUBC, PSES)

Flow Rate: 800 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: SEE SP 914 ~

Basis for Pollutants: SEE SP 914

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: # E.15 (MOD), # D.1, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 917 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT(439 SUBC, PSNS)

Flow Rate: 5,000 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: 40 CFR 439 SUB C, PSNS (LONG LIST)

Basis for Pollutants: 40 CFR 439 SUB C, PSNS

Basis for Limitations: " " " "

Basis for Monitoring Frequencies: 1/3 mos; CATEGORICAL

Special Conditions: # E.15 (MOD), # ~~NON-STD~~ II.B.2, # ~~NON-STD~~ II.B.4, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

NOTE: SEE DMA MEMO IN PMT FILE ABOUT EXCLUSION OF NH_4 & Cr LIMITS ✓

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 918 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES)

Flow Rate: 8,000 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: SEE SP 914

Basis for Pollutants: SEE SP 914

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: # E.15 (MOD), # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 919 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES)

Flow Rate: 6,000 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: SEE SP 914 ~

Basis for Pollutants: SEE SP 914

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: # E.15 (MOD), # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO ✓

Explain:

PERMIT NO: 2112059 6-00

SAMPLING POINT REFERENCE NUMBER: 920 **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES)

Flow Rate: 36,000 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: SEE SP 914

Basis for Pollutants: SP 914

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: # E.15 (MOD), # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: 926 (NEW) **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: PRODUCTION OPS FROM BLDG 505

Flow Rate: 160,000 GPD Basis for Flow Rate: IUQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: DMAC V010 11/1/03 FG

Basis for Pollutants: SEE SP 912

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: # NON-STD II C.7, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~, # ~~_____~~

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? ~~YES~~ __ ~~NO~~ __

Explain:

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 927 (NEW) **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB B, PSES)

Flow Rate: 2,700 GPD Basis for Flow Rate: IWQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: 40 CFR 439 SUB B, PSES (SHORT LIST)

Basis for Pollutants: 40 CFR 439 SUB B, PSES
" " " "

Basis for Limitations:

Basis for Monitoring Frequencies: 1/3 MOS; CATEGORICAL

Special Conditions: # E.15 (MOD), # NON-STD II.C.8 #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? ~~YES~~ __ ~~NO~~ __

Explain:

SAMPLING POINT REFERENCE NUMBER: 928 (NEW) **TYPE:** Ord. __ Cat ✓ Comb __

Wastewater Components: CAT (439 SUB C, PSES)

Flow Rate: 2,700 GPD Basis for Flow Rate: IWQ

General Pollutants: ~~BOD~~ __ ~~COD~~ __ ~~O&GT~~ __ ~~pH~~ __ ~~Temp~~ __ ~~TSS~~ __ ~~Ord TTO~~ __

Other: N/A

Priority/Categorical Pollutants: SEE SP 914

Basis for Pollutants: SEE SP 914

Basis for Limitations:

Basis for Monitoring Frequencies:

+ E.15 MOD

Special Conditions: #, # NON-STD II.C.8 #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? ~~YES~~ __ ~~NO~~ __

Explain:

PERMIT NO: 21120596-00

SAMPLING POINT REFERENCE NUMBER: 099 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: NO SP AVAILABLE (UPSTREAM / DOWNSTREAM SP)

Flow Rate: 49,600 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: N/A

Basis for Pollutants: SEE SP. 003 & 009

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: # D.11, #, #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES __ NO ✓

Explain:

SAMPLING POINT REFERENCE NUMBER: _____ **TYPE:** Ord. __ Cat __ Comb __

Wastewater Components:

Flow Rate: Basis for Flow Rate:

General Pollutants: BOD __ COD __ O&GT __ pH __ Temp __ TSS __ Ord TTO __

Other:

Priority/Categorical Pollutants:

Basis for Pollutants:

Basis for Limitations:

Basis for Monitoring Frequencies:

Special Conditions: #, #, #, #, #, #

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES __ NO __

Explain:

PERMIT PREPARATION CHECKLIST - PART 1
(Fact Sheet Attachment 2)

Company Name: MALLINCKRODT INC. Permit No.: 2120596-00

Effective Date: 05.01.03 Prepared by: FG Date: 04.03.03

REVIEW THE PRETREATMENT DATABASE (ECIMS), INDUSTRY FILE AND PERMIT APPLICATION.

ANSWER THE FOLLOWING QUESTIONS AND UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ✓ No ___
   If no, add: ___ delete: ___

2. Is user in surcharge? Yes ✓ No ___
   If yes, date last certified: 05.09.02
   If yes, Special Condition F.2 applies.

3. Does user's premise have more than one MSD account? Yes ___ No ✓
   If yes, were all account numbers correctly listed (including occupant #s)? Yes ___ No ___
   If no, have account numbers been corrected in database before proceeding? Yes ___ No ___

4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ✓ No ___
   If yes, list acct no., RF and date last updated:
   Acct 2120596-00 RF 0.96 Updated 01.28.02
   Acct ___ RF ___ Updated ___
   If yes, Special Condition F.1 applies.

5. Does user discharge water from a source not included in the MSD Billing system? Yes ___ No ✓
   If yes, Special Condition F.3 applies.

6. Have you established agreement among permit application, water consumption records and ECIMS on component flows at each SP, total SP flows and total premise flow? Yes ✓ No ___
   If no, explain ___

7. Has user been granted any variances from ordinance limitations? Yes ___ No ✓
   If yes, Parameter(s) ___ at SP(s) ___
   If yes, Special Condition C.4 applies.

8. Does user discharge any radioactive materials? Yes ✓ No ___
   If yes, Special Condition E.18 applies.

9. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ___ No ✓
   If no, explain: UNKNOWN NUMBER OF SPECIFIC CONNECTIONS.
   If no, is documentation sufficient to use Special Condition E.5, E.6, E.7 or E.8? Yes ✓ No ___
   If no, is compliance schedule necessary to obtain documentation? Yes ___ No ___
   If yes, Special Condition G.1 is necessary. E.5 (MOD)

10. Does premise require use of "upstream/downstream" sampling? Yes ✓ No ___
    If yes, Upstream SP # 009 & Downstream SP # 003
    If yes, Special Conditions D.11 and E.9 apply.

11. Are there any inactive connections to MSD sewers? Yes ___ No ✓
    If yes, does Special Condition E10. apply? Yes ___ No ___

12. Have you verified, in ECIMS, the SP location descriptions are complete and adequate? Yes ✓ No ___

13. Have you verified, in ECIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ✓ No ___

14. Are any SPs Dry Justified? Yes ___ No ✓
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition E.3 applies.

15. Do any SPs convey stormwater in addition to regulated wastewater? Yes ✓ No ___
If yes, list points 001, 003, 007, 008, 009, ___ and note on P&LD sheets.
If yes, Special Condition D.10 applies. 010, 080

16. Does user have any discharges subject to NPDES permitting regulations? Yes ___ No ✓
If yes, list points: _____
If yes, Special Condition E.14 applies.

17. Are there some SPs where user discharges only non-process wastewater? Yes ✓ No ___
If yes, does Special Condition E.3 apply? 082 Yes ✓ No ___
If yes, list points 001, 002, 007, and note on P&LD sheets.

18. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ✓ No ___
If yes, list points 914, 915, 916 and note on P&LD sheets.
If yes, Special Condition D.1 applies.

19. Are there SPs with less than a quarterly self-monitoring frequency for all parameters? Yes ___ No ✓
If yes, Special Condition E.4 applies.

20. Can user be given a waiver from monitoring local limits TTO at any ordinance SPs? Yes ___ No ✓
If yes, list points _____ and explain on P&LD sheets.

21. Does user have a history of compliance problems at this or a previous location ? Yes ___ No ✓
If yes, is a compliance schedule required? Yes ___ No ___
If yes, Special Condition G.1 applies.
Is supporting documentation attached? Yes ___ No ✓

22. Is user required to monitor for Total Phenols at an ordinance SP? Yes ___ No ✓
If yes, does Special Condition D.3 apply? Yes ___ No ✓

23. Are special billing conditions, other than the standard Special Conditions, needed? Yes ___ No ✓
If yes, describe: _____

24. Are any Special Conditions, other than the standard special conditions, required? Yes ✓ No ___
If yes, explain: SEE ATTACHED MEMO
Is supporting documentation attached? Yes ___ No ___

25. Is user classified as a Categorical Industrial User (CIU)? Yes ✓ No ___
If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit:

#F.2	#F.1	#E.18	#E.5 (MOD)	#D.11	#E.9	#D.10	#E.3	#D.1	#____
				003		001	001	914	
				009		003	002	915	
				099		007	007	916	
						008	082		
						009			
						010			
						080			

Rev 12/01

MSD 019998

PERMIT PREPARATION CHECKLIST - PART 2
(Fact Sheet Attachment 2)

26. Do any SPs have both Ordinance & Categorical limits? Yes ___ No ✓
If yes, which sampling point(s):_____
If yes, Special Condition C.3 is applicable. Is worksheet attached? Yes ___ No ✓

27. Is the Combined Wastestream Formula (CWF) required? Yes ___ No ✓
If yes, which SP(s):_____
If yes, date last calculated:_____
If yes, Special Condition C.2 is applicable. Is CWF worksheet attached?. Yes ___ No ✓

28. Are categorical limitations based on production rates? Yes ___ No ✓
If yes, which SP(s):_____
If yes, date last calculated:_____
If yes, does Special Condition C.1__, E1__ or E2__ apply?

29. Are categorical limitations mass limits? Yes ✓ No ___
If yes, which SP(s): 905
If yes, Special Condition E.19 is applicable.

30. Does user discharge only non-categorical wastewater at all SPs? Yes ___ No ✓
If yes, which categorical operations are performed: _____
If yes, does Special Condition B.1__, B.2__ or B.3__ apply? Yes ___ No ___

31. Are there process discharges, from a categorical operation, for which standards have not been promulgated? Yes ✓ No ___
If yes, for which existing source categorical standard: ~~40 CFR 415 SUB BK~~
If yes, which SP(s): NO DISCHARGE
If yes, is Special Condition E.20 applicable? Yes ✓ No ___

32. Is user a job shop electroplater with >10,000 gpd subject to 40 CFR 413? Yes ___ No ✓
If yes, Special Condition D.2 is applicable.

33. Is user a new source soap and detergent manufacturer subject to 40 CFR 417? Yes ___ No ✓
If yes, is user subject to Subparts O__, P__, Q__ or R__? Yes ___ No ___
If yes, for Subpart O, Special Condition B.4 is applicable.
If yes, for Subpart P, Special Condition B.5 is applicable.
If yes, for Subpart Q, Special Condition B.6 is applicable.
If yes, for Subpart R, Special Condition B.7 is applicable.

34. Is user a leather tanner/finisher subject to 40 CFR 425? Yes ___ No ✓
If yes, is user subject to subpart C (Appendix B)? Yes ___ No ___
If yes, Special Condition D.7 is applicable.
If no, Special Condition D.6 is applicable.

35. Is user a Centralized Waste Treater subject to 40 CFR 437? Yes ___ No ✓
If yes, does user receive any waste that contains cyanide at a concentration greater than 136 mg/l? Yes ___ No ___
If yes, Special Condition 437a is applicable.
If yes, does it performs operations subject to Subpart(s) A__, B__ or C__? Yes ___ No ___
If subject to multiple Subparts, has user requested and been approved for application of Subpart D standards? Yes ___ No ___
If yes, Special Condition 437b is applicable.
If no, Special Condition 437c is applicable.

✓

36. Is user a pharmaceutical manufacturer subject to 40 CFR 439? Yes ✓ No ___
If yes, has user certified to the absence of cyanide? Yes ✓ No ___
If yes, Special Condition E.15 is applicable.
If no, must total cyanide limitations be adjusted? Yes ___ No ___
If yes, calculate adjusted limitations. Is worksheet attached? Yes ___ No ✓
If yes, has user certified to the absence of other specific regulated pollutants? Yes ___ No ✓
If yes, Special Conditions E.22 and E.23 are applicable.
If yes, has user requested the use of surrogate pollutants for monitoring? Yes ___ No ✓
If yes, Special Condition E.24 is applicable.

37. Is user a pesticide formulator/packager/repackager subject to 40 CFR 455? Yes ___ No ✓
If yes, has user requested and been approved for the pollution prevention allowable discharge option? Yes ___ No ___
If yes, Special Condition 455a is applicable.

38. Is user a metal molder/caster subject to 40 CFR 464? Yes ___ No ✓
If yes, Special Condition D.4 is applicable.

39. Is user a coil coater subject to 40 CFR 465? Yes ___ No ✓
If yes, is user subject to 40 CFR 465 Subpart(s) A__, B__ or C__? Yes ___ No ___
If yes, Special Condition E.16 is applicable.
If yes, is user subject to 40 CFR 465 Subpart D? Yes ___ No ___
If yes, Special Conditions D.5, D.9 and E.17 are applicable.
If yes, is there a separate categorical SP for the regulated waste?
If yes, include O&G (Hydrocarbon) in the list of parameters at the categorical SP.
If no, and categorical waste discharges at a combined ord/cat SP point, include O&G (Total) and O&G (Hydrocarbon) in the list of parameters at the combined SP.

40. Do any sampling points have both Ordinance & Categorical TTO limits? Yes ___ No ✓
If yes, which SP(s):_____
Is Special Condition E.13 applicable? Yes ___ No ___
If yes, explain:_____.

41. Can user certify, in lieu of monitoring, for categorical TTO at a categorical or combined SP? Yes ___ No ✓
If yes, which SP(s):_____
If yes, Special Condition E.11 __ or E.12 __ is applicable.

42. May user monitor for Oil & Grease, in lieu of TTO, at a categorical SP? Yes ___ No ✓
If yes, which SP(s):_____
If yes, Special Condition D.8 is applicable.
If yes, is a modification of Special Condition E.13 applicable? Yes ___ No ___

List all the Special Conditions from Part 2 that are applicable to this permit:

#E.19 905 #~~E.2e~~ #E.15 (MOD) #_____ #_____ #_____ #_____ #_____ #_____ #_____

005
010
080
082
914
915
916
917
918 928
919 ~~927~~
920

Rev 12/01

MEMORANDUM

FROM : FABIAN GRABSKI

TO : PERMIT PREPARATION CHECK LIST

RE : MALLINCKRODT INC.
3600 NORTH 2ND STREET
ST. LOUIS, MO 63147

PERMIT : 21120596-00

DATE : 04-03-03

The following presents 10 non-standard special conditions and 4 modified special condition for use in Mallinckrodt's revised permit:

A. PROHIBITED DISCHARGES:

B.1 (Modified)
There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 414** except for those wastes conveyed by sampling point **905.** The permittee shall certify on each quarterly self-monitoring report that such wastes were only discharged via sampling point **905.**

B.1 (Modified)
There shall be no discharge to the District of process wastes which are subject to pretreatment standards in **40 CFR 439** at sampling point **082.** The permittee shall certify on each quarterly self-monitoring report that such wastes are not discharged.

B. SPECIAL MONITORING AND REPORTING REQUIREMENTS APPLICABLE TO DISCHARGES FROM PILOT PANT OPERATIONS IN BUILDINGS 97 AND 98:

Non-Standard
The process waste discharge sampling point for the pilot plant operations in **Building 98** has been assigned two separate numerical designations to account for the different regulatory standards which apply at different times. These designations are **080** and **082.**

Non-Standard
All monitoring and reporting of waste discharges from **Building 97** shall be performed as described below.

a. **Sampling point 917:** During each quarter in which any **439** regulated waste is discharged from pilot plant operations in building 97, sampling and analyses shall be performed at least once for the listed pollutants. If no **439** regulated wastes are discharged during an entire reporting quarter the report for sampling point **917** for that quarter shall state that no discharge occurred.

Non-Standard
All monitoring and reporting of waste discharges from building 98 shall be performed as described below.

a. **Sampling point 080:** Sampling and analyses for the listed pollutants shall be performed at least once during each reporting quarter. This sampling shall be performed during a period when **439** regulated wastes are being discharged, **except** if no **439** wastes are discharged at any time during an entire reporting quarter then sampling may be performed at any time that will be representative of the activities occurring within the building during that quarter.

Non-Standard
The permittee shall submit, with each quarterly self monitoring report required pursuant to section I.A.1 of the permit conditions, summaries of all process activities, in buildings 98 and 97, which generated wastewater for discharge at sampling points **080, 082,** and **917** during the reporting quarter. The summary should be in two parts, one part for building 98 and one part for building 97. Each part should be set up in a tabular form and shall:

a. Identify what activities occurred (**40 CFR 439** Regulated Process, Non-regulated Process, or No operation) and the beginning and ending date for each period of **439** activity. For **439** discharges identify the applicable Subpart from **40 CFR 439**).

b. Identify the days on which wastewater subject to the **439** standards was discharged. If **439** regulated wastewater was generated during the quarter, but not discharged describe the manner of disposal of that waste.

Non-Standard
The permittee shall monitor sampling point **008** for flow and pH on a daily basis during discharges with durations greater than **ninety (90) minutes**. The other parameters listed for this sampling point shall be analyzed once during each discharge occurrence greater than **ninety (90) minutes** except for Total Toxic Organics which shall be analyzed only once per year. The permittee shall report all analytical results on the quarterly self-monitoring reports. If there has been no discharge at this sampling point during the reporting quarter, then the permittee shall certify, on the self-monitoring report, that there has been no discharge.

Non-Standard
Discharges at sampling point **912** shall be metered and controlled to ensure a uniform rate of discharge throughout each 24 hour period. The limitations at this point are in mass units. For each pollutant, the permittee shall include, on the quarterly self-monitoring report, the analytical concentration value determined, the calculated mass and the measured flow used to calculate the mass.

Non-Standard NEW NON-STD SPEC. CONDITIONS
For sampling points **912** and **926**:

a. Permittee shall sample both sampling points at the same time;

b. If a violation occurs at sampling point **926**, the limit at sampling point **912** applies to the total DMAC discharge for both sampling points **912** and **926**. Additionally, the estimated sampling point **926** DMAC discharge will be added to sampling point **912**'s DMAC discharge to calculate the potential violation of sampling point **912**'s limit.

Non-Standard
Monitoring at sampling points **927** and **928** shall include the following:

a) Samples collected from sampling points **927** and **928** (Tanks 308 and 309) shall be representative of the contents within Tanks 308 and 309;

b) Permittee shall collect samples from sampling points **927** and **928** while the related tanks are discharging.

D. SPECIAL CERTIFICATION & REPORTING REQUIREMENTS

E.5 Modified

In addition to the sewer connections with sampling points identified herein and in addition to the connection points addressed by Special Condition **II.C.5**, the permittee and the District have identified other connection points at which wastewater is discharged from the permittee's premise to the District. These additional connections currently do not have sampling points. It has been determined:

a. Only domestic type wastewater not subject to federal categorical standards or toxic pollutant standards is discharged at these connections, or

b. All wastewater subject to federal categorical standards or toxic pollutant standards is adequately monitored at other permitted sampling points prior to combining with domestic type wastewater for discharge at these connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

E.15 Modified 928

The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **005**, **010**, **080**, **914**, **915**, **916**, **917**, **918**, **919**, **920**, and ~~**927**~~. Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **005**, **010**, **080**, **914**, **915**, **916**, **917**, **918**, **919**, **920**, and ~~**927**~~. 928

Non-Standard

Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **<u>will not</u>** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

Non-Standard

Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

FACT SHEET

From: Doug Mendoza
To: Fabian Grabski; Jason Gill
Date: 3/4/03 10:11AM
Subject: Mallinckrodt and permit revisions

I received a letter from Mallinckrodt with details re. bldgs 504/505 (SP912/926) and the DMAC process. I talked with Karen S. about it, and what we will wind up doing is keeping the SP912 limits the same. The SP926 limit will be "non-detect up to <5 mg/L" for both daily max and monthly avg. They can also estimate the flow at SP926, like they do for most other points. The limit is the detection level for DMAC. (At 160,000 gpd, this works out to about 7 lb/day potential.) Sampling will be required weekly at SP926, just like at SP912.

A special condition also will need to be added stating:

SP912 and SP926 must be sampled at the same time;

For SP926 a detected value or a DL above 5 mg/l is a violation;

If a violation at SP926 occurs, the limit at SP912 applies to the total from both SP912 and SP926 - and the estimated SP 926 DMAC discharge will be added to SP912's DMAC to calculate potential violation of SP912's limit;

Karen also will be submitting some information regarding revision of SP913 and the associated 40 CFR 439 subparts. After that is received, we can revise the permit for both SP 913 and SPs 912/926.

FACT SHEET

From: Doug Mendoza
To: Fabian Grabski; Jason Gill
Date: 4/2/03 12:53PM
Subject: 21120596-00 Mallinckrodt permit revision

We finally received all the info. from Mallinckrodt re. their SP912/926 and SP913/927/928 revisions.

See memos/e-mails/letters in industry file from late Feb. to late March for details.

Jason - you need to add 926, 927 and 928 to the map; delete 913; add a special sampling note that for 927 and 928 the company will collect samples while we observe the collection (for safety purposes)

Fabian - need to revise SP912's flow, discharge description and discharge quantity. Add SP~~916~~926, including special condition noted in 3/4/03 e-mail. Delete 913 (and inactivate all the associated stuff in ECIMS for the SP, limits, components, etc.). Add SPs 927 and 928 (including a special condition to collect represenatative samples directly from the tanks when discharing). Revise SP010 discharge components description.

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

March 20, 2002

Kenneth S. Coffey
Principal HSE Engineer
MALLINCKRODT CHEMICAL INC.
P.O. Box 5439
St. Louis, MO 63147

RE: Discharge Permit No: 21120596-00
For premise at: 3600 N. 2nd Street
St. Louis, MO 63147

Dear Mr. Coffey:

Enclosed is a draft copy of the revised Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit proposed for the premise identified above. The permit is being revised due to significant changes incurred through the elimination and addition of existing/new sampling points. This revision deletes sampling points 081, 904, 981, and 982. Additionally, the revision adds categorical sampling point 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, and 925. The requirements to monitor and report Cyanide (Total) at sampling point 082 have been removed, however, pharmaceutical pollutants regulated under 40 CFR 439 subpart C have been added. The permit special conditions have been amended to reflect the removal and addition of the above sampling points. Two new special conditions have been added exempting Mallinckrodt from the Ammonia standards regulated under CFR 439 Subpart C and which allows Mallinckrodt to utilize a net/gross allowance for compliance monitoring of Chloroform.

This draft has been prepared pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001 and is based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed as acceptance of the draft permit and we will proceed to issue the final permit. If you have any questions, please contact me at 436-8755.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Permit file

connections.

Therefore, the permittee is not required, at this time, to establish sampling points or to sample discharges at these connections. Each quarterly monitoring report shall include a statement that there has been no change in the character of the wastes (as described in a or b above) discharged at these connections since the last report. If changes in discharge do occur, they shall be reported pursuant to General Condition I.B.

3. The permittee has reported that **Cyanide** is not used or generated in any pharmaceutical manufacturing process subject to regulation under **40 CFR 439** at sampling points **005, 010, 080, 082, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924,** and **925.** Therefore, pursuant to the standards in **40 CFR 439**, the permittee is not subject to limitations or monitoring for **Total Cyanide** at these two sampling points. Permittee shall include with each quarterly self-monitoring report, a certification that **Cyanide** is not used or generated at sampling points **005, 010, 080, 082, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924,** and **925.**

4. As an "existing source", under **40 CFR Part 415, Subpart BK**, permittee is currently not subject to categorical pretreatment standards in that Part. When "existing source" standards are promulgated, permittee shall, within 180 days after the final effective date of such standards, submit to the District a baseline monitoring report which contains the information required by **40 CFR 403.12(b)(1)** through **(7)**.

5. Permittee is authorized to discharge not more than **100 millicuries** of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other users' discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

6. The permittee is not required, at this time, to establish sampling points or to separately sample discharges at the sewer connections located between the upstream and downstream sampling points identified in this permit. However, if it is determined, by the District, that sampling at the identified upstream and downstream points is not adequate to document compliance with discharge limitations, the District may require the installation of a separate sampling point at each connection.

7. Pursuant to the District's June 17, 1999 letter to Mallinckrodt Inc. and **40 CFR 439.36(a)**, pretreatment limitations for Ammonia **will not** be applied to any sampling point subject to **40 CFR 439.** However, the District reserves the right to implement local Ammonia limitations in the future at any sampling point.

8. Pursuant to **40 CFR 403.15**, the District is authorizing the permittee to utilize a net/gross allowance for compliance monitoring for Chloroform at sampling points wherein Chloroform is regulated.

E. SPECIAL BILLING REQUIREMENTS

DRAFT

MSD DEPARTMENT MEMO - ENVIRONMENTAL COMPLIANCE

TO: Mallinckrodt Permit File

ACCT #: 21120596-00

FROM: Doug Mendoza

DATE: February 28, 2002

RE: PERMIT MODIFICATION TO ADD NEW PHARMACEUTICAL POINTS

Mallinckrodt has recently become subject to the discharge standards contained in EPA's revised pharmaceutical rule (40 CFR 439). Therefore, changes to the permit need to be made, as detailed below.

The following new pharmaceutical sample points were added to Mallinckrodt for new discharge standards for 40 CFR 439 Subpart C PSES:

Bld	Location	SP #	Scrubber?	Description
6	acid press/ lime press	**913**	No	Valve on line into standpipe at inside N wall of bldg 6, just W of large door, W of NE bldg corner
6	VOC scrubber	**921**	Yes	Valve on bottom S side of scrubber T-655 at outside E wall of bldg 6, S of NE bldg corner
6	alcohol still	**914**	No	Valve on bottom N side of T-652 at outside wall of bldg 6, S of NE bldg corner
6	fusel oil still	**915**	No	Valve on E side of T-315 at inside NE corner of bldg 6
7	HA centri-fuge pump	**916**	No	Sump receiving centrifuge 639 effluent on top floor of bldg 7 along W wall - only when sump is discharging to sewer
97	non-PEG	**917 ***	No	Valve on line from E side of sump pit, N of bldg 97 NE corner
97	process scrubber	**922**	Yes	Valve on W side of scrubber, N of N side of bldg 97
97	pilot scrubber	**923 ***	Yes	Valve on N side of T-3020 on W side of interior wall of bldg 97
235	non-PEG	**918**	No	Valve on line under stairwell, on N side of bldg 325, E of generator
235	scrubber	**924**	Yes	Valve on S side of BAU tank (N of T-360) at inside S wall of bldg 235's W bay
250	non-PEG	**919**	No	Valve on S side of T-330 at inside E wall of bldg 250, just S of large door
250	scrubbers	**925**	Yes	Valve on bottom W side of scrubber at outside E wall of bldg 250, N of SE bldg corner
512	pretreated effluent	**920**	No	Valve on discharge line, outside SW corner of diked area E of bldg 512

(non-PEG means subject to 439, but process doesn't contain regulated pollutants)

Note that the scrubbers are planned for elimination in October 2002. Their discharges do not meet 40 CFR 439 standards, and Mallinckrodt will be under a consent order regarding this. The order will be separate from the discharge permit. Details are in the files.

* SPs 917 and 923 (and 082) are 439 pilot plant discharge points. (917 replaces 982, so 982 was inactivated and should be removed from the permit). While the same discharge limits will apply as for the other 439 points, the applicable regulation is 40 CFR 439 PSNS (not specific to Subpart C).

All the points in the above table (plus SP082) are subject to the new pharmaceutical pollutant discharge limits, that became effective on 9/21/01.

Of the 25 pollutants in the list, Mallinckrodt will not have to monitor for cyanide or ammonia.

See below re. the 2/22/02 letter for details on cyanide and its exclusion from monitoring requirements.

For ammonia, the exemption under 40 CFR 439.36(a) applies (see letter in file dated 6/17/99), so that the ammonia limits will not apply to Mallinckrodt's pharmaceutical discharges. [The letter also informed Mallinckrodt that we reserve the right to impose local ammonia limits, should conditions so warrant.] A special condition will be needed in the permit re. the ammonia exemption.

For chloroform, Mallinckrodt will be using the "net/gross allowance" allowed under 40 CFR 403.15. See 1/18/00 memo in file - which has 12/7/99 "net/gross allowance" memo attached to it. A special condition will be needed in the permit.

Note also that Mallinckrodt will <u>not</u> be using surrogate pollutants and will <u>not</u> be certifying the absence of any regulated organics. Thus, quarterly self-monitoring of all 23 pollutants will be required.

Mallinckrodt verified the following in 2/22/02 letter:

Cyanide is not generated or used at the plant (so CN exclusion certification can be used for pharmaceutical sample points) - a special condition will be needed in the permit.

The following (OCPSF) processes have ceased, so the associated sample points were inactivated and should be removed from the permit:

bldg 502 - SP904, bldg 97 - SP981, bldg 98 - SP081

For the following new sample points, grab samples are acceptable: 916, 923, 924 - a special condition will be needed in the permit.