Sewer Acct. #: **1024353000**

Company: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Address: 660 S. Euclid Ave.

City: St. Louis

State and Zip: MO 63110

Ind_id	File Code	File Description
84250	50	ARCHIVED INDUSTRY

ACCOUNT NUMBER: **10243530-00**

COMPANY NAME: **WASHINGTON UNV MEDICAL**

MAPS

FROM 09-02-98 THRU 01-02-09

IUQ'S

FROM 08-31-98 THRU 07-06-07

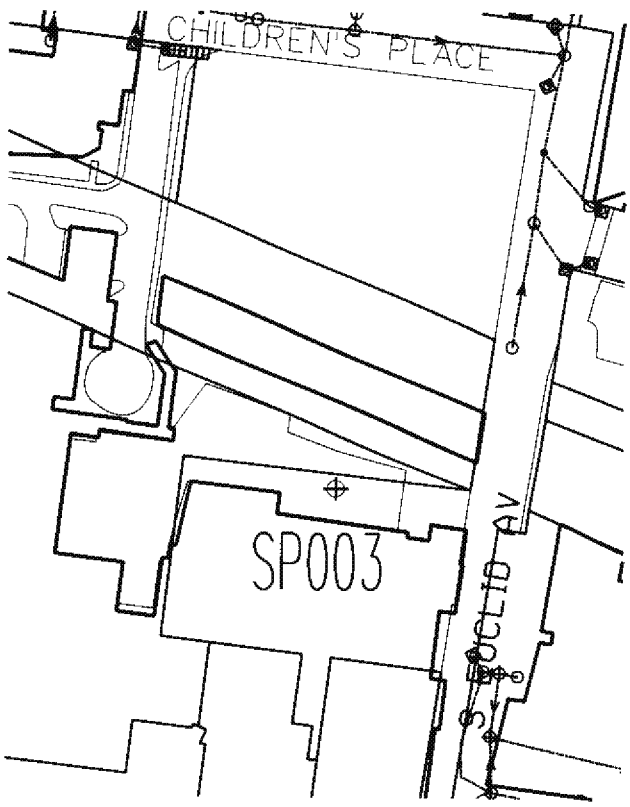
X	CORRESPONDANCE LOCATED IN ARCHIVE FILE S

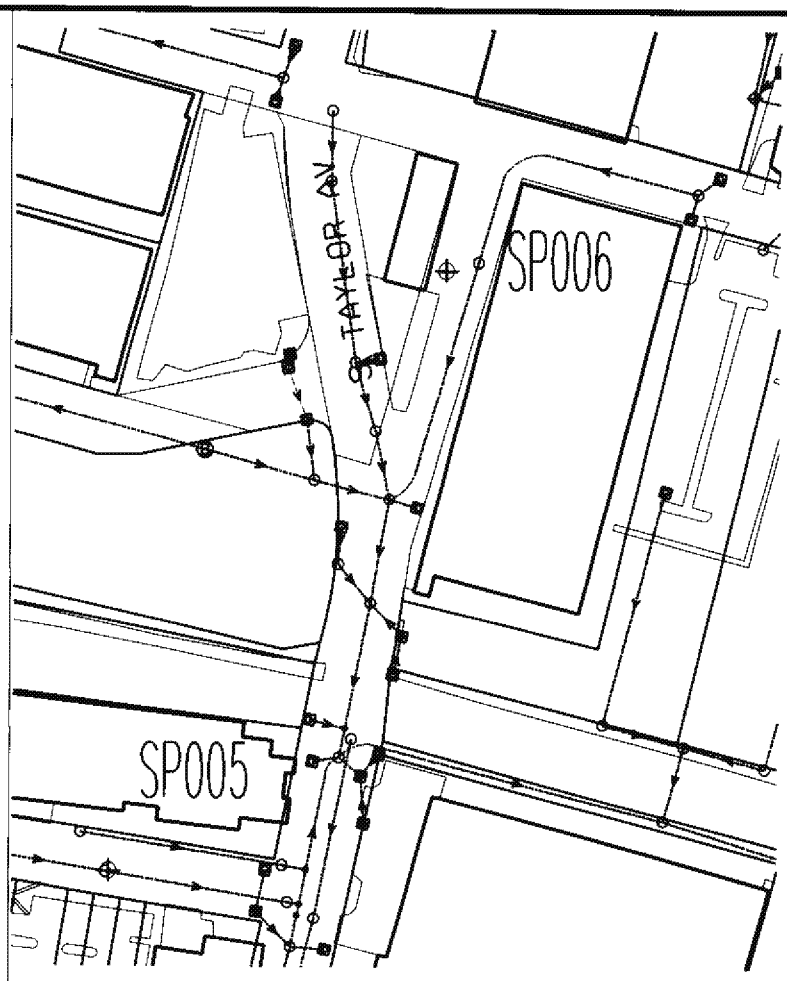
MSD-DEC INDUSTRY SAMPLING MAP

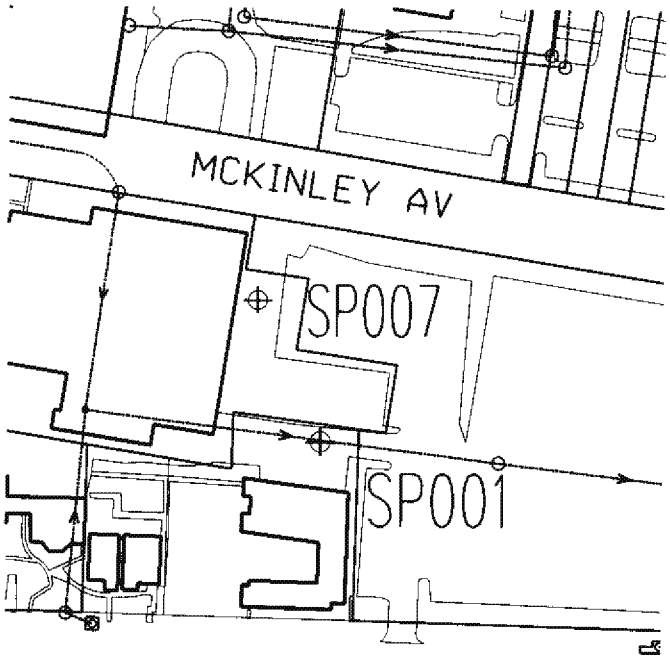
Company Name: WASHINGTON UNIVERSITY MED SCHOOL MSD Account No.: 5112216200

Premise Address: 660 S. Euclid Zip:63110 Date:1/2/09

MSD-DEC INDUSTRY SAMPLING MAP







SP001: Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

SP003: Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

SP005: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

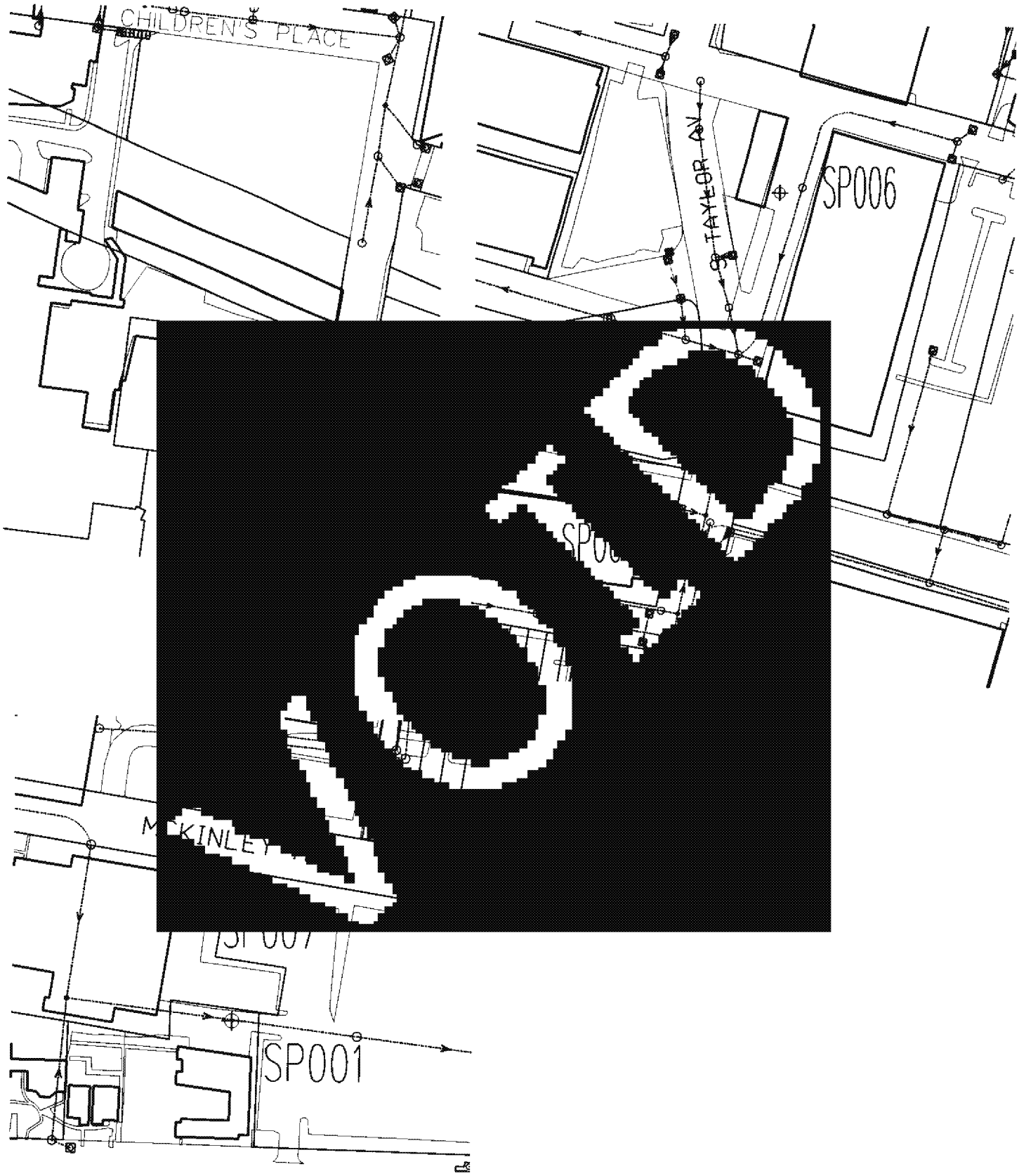
SP006: 6" clay pipe 13' N, 9' E of SE corner of building 80

SP007: Manhole in sidewalk E of Bldg 63: 111' N, 2' E of SE corner of building

Company Name: WASHINGTON UNIVERSITY MED SCHOOL MSD Account No.: 5112216200

Premise Address: 660 S. Euclid Zip: 63110 Date: 2/25/09

MSD-DEC INDUSTRY SAMPLING MAP



Company Name: WASHINGTON UNIVERSITY MED SCHOOL MSD Account No.: 5112216200

Premise Address: 660 S. Euclid Zip: 63110 Date: 1/2/09

Page 2 of 2

M D-DEC INDUSTRY SAMPLING M

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

Nearest Intersection: FOREST PARK BLVD

Wunnenberg: J20-26 Base Map: 19G3

MSD Account No.: 51122162-00

Total No. of Active Sample Points: 5

Active SP Nos: 001,003,005,006,007

Facility Contact: MIKE KOCH (362-6735)

Secondary Contact: BRUCE BACKUS (362-6816)

Must contact prior to sampling: Yes ____ No X

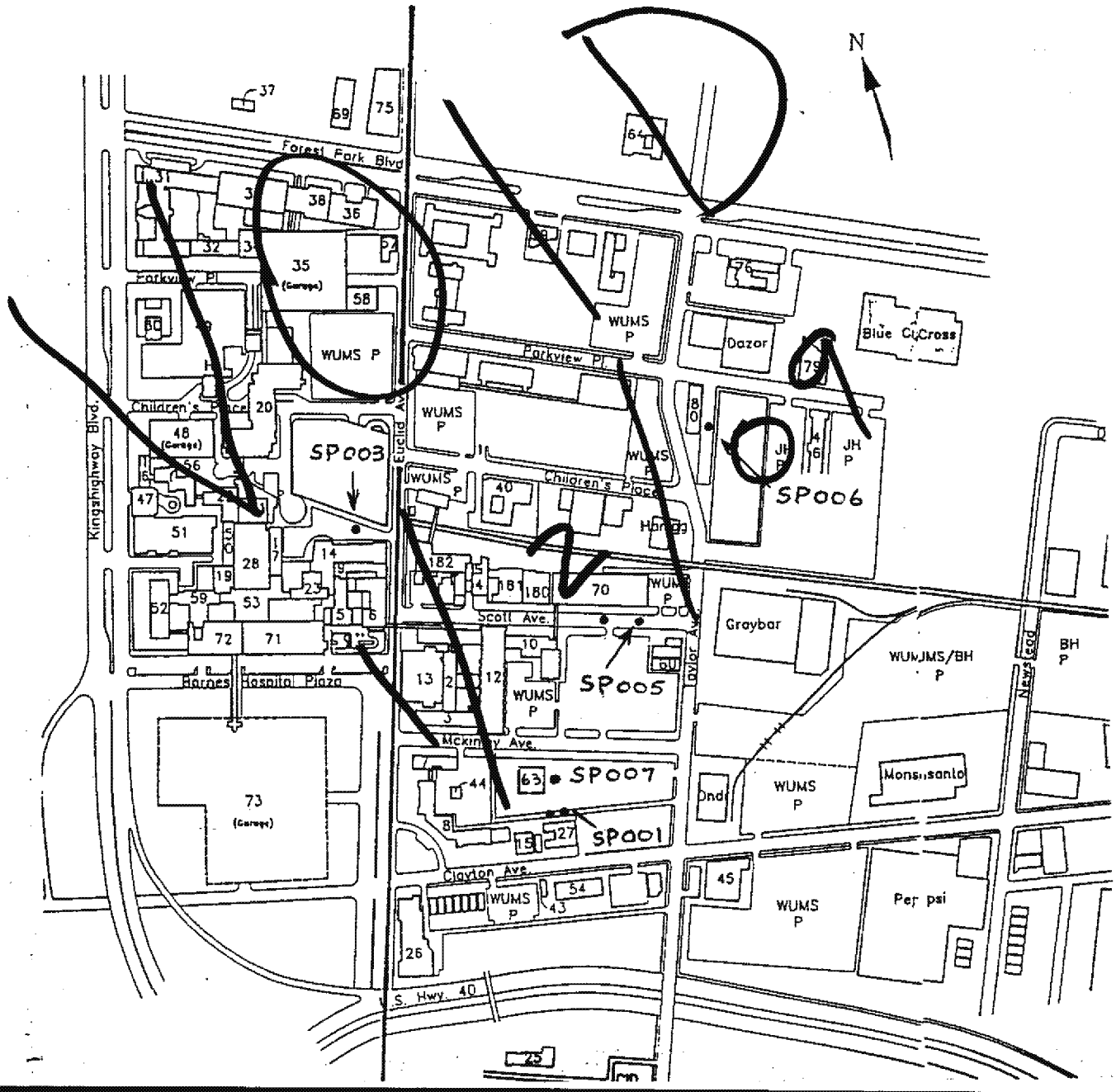
Reason: ____

Company wants to split samples: Yes ____ No X

Special Sampling Requirements or Instructions: ____

Map Effective Date: 06-18-04 By: JEG Map Revision Date: ____ By: ____

Map Revision Date: 07-06-05 By: JEG Map Void Date: ____ By: ____



SP MAP DMM-1/95-1

MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

M D-DEC INDUSTRY SAMPLING M..P

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

MSD Account No.: 51122162-00

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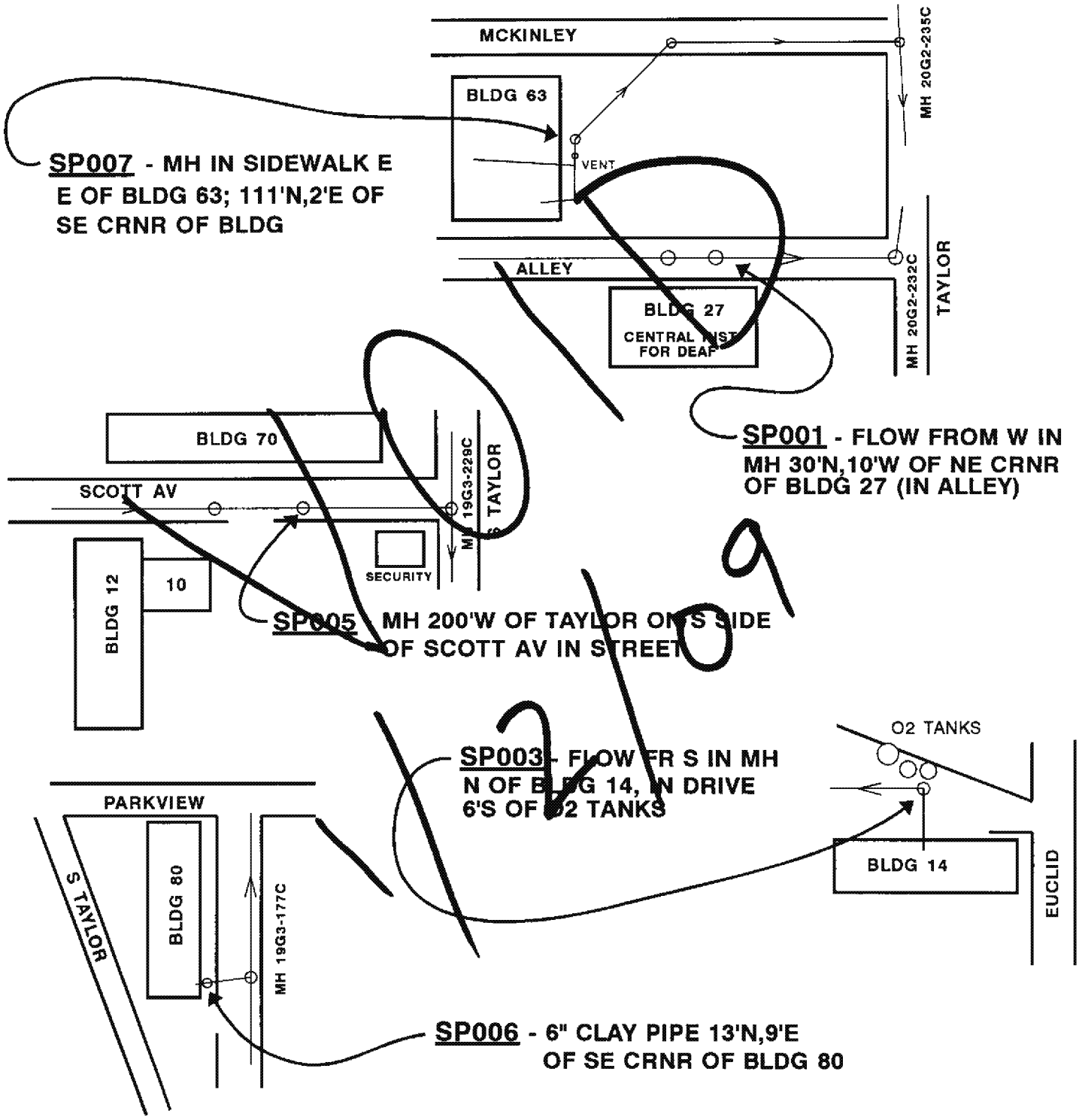
Map Revision Date: 07-06-05 By: JEG Map Void Date: By:



MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

Nearest Intersection: FOREST PARK BLVD

Wunnenberg: J20-26 Base Map: 19G3

MSD Account No.: 51122162-00

Total No. of Active Sample Points: 5

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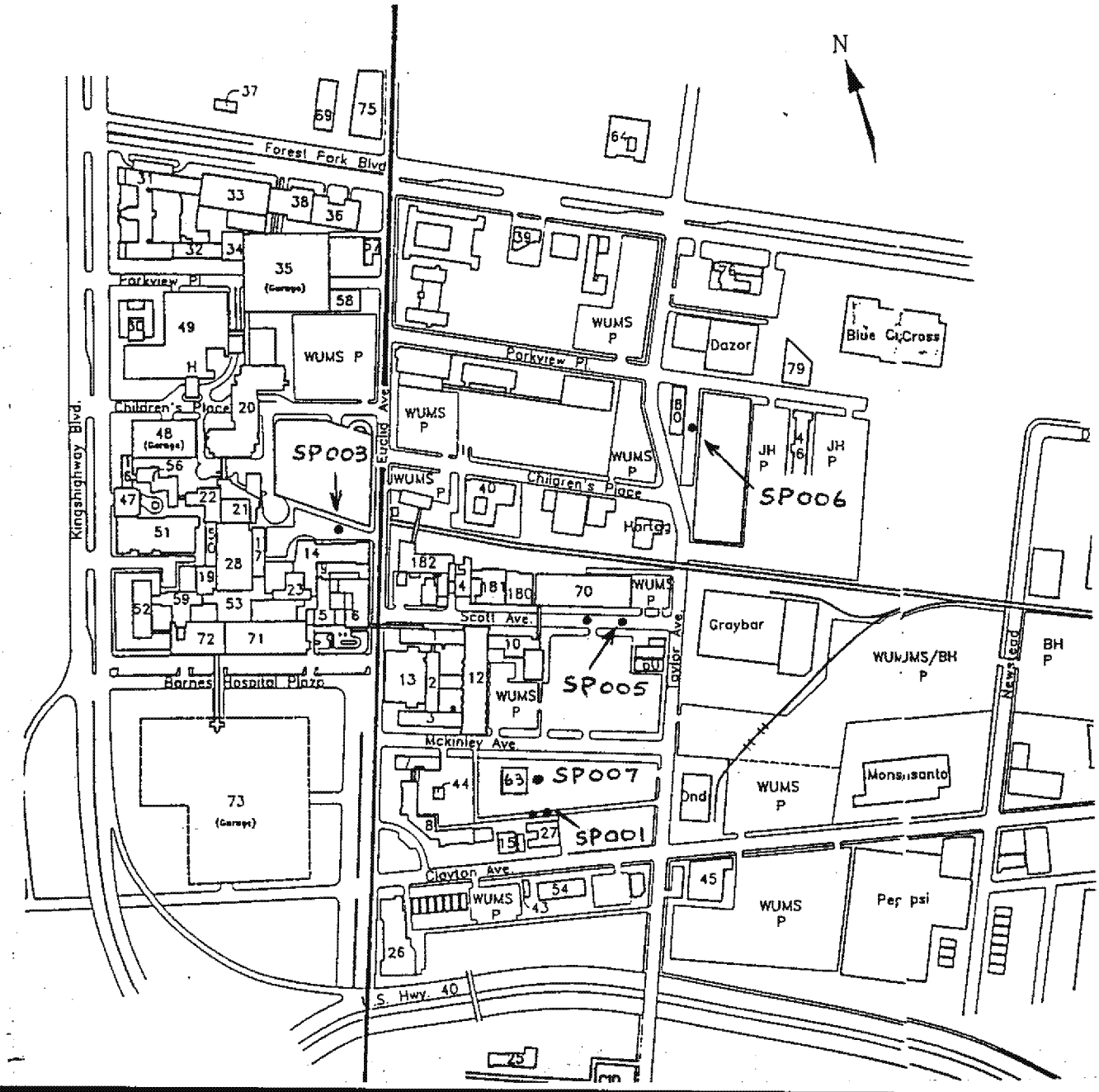
Map Revision Date: 07-06-05 By: JEG Map Void Date: ____ By: ____



SP MAP DMM-1/95-1

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MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

MSD Account No.: 51122162-00

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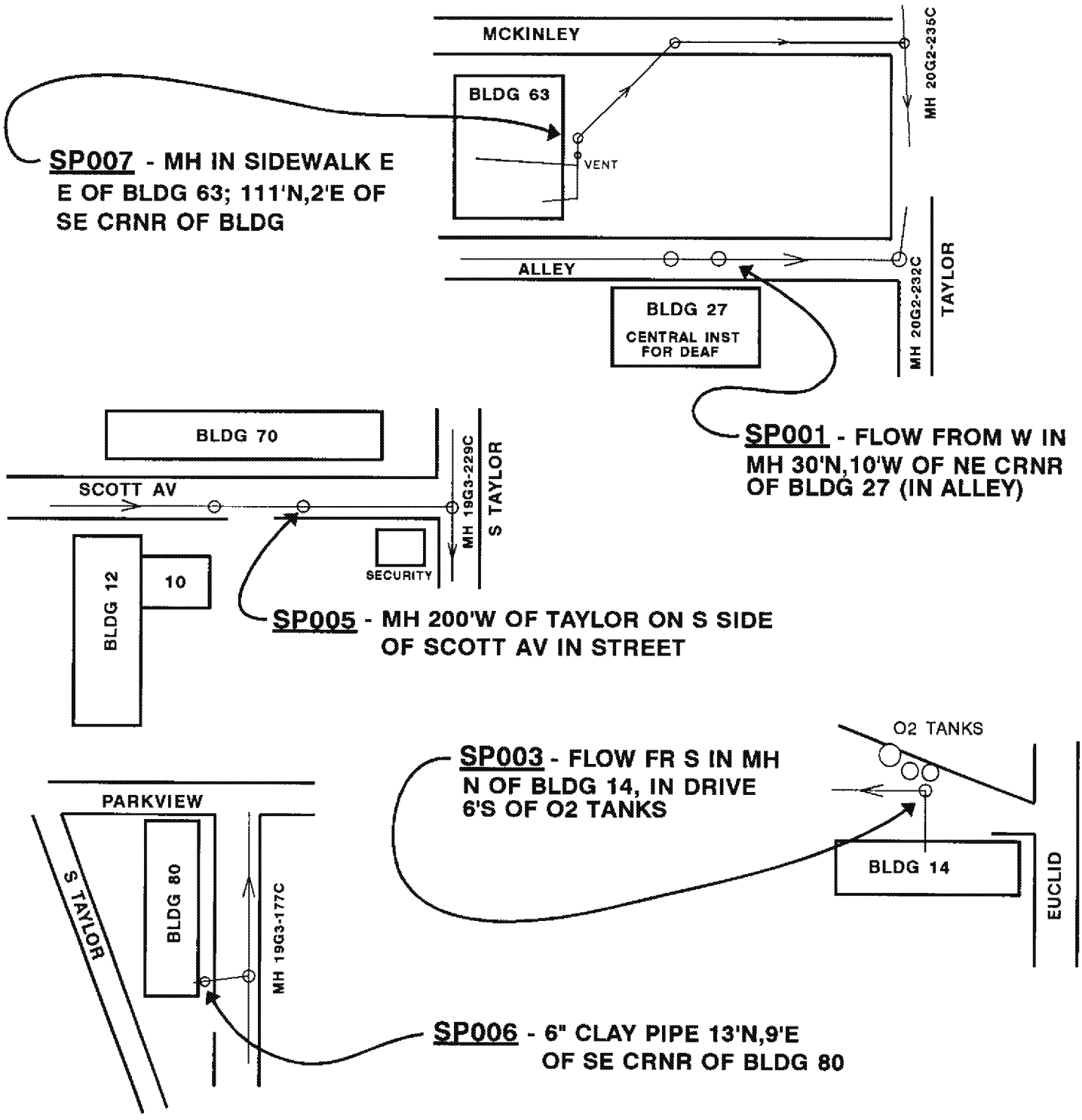


SP MAP DMM-1/95-2

MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

Nearest Intersection: FOREST PARK BLVD

Wunnenberg: J20-26 Base Map: 19G3

MSD Account No.: 51122162-00

Total No. of Active Sample Points: 4

Active SP Nos: 001,003,005,006

Facility Contact: MIKE KOCH (362-6735)

Secondary Contact: BRUCE BACKUS (362-6816)

Must contact prior to sampling: Yes ____ No X

Reason: ____

Company wants to split samples: Yes ____ No X

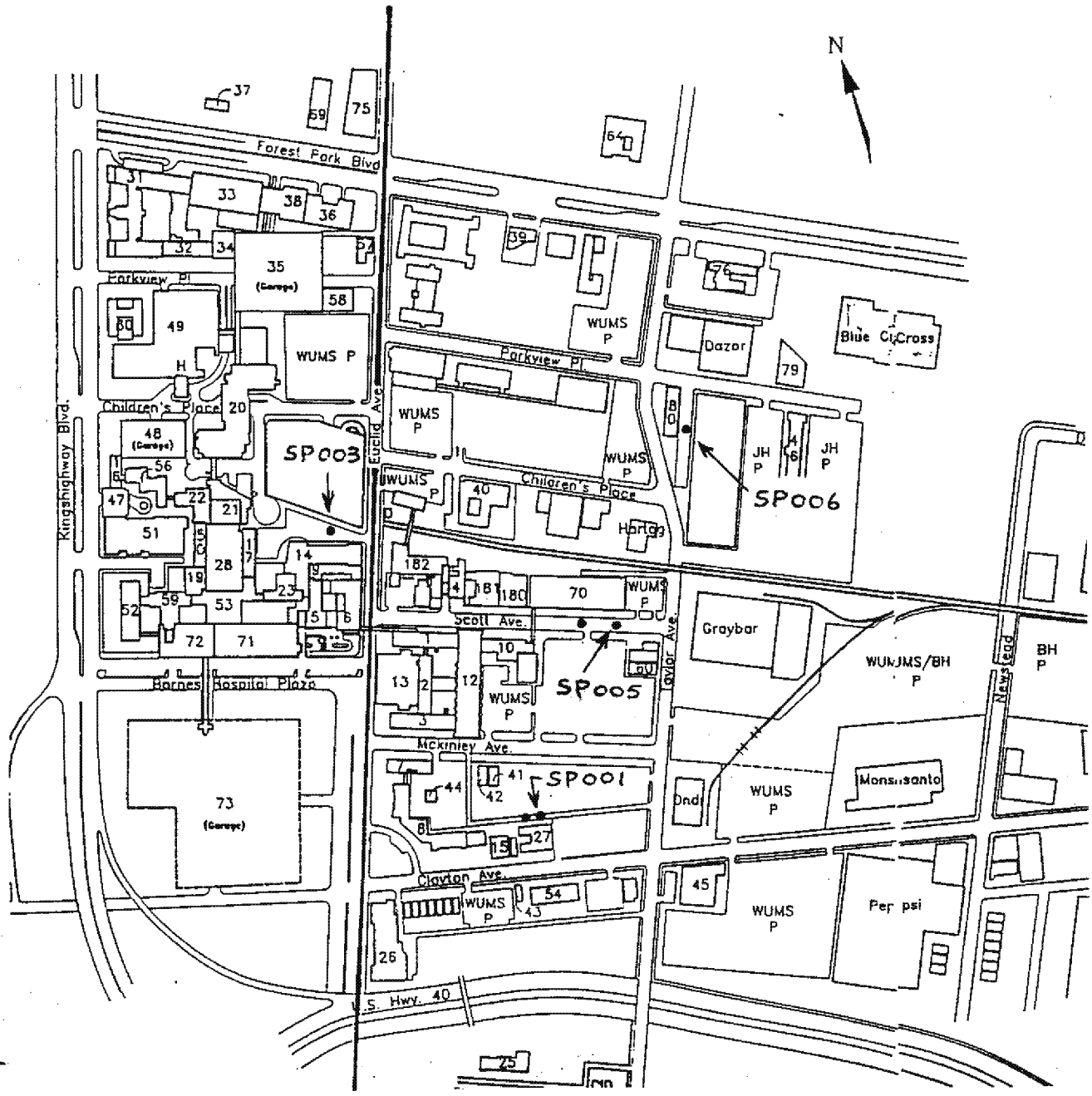
Special Sampling Requirements or Instructions:

Map Effective Date: 06-18-04 By: JEG

Map Revision Date: ____ By: ____

Map Revision Date: ____ By: ____

Map Void Date: 7/6/05 By: JEG



SP MAP DMM-1/95-1

MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

MSD

MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

MSD Account No.: 51122162-00

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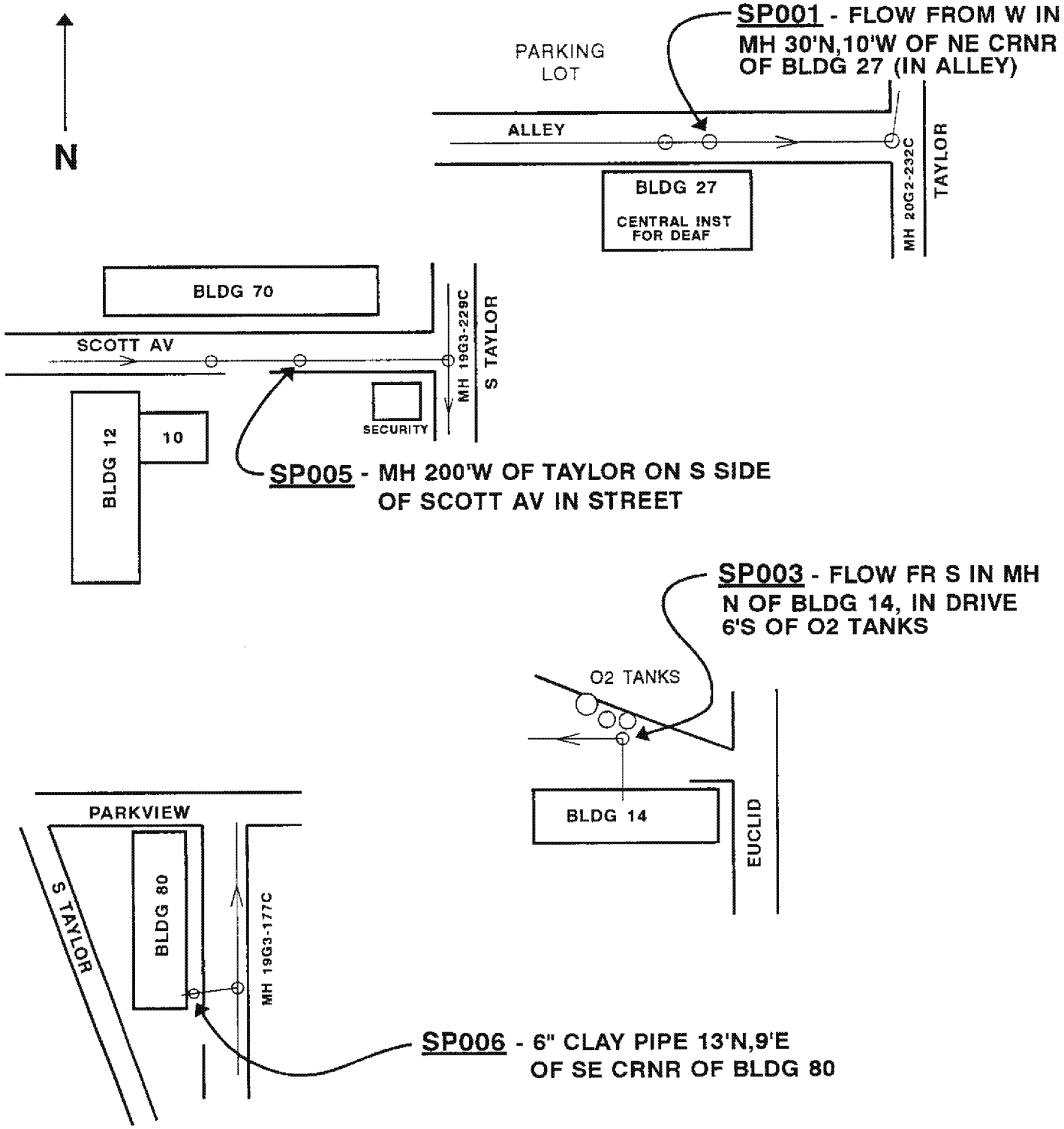
Map Revision Date: By: Map Void Date: 7/6/05 By: JEG



SP MAP DMM-1/95-2 MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

Nearest Intersection: FOREST PARK BLVD

Wunnenberg: J20-26 Base Map: 19G3

MSD Account No.: 51122162-00

Total No. of Active Sample Points: 4

Active SP Nos: 001,003,005,006

Facility Contact: MIKE KOCH (362-6735)

Secondary Contact: BRUCE BACKUS (362-6816)

Must contact prior to sampling: Yes ____ No X

Reason: ____

Company wants to split samples: Yes ____ No X

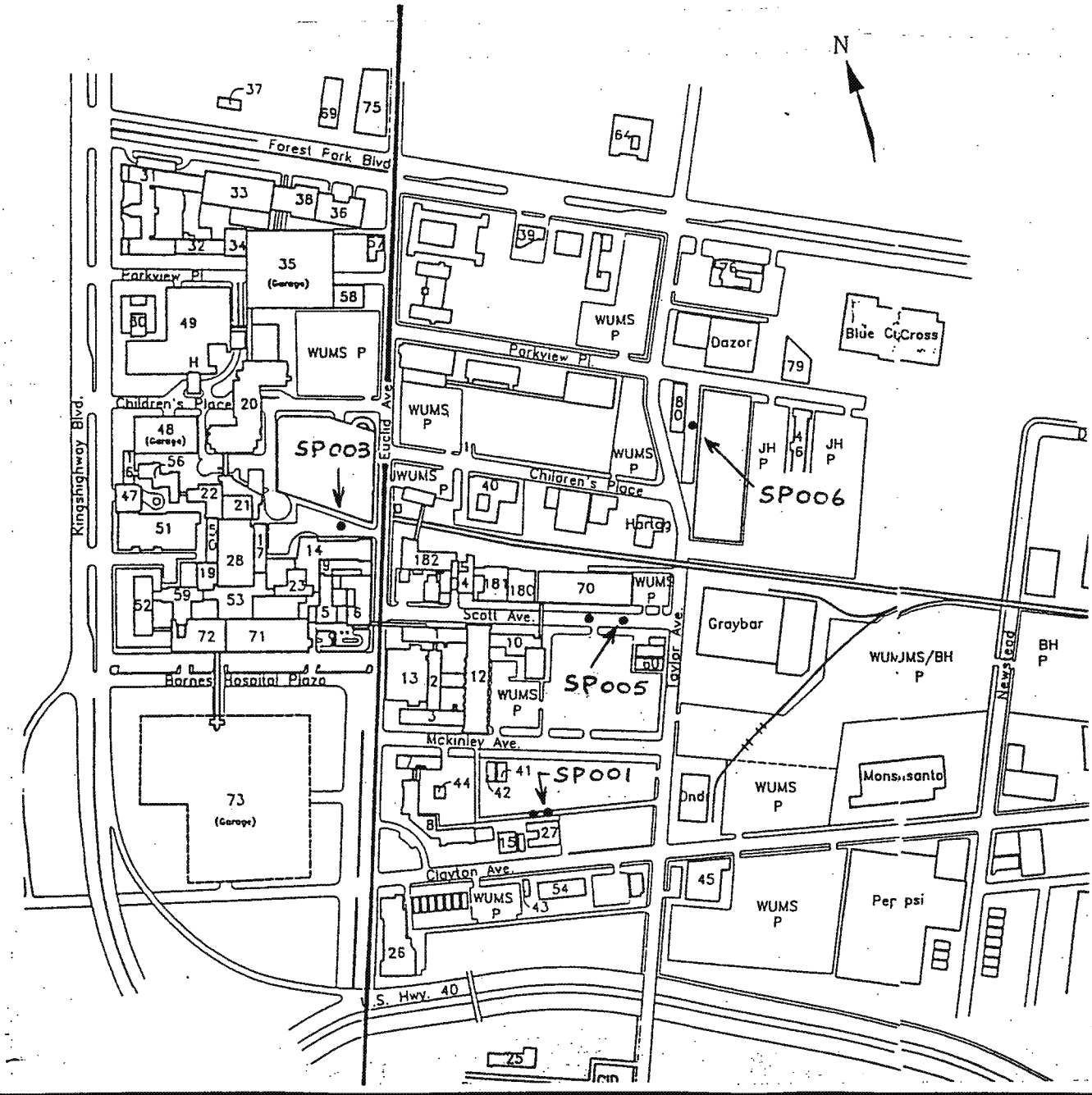
Special Sampling Requirements or Instructions:

Map Effective Date: 06-18-04 By: JEG

Map Revision Date: ____ By: ____

Map Revision Date: ____ By: ____

Map Void Date: ____ By: ____



SP MAP DMM-1/95-1

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MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

MSD Account No.: 51122162-00

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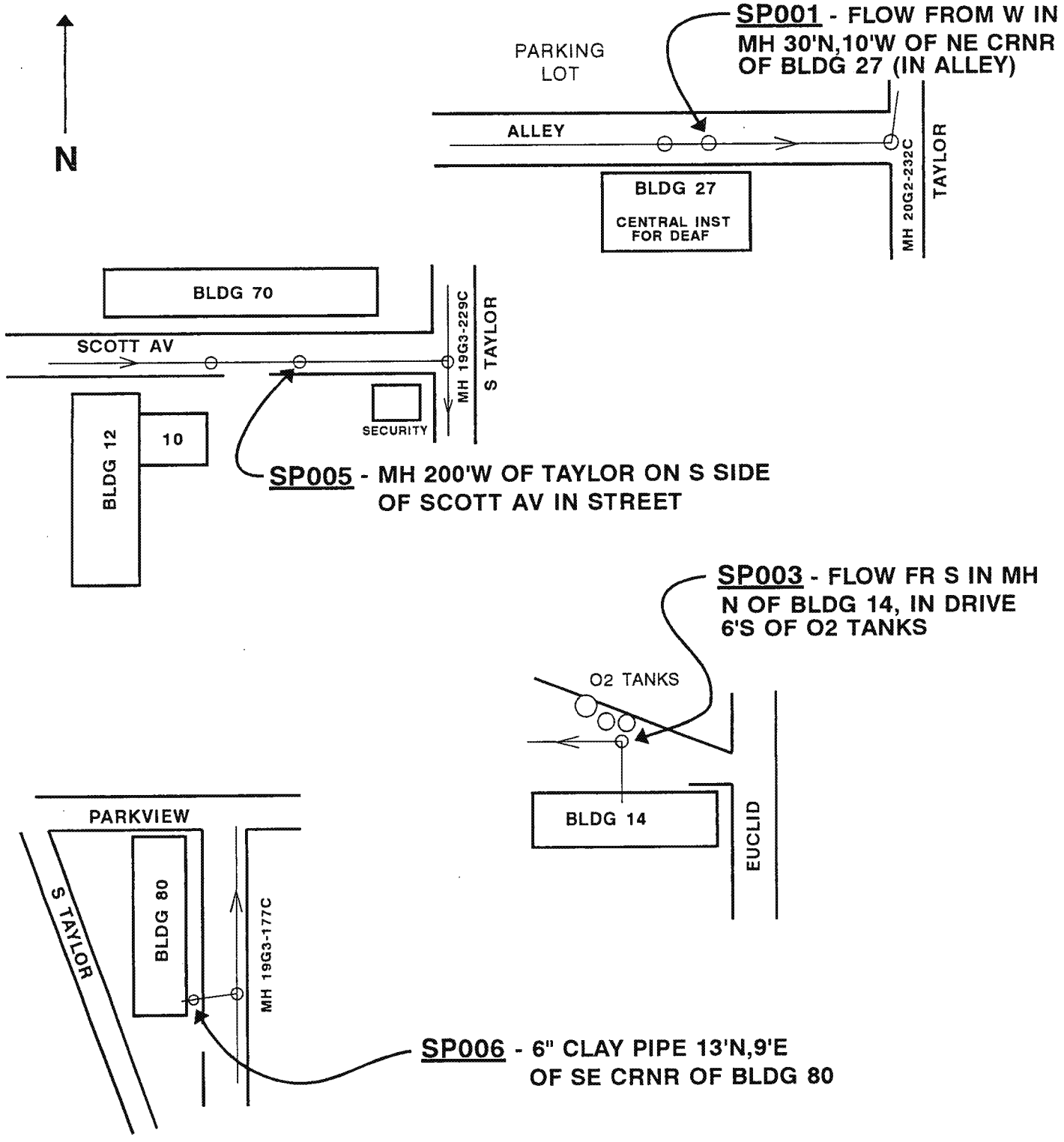

SP MAP DMM-1/95-2

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MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

Nearest Intersection: FOREST PARK BLVD

Wunnenberg: J20-26 Base Map: 19G3

MSD Account No.: 51122162-00

Total No. of Active Sample Points: 4

Active SP Nos: 001,003,005,006

Facility Contact: MIKE KERSHAW (362-6735)

Secondary Contact: BRUCE BACKUS (362-6816)

Must contact prior to sampling: Yes ____ No X

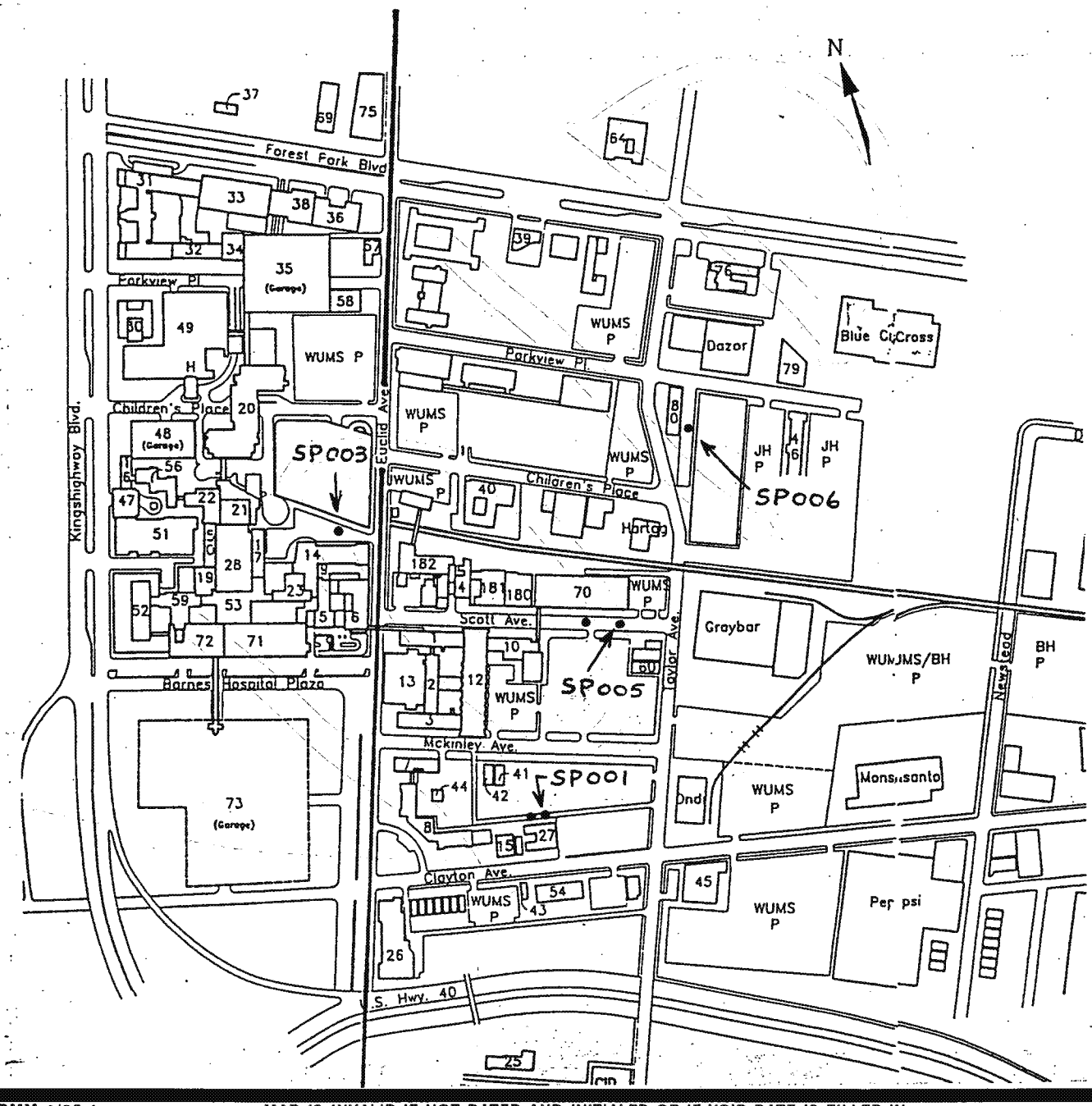
Reason: ____

Company wants to split samples: Yes ____ No X

Special Sampling Requirements or Instructions: ____

Map Effective Date: 09-02-98 By: JEG Map Revision Date: 06-19-00 By: JEG

Map Revision Date: 06-16-99 By: JEG Map Void Date: 6/18/04 By: JEG



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Premise Address: 660 S EUCLID

Zip Code: 63110

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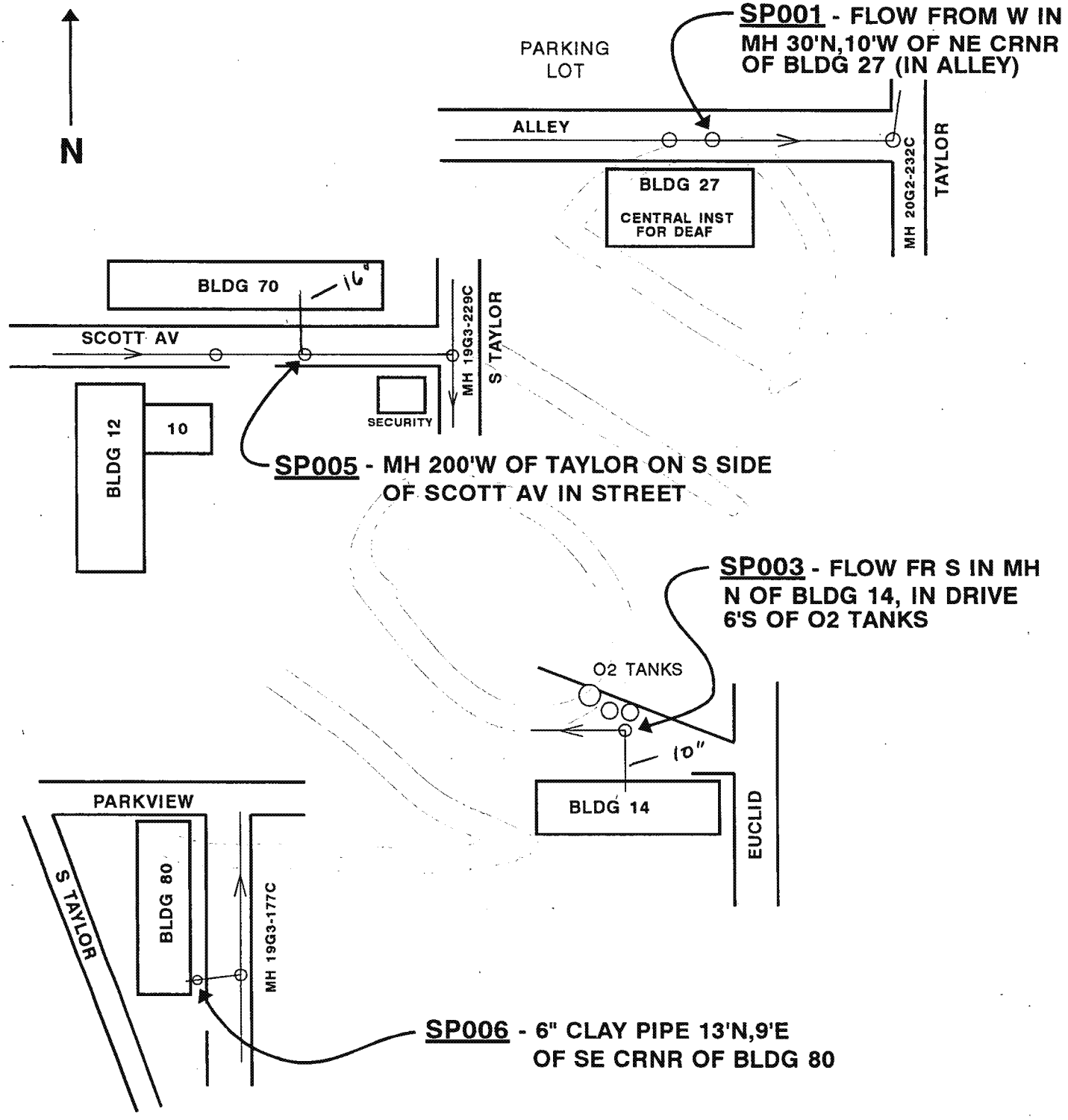

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Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

Nearest Intersection: FOREST PARK BLVD

Wunnenberg: J20-26 Base Map: 19G3

MSD Account No.: 51122162-00

Total No. of Active Sample Points: 4

Active SP Nos: 001,003,004,005

Facility Contact: MIKE KERSHAW (362-6735)

Secondary Contact: BRUCE BACKUS (362-6816)

Must contact prior to sampling: Yes _____ No X

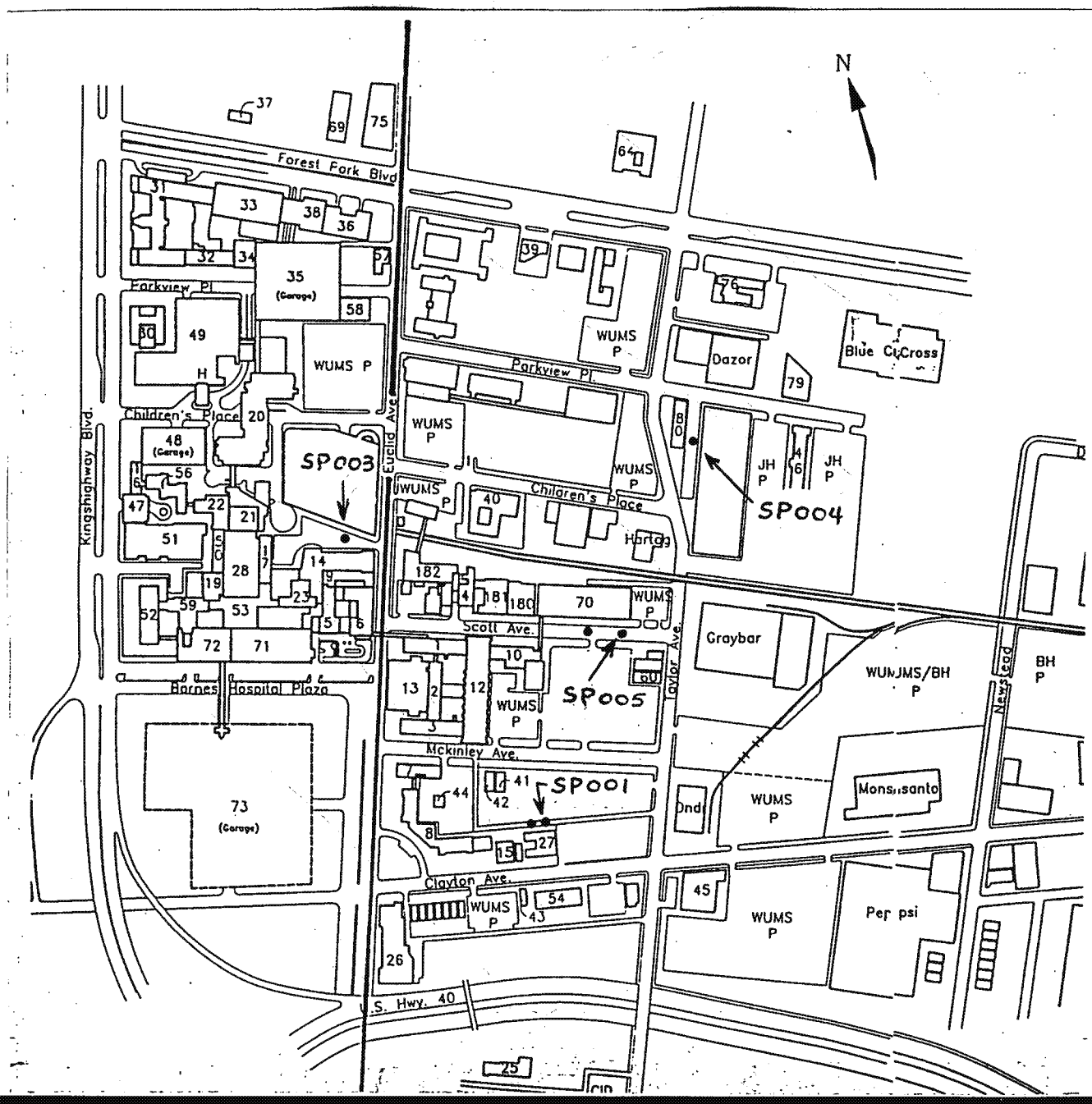
Reason: _____

Company wants to split samples: Yes _____ No X

Special Sampling Requirements or Instructions:

Map Effective Date: 09-02-98 By: JEG Map Revision Date: _____ By: _____

Map Revision Date: 06-16-99 By: JEG Map Void Date: 6/19/00 By: JEG



SP MAP DMM-1/95-1

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MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

MSD Account No.: 51122162-00

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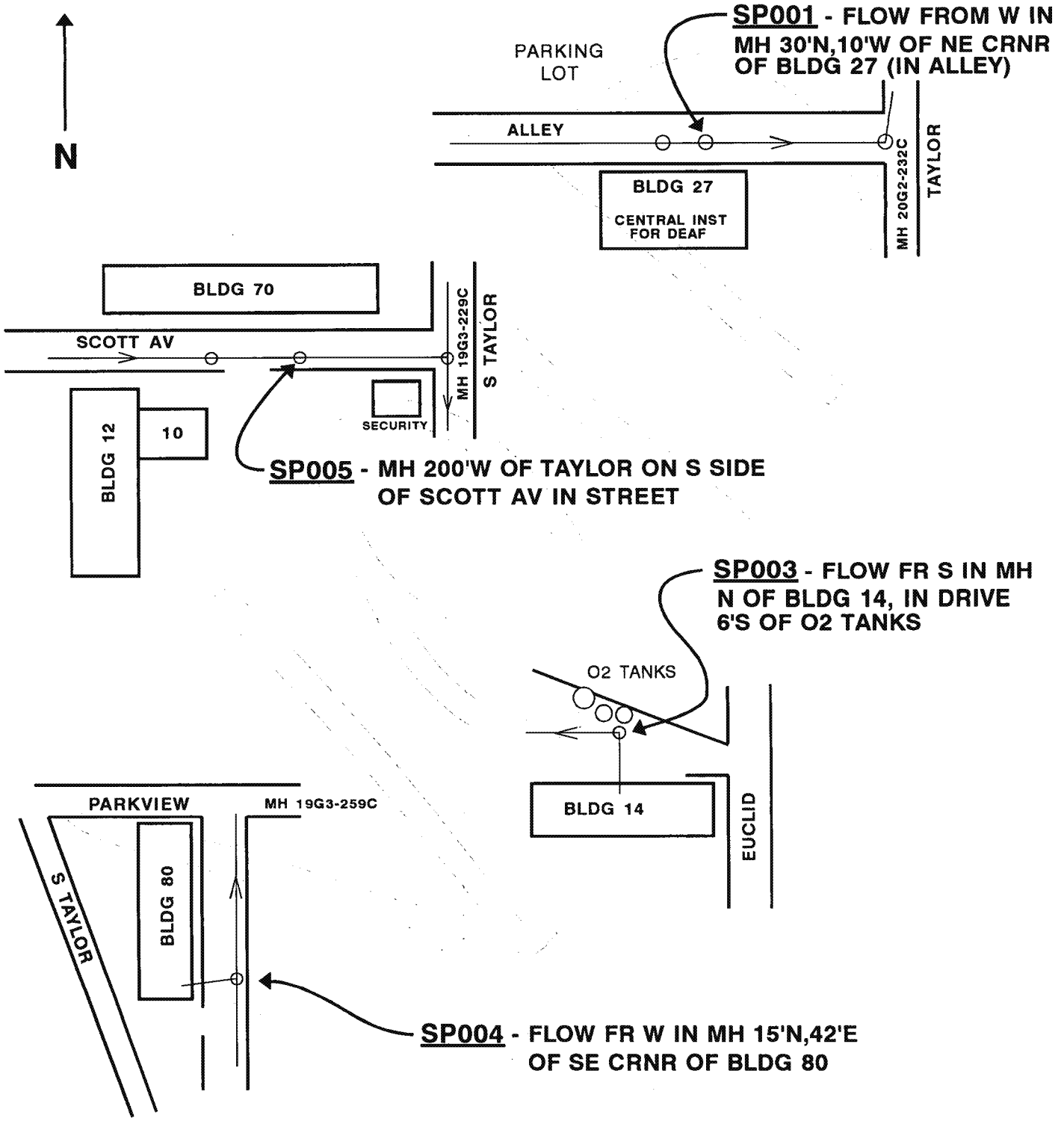
Map Revision Date: By:

Map Void Date: 6/19/00 By: JEG



SP MAP DMM-1/95-2

MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

Nearest Intersection: FOREST PARK BLVD

Wunnenberg: J20-26 Base Map: 19G3

MSD Account No.: 51122162-00

Total No. of Active Sample Points: 4

Active SP Nos: 001,002,003,004

Facility Contact: MIKE KERSHAW (362-6735)

Secondary Contact: BRUCE BACKUS (362-6816)

Must contact prior to sampling: Yes ____ No X

Reason: ____

Company wants to split samples: Yes ____ No X

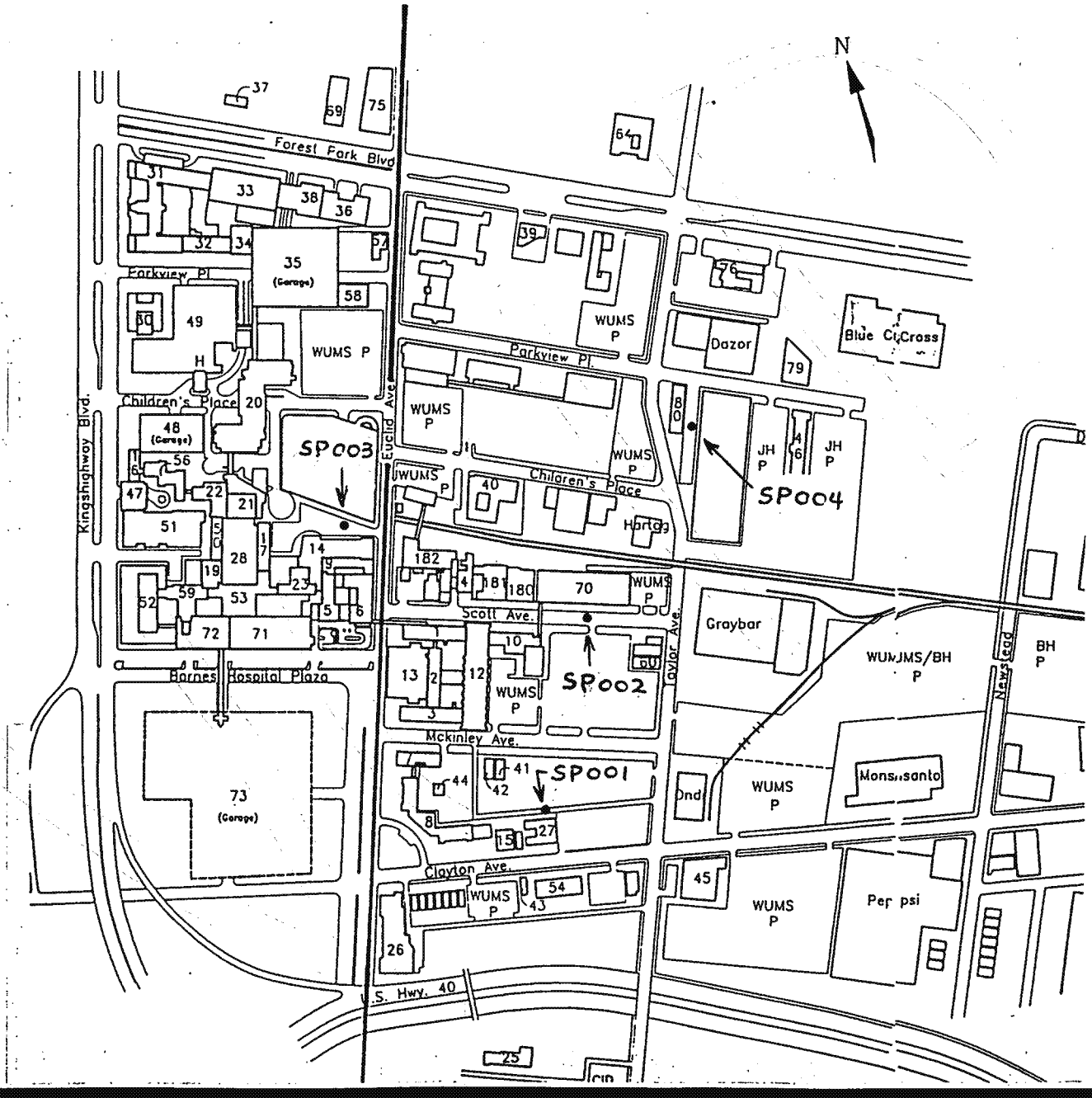
Special Sampling Requirements or Instructions: ____

Map Effective Date: 09-02-98 By: JEG

Map Revision Date: ____ By: ____

Map Revision Date: ____ By: ____

Map Void Date: 6/16/99 By: JEG



SP MAP DMM-1/95-1

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MSD-DEC INDUSTRY SAMPLING MAP

Company Name: WASH U SCHOOL OF MEDICINE

Premise Address: 660 S EUCLID

Zip Code: 63110

MSD Account No.: 51122162-00

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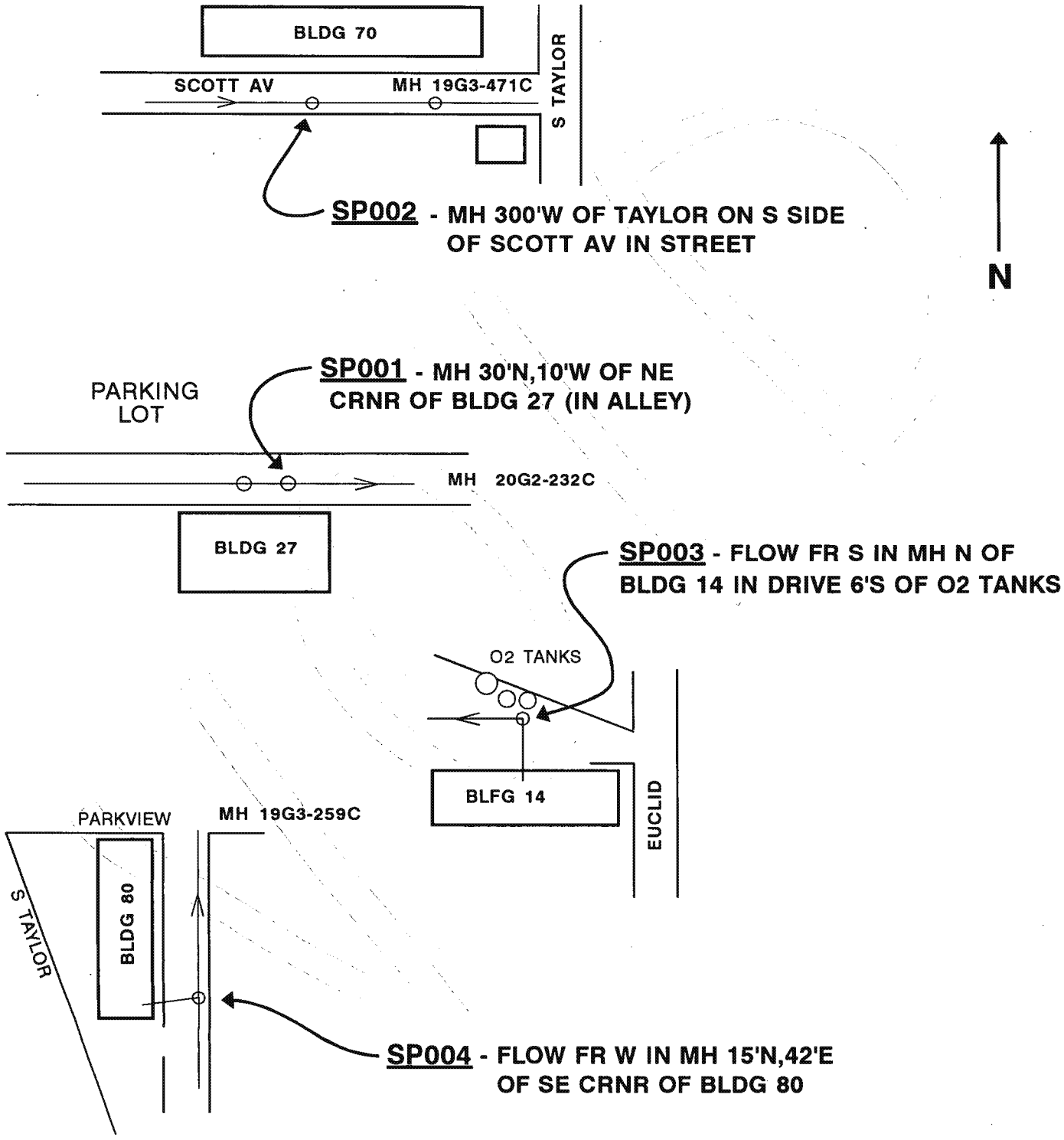
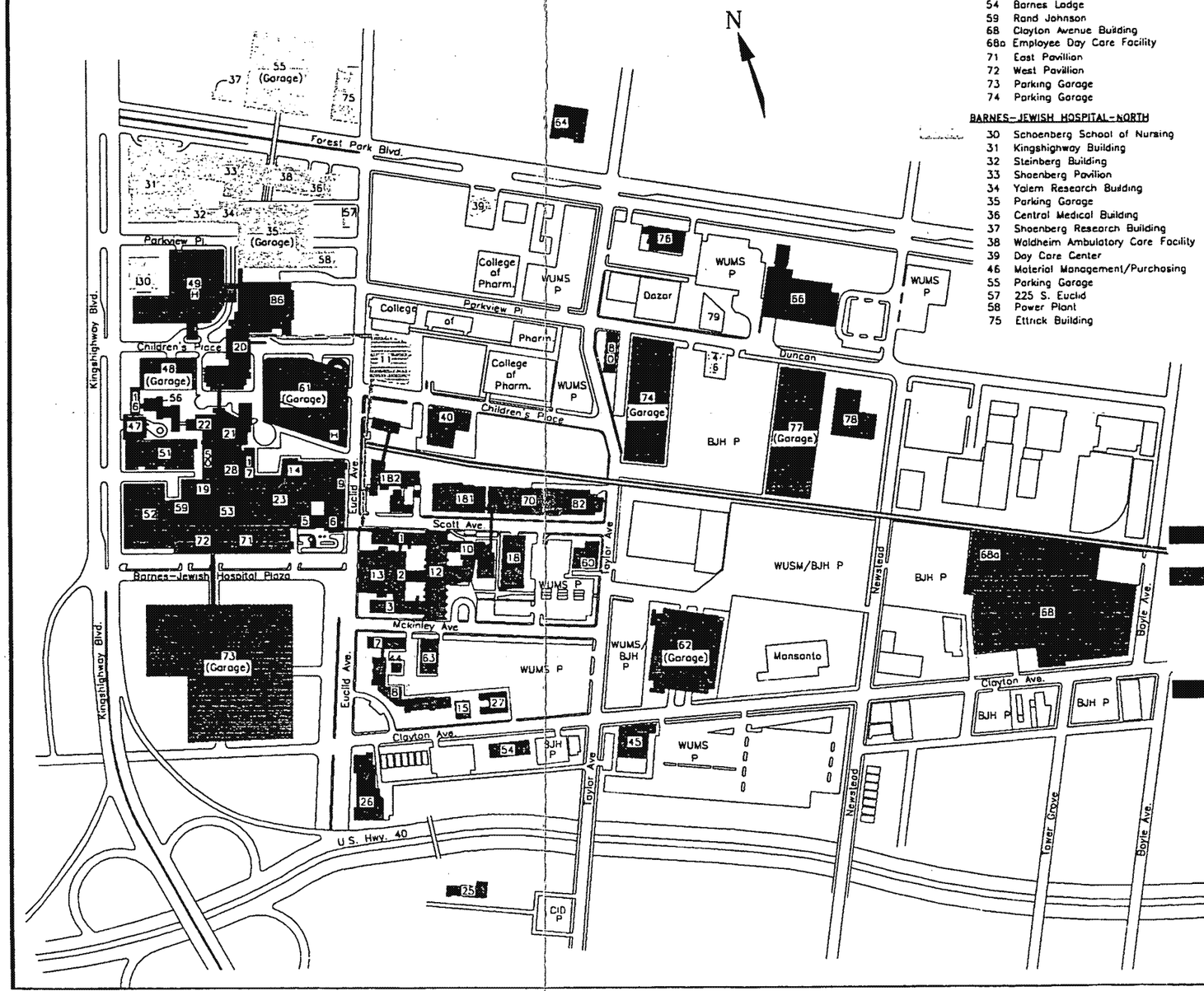


SP MAP DMM-1/95-2

MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

RECEIVED
JAN 2 9 1998
mental Compliance

WASHINGTON UNIVERSITY MEDICAL CENTER



BARNES-JEWISH HOSPITAL-SOUTH

- 23 Peters Building
- 28 Barnes Service Building
- 52 Queeny Tower
- 53 Barnes
- 54 Barnes Lodge
- 59 Rand Johnson
- 68 Clayton Avenue Building
- 68a Employee Day Care Facility
- 71 East Pavillion
- 72 West Pavillion
- 73 Parking Garage
- 74 Parking Garage

BARNES-JEWISH HOSPITAL-NORTH

- 30 Schoenberg School of Nursing
- 31 Kingshighway Building
- 32 Steinberg Building
- 33 Shoenberg Pavilion
- 34 Yalem Research Building
- 35 Parking Garage
- 36 Central Medical Building
- 37 Shoenberg Research Building
- 38 Waldheim Ambulatory Care Facility
- 39 Day Care Center
- 46 Material Management/Purchasing
- 55 Parking Garage
- 57 225 S. Euclid
- 58 Power Plant
- 75 Ettrick Building

WASHINGTON UNIVERSITY MEDICAL CENTER

- 11 Eric P Newman Education Center

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

- 1 North Building
- 2 Cancer Research Building
- 3 South Building
- 4 Occupational Therapy Program
- 5 Maternity
- 6 McMillan
- 7 Biomedical Computing Laboratory
- 8 Shriner's
- 9 Irene Walter Johnson Rehabilitation
- 10 Olin Residence Hall
- 12 McDonnell Medical Sciences Building
- 13 Medical Library
- 14 West Building
- 15 Health Administration Program
- 16 School of Nursing
- 17 Renard
- 18 East McDonnell S.R.F.
- 19 Mallinckrodt Institute of Radiology
- 20 Clinical Sciences Research Building
- 21 Wohl Clinic
- 22 Wohl Hospital
- 40 Storz Building
- 44 Plant Maintenance Storage Garage
- 45 4480 Clayton
- 56 Nurses Residence
- 60 Library Annex
- 61 Parking Garage
- 62 Parking Garage
- 63 Interim Sp. Res. Facility
- 64 4511 Forest Park Medical Center
- 66 4444 Forest Park
- 70 East Building
- 76 4488 Forest Park
- 80 4500 Parkview
- 82 East Imaging
- 86 Clinical Sciences Research Building – NTA
- 181 Biotechnology Center
- 182 Euclid Power Plant

BARNARD HOSPITAL

- 50 Barnard Hospital

CHILDREN'S HOSPITAL

- 47 Spoehrer Children's Tower
- 48 Parking Garage
- 49 Children's Hospital
- 51 Children's Annex
- 77 Parking Garage
- 78 Child Development Center

CENTRAL INSTITUTE FOR THE DEAF

- 25 Clinic/Research Building
- 26 Central Institute for the Deaf
- 27 Residence Hall

SURFACE PARKING LOTS

BJH P	– Barnes-Jewish Hospital
CID P	– Central Institute
WUMS P	– Medical School
WUSM/BJH P	– Medical School & Barnes-Jewish
H	– Heliport

Washington
WASHINGTON · UNIVERSITY · IN · ST · LOUIS
School of Medicine
OFFICE OF DESIGN & CONSTRUCTION
REV. 8/97
KVB

ACCOUNT NUMBER: **10243530-00**

COMPANY NAME: **WASHINGTON UNV MEDICAL**

CORRESPONDENCE

FROM 02-27-01 THRU 10-25-10

X	CORRESPONDANCE LOCATED IN OVERFLOW FILE

10-07-15 Moved to ARCHIVED IU files. MI

SR

METROPOLITAN SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **2010** ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	1.4132
H-3	124.6376
I-125	0.1031
P-32	0.7548
S-35	0.2958
U-238	0.0140
TOTAL ACTIVITY DISCHARGED:	**127.2185**

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

DML

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature:

Date: 10/22/2010

RE: radrpt.doc 2/00

RECEIVED
OCT 25 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

SR
10-19

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 51122162-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2009 (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001 ✓		003 ✓		005 ✓			
Dates on Which Samples Were Collected		G: 10/5/2010 C: 10/5/2010		G: 10/5/2010 C: 10/5/2010		G: 10/5/2010 C: 10/5/2010			
Times at Which Samples Were Collected		G: 8:35a.m. C: 8:37am - 3:35pm		G: 8:23 a.m. C: 8:23am - 4:23 pm		G: 8:48am C: 8:48 am - 3:27 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	28,250	E	55,500	E	450,000		Gal/Day
Biological Oxygen Demand	****	C	31	C	76	C	70		mg/L
Chemical Oxygen Demand	****	C	65	C	137	C	187		mg/L
Total Suspended Solids	****	C	52	C	38	C	79		mg/L
pH	5.5 - 11.5	G	7.72	G	7.71	G	7.88		pH
Oil & Grease	200	G	6	G	10	G	7		mg/L
Temperature	60	G	22	G	22	G	24		Celcius
Silver	0.5	C	ND	C	0.01	C	ND		mg/L
Cadmium	0.7	C	ND	C	ND	C	ND		mg/L
Chromium	5	C	ND	C	ND	C	ND		mg/L
Total Cyanide	0.4	G	ND	G	ND	G	ND		mg/L
Copper	2.7	G	ND	G	ND	G	ND		mg/L
Lead	0.4	G	ND	G	ND	G	ND		mg/L
Nickel	2.3	C	ND	C	ND	C	ND		mg/L
Selenium	0.2	C	ND	C	ND	C	ND		mg/L
Thallium	***	C	ND	C	ND	C	ND		mg/L
Zinc	3	C	0.03	C	0.05	C	0.07		mg/L
Mercury	0.01	C	ND	C	ND	C	ND		mg/L
1,1,1-Tetrachloroethane	5.844	G	ND	G	ND	G	ND		mg/L
1,1,2,2-Tetrachloroethane	5.844	G	ND	G	ND	G	ND		mg/L
1,1,2-Trichloroethane	5.844	G	ND	G	ND	G	ND		mg/L
1,1-Dichloroethane	5.844	G	ND	G	ND	G	ND		mg/L
1,1-Dichloroethene	5.844	G	ND	G	ND	G	ND		mg/L
1,2,4-Trichlorobenzene	5.844	G	ND	G	ND	G	ND		mg/L
1,2-Dichlorobenzene	5.844	G	ND	G	ND	G	ND		mg/L
1,2-Dichloroethane	5.844	G	ND	G	ND	G	ND		mg/L

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			1		3		5		
1,2-Dichloropropane	5.844	G	ND	G	ND	G	ND		mg/L
1,3-Dichlorobenzene	5.844	G	ND	G	ND	G	ND		mg/L
1,4-Dichlorobenzene	5.844	G	ND	G	ND	G	ND		mg/L
2-Chloroethyl vinyl ether	5.844	G	ND	G	ND	G	ND		mg/L
Acrolein	5.844	G	ND	G	ND	G	ND		mg/L
Acrylonitrile	5.844	G	ND	G	ND	G	ND		mg/L
Benzene	5.844	G	ND	G	ND	G	ND		mg/L
Bromodichloromethane	5.844	G	ND	G	ND	G	ND		mg/L
Bromomethane	5.844	G	ND	G	ND	G	ND		mg/L
Carbon Tetrachloride	5.844	G	ND	G	ND	G	ND		mg/L
Chlorobenzene	5.844	G	ND	G	ND	G	ND		mg/L
Chloroethane	5.844	G	ND	G	ND	G	ND		mg/L
Chloroform	5.844	G	ND	G	ND	G	ND		mg/L
Chloromethane	5.844	G	ND	G	ND	G	ND		mg/L
cis-1,3-Dichloropropene	5.844	G	ND	G	ND	G	ND		mg/L
Dibromochloromethane	5.844	G	ND	G	ND	G	ND		mg/L
Ethylbenzene	5.844	G	ND	G	ND	G	ND		mg/L
Methylene Chloride	5.844	G	ND	G	ND	G	0.077		mg/L
Naphthalene	5.844	G	ND	G	ND	G	ND		mg/L
Nitrobenzene	5.844	G	ND	G	ND	G	ND		mg/L
Tetrachloroethane	5.844	G	ND	G	ND	G	ND		mg/L
Toluene	5.844	G	ND	G	ND	G	ND		mg/L
trans-1,2-dichloroethene	5.844	G	ND	G	ND	G	ND		mg/L
trans-1,3-Dichloropropene	5.844	G	ND	G	ND	G	ND		mg/L
Trichloroethene	5.844	G	ND	G	ND	G	ND		mg/L
2,4,6-Trichlorophenol	5.844	G	ND	G	ND	G	ND		mg/L
2,4-Dichlorophenol	5.844	G	ND	G	ND	G	ND		mg/L
2,4-Dimethylphenol	5.844	G	ND	G	ND	G	ND		mg/L
2,4-Dinitrophenol	5.844	G	ND	G	ND	G	ND		mg/L
2,4-Dinitrotoluene	5.844	G	ND	G	ND	G	ND		mg/L
2,6-Dinitrotoluene	5.844	G	ND	G	ND	G	ND		mg/L
2-Chlorophenol	5.844	G	ND	G	ND	G	ND		mg/L
2-Nitrophenol	5.844	G	ND	G	ND	G	ND		mg/L
3,3-Dichlorobenzidine	5.844	G	ND	G	ND	G	ND		mg/L
4-Chloro-3-methylphenol	5.844	G	ND	G	ND	G	ND		mg/L
4-Nitrophenol	5.844	G	ND	G	ND	G	ND		mg/L
Acenaphthene	5.844	G	ND	G	ND	G	ND		mg/L
Acenaphthylene	5.844	G	ND	G	ND	G	ND		mg/L
Anthracene	5.844	G	ND	G	ND	G	ND		mg/L
Azobenzene	5.844	G	ND	G	ND	G	ND		mg/L
Benzidine	5.844	G	ND	G	ND	G	ND		mg/L
Benzo(a)pyrene	5.844	G	ND	G	ND	G	ND		mg/L
Bis(2-chloroethoxy)methane	5.844	G	ND	G	ND	G	ND		mg/L
Bis(2-Chloroethyl) ether	5.844	G	ND	G	ND	G	ND		mg/L
Bis(2-chloroisopropyl)ether	5.844	G	ND	G	ND	G	ND		mg/L
N-Nitrosodimethylamine	5.844	G	ND	G	ND	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: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 10/5/2010 C: 10/5/2010		G: 10/5/2010 C: 10/5/2010					
Times at Which Samples Were Collected		G: 8:05 AM C: 8:05 am - 4:05 pm		G: 8:20 AM C: 8:32 am - 3:32 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	8,900				Gal/Day
Biological Oxygen Demand	****	C	43	C	31				mg/L
Chemical Oxygen Demand	****	C	107	C	10				mg/L
Total Suspended Solids	****	C	56	C	24				mg/L
pH	5.5 - 11.5	G	8.66	G	7.9				pH
Oil & Grease	200	G	ND	G	ND				mg/L
Temperature	60	G	19	G	26				Celcius
Silver	0.5	C	ND	C	ND				mg/L
Cadmium	0.7	C	ND	C	ND				mg/L
Chromium	5	C	ND	C	ND				mg/L
Total Cyanide	0.4	G	ND	G	ND				mg/L
Copper	2.7	G	ND	G	0.07				mg/L
Lead	0.4	G	ND	G	ND				mg/L
Nickel	2.3	C	ND	C	ND				mg/L
Selenium	0.2	C	ND	C	ND				mg/L
Thallium	***	C	ND	C	ND				mg/L
Zinc	3	C	0.13	C	0.04				mg/L
Mercury	0.01	C	ND	C	ND				mg/L
1,1,1-Tetrachloroethane	5.844	G	ND	G	ND				mg/L
1,1,2,2-Tetrachloroethane	5.844	G	ND	G	ND				mg/L
1,1,2-Trichloroethane	5.844	G	ND	G	0.007				mg/L
1,1-Dichloroethane	5.844	G	ND	G	ND				mg/L
1,1-Dichloroethene	5.844	G	ND	G	ND				mg/L
1,2,4-Trichlorobenzene	5.844	G	ND	G	ND				mg/L
1,2-Dichlorobenzene	5.844	G	ND	G	ND				mg/L
1,2-Dichloroethane	5.844	G	ND	G	ND				mg/L

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			6 ✓		7 ✓				
1,2-Dichloropropane	5.844	G	ND	G	ND				mg/L
1,3-Dichlorobenzene	5.844	G	ND	G	ND				mg/L
1,4-Dichlorobenzene	5.844	G	ND	G	ND				mg/L
2-Chloroethyl vinyl ether	5.844	G	ND	G	ND				mg/L
Acrolein	5.844	G	ND	G	ND				mg/L
Acrylonitrile	5.844	G	ND	G	ND				mg/L
Benzene	5.844	G	ND	G	ND				mg/L
Bromodichloromethane	5.844	G	ND	G	ND				mg/L
Bromomethane	5.844	G	ND	G	ND				mg/L
Carbon Tetrachloride	5.844	G	ND	G	ND				mg/L
Chlorobenzene	5.844	G	ND	G	ND				mg/L
Chloroethane	5.844	G	ND	G	ND				mg/L
Chloroform	5.844	G	0.0052	G	ND				mg/L
Chloromethane	5.844	G	ND	G	ND				mg/L
cis-1,3-Dichloropropene	5.844	G	ND	G	ND				mg/L
Dibromochloromethane	5.844	G	ND	G	ND				mg/L
Ethylbenzene	5.844	G	ND	G	ND				mg/L
Methylene Chloride	5.844	G	ND	G	ND				mg/L
Naphthalene	5.844	G	ND	G	ND				mg/L
Nitrobenzene	5.844	G	ND	G	ND				mg/L
Tetrachloroethane	5.844	G	ND	G	ND				mg/L
Toluene	5.844	G	ND	G	ND				mg/L
trans-1,2-dichloroethene	5.844	G	ND	G	ND				mg/L
trans-1,3-Dichloropropene	5.844	G	ND	G	ND				mg/L
Trichloroethene	5.844	G	ND	G	ND				mg/L
2,4,6-Trichlorophenol	5.844	G	ND	G	ND				mg/L
2,4-Dichlorophenol	5.844	G	ND	G	ND				mg/L
2,4-Dimethylphenol	5.844	G	ND	G	ND				mg/L
2,4-Dinitrophenol	5.844	G	ND	G	ND				mg/L
2,4-Dinitrotoluene	5.844	G	ND	G	ND				mg/L
2,6-Dinitrotoluene	5.844	G	ND	G	ND				mg/L
2-Chlorophenol	5.844	G	ND	G	ND				mg/L
2-Nitrophenol	5.844	G	ND	G	ND				mg/L
3,3-Dichlorobenzidine	5.844	G	ND	G	ND				mg/L
4-Chloro-3-methylphenol	5.844	G	ND	G	ND				mg/L
4-Nitrophenol	5.844	G	ND	G	ND				mg/L
Acenaphthene	5.844	G	ND	G	ND				mg/L
Acenaphthylene	5.844	G	ND	G	ND				mg/L
Anthracene	5.844	G	ND	G	ND				mg/L
Azobenzene	5.844	G	ND	G	ND				mg/L
Benzidine	5.844	G	ND	G	ND				mg/L
Benzo(a)pyrene	5.844	G	ND	G	ND				mg/L
Bis(2-chloroethoxy)methane	5.844	G	ND	G	ND				mg/L
Bis(2-Chloroethyl) ether	5.844	G	ND	G	ND				mg/L
Bis(2-chloroisopropyl)ether	5.844	G	ND	G	ND				mg/L
N-Nitrosodimethylamine	5.844	G	ND	G	ND				mg/L
Phenol	5.844	G	ND	G	ND				mg/L

October 13, 2010
Lab No. 10E-1720
P.O. No. 2909987P
Invoice No. 125819

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110
Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 10/05/10, 8:37 A.M.
WASTEWATER COMPOSITE, SP 001, 10/05/10, 8:37 A.M. – 3:35 P.M.
WASTEWATER GRAB, SP 003, 10/05/10, 8:23 A.M.
WASTEWATER COMPOSITE, SP 003, 10/05/10, 8:23 A.M. – 4:23 P.M.
WASTEWATER GRAB, SP 005, 10/05/10, 8:48 A.M.
WASTEWATER COMPOSITE, SP 005, 10/05/10, 8:48 A.M. – 3:27 P.M.
WASTEWATER GRAB, SP 006, 10/05/10, 8:05 A.M.
WASTEWATER COMPOSITE, SP 006, 10/05/10, 8:05 A.M. 4:05 P.M.
WASTEWATER GRAB, SP 007, 10/05/10, 8:32 A.M.
WASTEWATER COMPOSITE, SP 007, 10/05/10, 8:32 A.M. – 3:32 P.M.

Units: mg/L Except As Noted

ANALYTE	SP 001	SP 003	SP 005	SP 006	SP 007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	31	76	70	43	31	10	405.1
Chemical Oxygen Demand (C)	65	137	187	112	107	10	410.4
Total Suspended Solids (C)	52	38	79	56	24	5	160.2
pH (Std. pH Units) (G)	7.72	7.71	7.88	8.66	7.90	---	150.1
Temperature, °C (G)	22	22	24	19	26	---	170.1
Oil & Grease (G)	6	10	7	ND	ND	5	1664
Total Cyanide (G)	ND	ND	ND	ND	ND	0.02	335.2

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

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REPORT OF TESTS

Units: mg/L

ANALYTE 9+1	SP 001	SP 003	SP 005	SP 006	SP 007	MQL	METHOD NUMBER
Cadmium (C)	ND	ND	ND	ND	ND	0.01	200.8
Chromium (C)	ND	ND	ND	ND	ND	0.01	200.8
Copper (C)	ND	ND	ND	ND	ND	0.01	200.8
Lead (C)	ND	ND	ND	ND	ND	0.01	200.8
Nickel (C)	ND	ND	ND	ND	ND	0.01	200.8
Selenium (C)	ND	ND	ND	ND	ND	0.01	200.8
Silver (C)	ND	0.01	ND	ND	ND	0.01	200.8
Thallium (C)	ND	ND	ND	ND	ND	0.01	200.8
Zinc (C)	0.03	0.05	0.07	0.13	0.04	0.01	200.8
Mercury (C)	ND	ND	ND	ND	ND	0.005	200.8

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite

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WASHINGTON UNIVERSITY
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660 South Euclid Ave.
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Attention: Livi Isringhausen

Units: µg/L **VOLATILE ORGANIC COMPOUNDS BY SW-846 5030, 8260B**

ANALYTE	SP001 (G)	SP 006 (G)	SP 007 (G)	MQL
1,1,1,-Trichloroethane	ND	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	ND	5
1,1,2- Trichloroethane	ND	ND	ND	5
1,1-Dichloroethane	ND	ND	ND	5
1,1-Dichloroethene	ND	ND	ND	5
1,2,4-Trichlorobenzene	ND	ND	ND	5
1,2- Dichlorobenzene	ND	ND	ND	5
1,2-Dichloroethane	ND	ND	ND	5
1,2- Dichloropropane	ND	ND	ND	5
1,3- Dichlorobenzene	ND	ND	ND	5
1,4- Dichlorobenzene	ND	ND	ND	5
2-Chloroethyl vinyl ether	ND	ND	ND	20
Acrolein	ND	ND	ND	100
Acrylonitrile	ND	ND	ND	5
Benzene	ND	ND	ND	2
Bromodichloromethane	ND	ND	ND	5
Bromomethane	ND	ND	ND	10
Carbon tetrachloride	ND	ND	ND	5
Chlorobenzene	ND	ND	ND	5
Chloroethane	ND	ND	ND	10
Chloroform	ND	5.2	ND	5
Chloromethane	ND	ND	ND	10
cis-1,3 – Dichloropropene	ND	ND	ND	5
Dibromochloromethane	ND	ND	ND	5
Ethylbenzene	ND	ND	ND	5
Methylene chloride	ND	ND	ND	5
Naphthalene	ND	ND	ND	10
Nitrobenzene	ND	ND	ND	50
Tetrachloroethene	ND	ND	ND	5
Toluene	ND	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	ND	5
Trichloroethene	ND	ND	ND	5

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(G) = Grab Sample
Date of Analysis: 10/10/10

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St. Louis, MO 63110
Attention: Livi Isringhausen

Units: µg/L **VOLATILE ORGANIC COMPOUNDS BY SW-846 5030, 8260B**

ANALYTE	SP003 (G)	*MQL
1,1,1,-Trichloroethane	ND	25
1,1,2,2-Tetrachloroethane	ND	25
1,1,2- Trichloroethane	ND	25
1,1-Dichloroethane	ND	25
1,1-Dichloroethene	ND	25
1,2,4-Trichlorobenzene	ND	25
1,2- Dichlorobenzene	ND	25
1,2-Dichloroethane	ND	25
1,2- Dichloropropane	ND	25
1,3- Dichlorobenzene	ND	25
1,4- Dichlorobenzene	ND	25
2-Chloroethyl vinyl ether	ND	100
Acrolein	ND	500
Acrylonitrile	ND	25
Benzene	ND	10
Bromodichloromethane	ND	25
Bromomethane	ND	50
Carbon tetrachloride	ND	25
Chlorobenzene	ND	25
Chloroethane	ND	50
Chloroform	ND	25
Chloromethane	ND	50
cis-1,3 – Dichloropropene	ND	25
Dibromochloromethane	ND	25
Ethylbenzene	ND	25
Methylene chloride	ND	25
Naphthalene	ND	50
Nitrobenzene	ND	250
Tetrachloroethene	ND	25
Toluene	ND	25
trans-1,2-Dichloroethene	ND	25
trans-1,3-Dichloropropene	ND	25
Trichloroethene	ND	25

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL
(G) = Grab Sample
Date of Analysis: 10/10/10
* Elevated MQL due to high non-target analyte(s). Dilution Factor - 5

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Invoice No. 125819

WASHINGTON UNIVERSITY
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St. Louis, MO 63110

Attention: Livi Isringhausen

Units: mg/L **SEMI-VOLATILE ORGANIC COMPOUNDS BY SW-846 3510C, METHOD 8270C**

ANALYTE	SP001 (G)	SP 003 (G)	SP 005 (G)	SP 006 (G)	SP 007 (G)	MQL
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	0.010
2,4,Dichlorophenol	ND	ND	ND	ND	ND	0.010
2,4-Dimethylphenol	ND	ND	ND	ND	ND	0.010
2,4-Dinitrophenol	ND	ND	ND	ND	ND	0.020
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	0.010
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	0.010
2-Chlorophenol	ND	ND	ND	ND	ND	0.010
2-Nitrophenol	ND	ND	ND	ND	ND	0.020
3,3-Dichlorobenzidine	ND	ND	ND	ND	ND	0.010
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	0.020
4-Nitrophenol	ND	ND	ND	ND	ND	0.020
Acenaphthene	ND	ND	ND	ND	ND	0.010
Acenaphthylene	ND	ND	ND	ND	ND	0.010
Anthracene	ND	ND	ND	ND	ND	0.010
Azobenzene	ND	ND	ND	ND	ND	0.010
Benzidine	ND	ND	ND	ND	ND	0.041
Benzo(a)pyrene	ND	ND	ND	ND	ND	0.010
Bis(2-chloroethoxy)methane	ND	ND	ND	ND	ND	0.010
Bis(2-chloroethyl)ether	ND	ND	ND	ND	ND	0.010
Bis(2-chloroisopropyl)ether	ND	ND	ND	ND	ND	0.010
N-Nitrosodimethylamine	ND	ND	ND	ND	ND	0.020
Phenol	ND	ND	0.068	ND	ND	0.005

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(G) = Grab Sample
Date of Analysis: 09/23/09

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Steve Root, Manager
Environmental Testing

SR/krd

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660 South Euclid Ave.
St. Louis, MO 63110
Attention: Livi Isringhausen

Units: µg/L **VOLATILE ORGANIC COMPOUNDS BY SW-846 5030, 8260B**

ANALYTE	SP005 (G)	*MQL
1,1,1,-Trichloroethane	ND	50
1,1,2,2-Tetrachloroethane	ND	50
1,1,2- Trichloroethane	ND	50
1,1-Dichloroethane	ND	50
1,1-Dichloroethene	ND	50
1,2,4-Trichlorobenzene	ND	50
1,2- Dichlorobenzene	ND	50
1,2-Dichloroethane	ND	50
1,2- Dichloropropane	ND	50
1,3- Dichlorobenzene	ND	50
1,4- Dichlorobenzene	ND	50
2-Chloroethyl vinyl ether	ND	200
Acrolein	ND	1000
Acrylonitrile	ND	50
Benzene	ND	20
Bromodichloromethane	ND	50
Bromomethane	ND	100
Carbon tetrachloride	ND	50
Chlorobenzene	ND	50
Chloroethane	ND	100
Chloroform	ND	50
Chloromethane	ND	100
cis-1,3 – Dichloropropene	ND	50
Dibromochloromethane	ND	50
Ethylbenzene	ND	50
Methylene chloride	76.7	50
Naphthalene	ND	100
Nitrobenzene	ND	500
Tetrachloroethene	ND	50
Toluene	ND	50
trans-1,2-Dichloroethene	ND	50
trans-1,3-Dichloropropene	ND	50
Trichloroethene	ND	50

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL
(G) = Grab Sample
Date of Analysis: 10/10/10
* Elevated MQL due to high non-target analyte(s). Dilution Factor - 10

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS**.

NONE

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION
	All permittees must sign and complete the information below:
	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: M. Olivia Isringhausen
	Title: Environmental Compliance Manager Telephone: 362-6735
	Signature: [signature] Date: 10/18/10

RECEIVED
OCT 19 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

MEMO TO: Chris Verplancke

FROM: Sara Kammerer SK

DATE: September 8, 2010

SUBJECT: **RETURN FACTOR UPDATE REVIEW**

RE: WASHINGTON UNIVERSITY
660 S. Euclid Ave., St. Louis, MO 63110

MSD Sewer Account No: 246496-4

Recommended Return Factor (RF) for future billing: 0.90
Previous Return Factor: 0.91

Total annualized consumption on this account from water agency records as of August 2010 was 53,605 CcF.

Total annualized nonsewered water from metered data and company records for cooling tower evaporation as of July 2010 was 5,500 Ccf.

We recommend RF credits be applied effective the start of the documentation program in July 2009.

Under the current Ordinance 13021 rates, this new RF equates to a revenue decrease per year as follows:

Volume Charges ($2.02/Ccf)	=	$1,082.82
Extra Strength Surcharges	=	$ 0.00
Total Revenue Decrease	=	$1,082.82

If you have any questions, please call me at 436-8763.

bv

pc Jan Zimmerman
Brian Gibson

File: RF, 5112-2162-00, WASHINGTON UNIVERSITY
IU, 5112-2162-00, WASHINGTON UNIVERSITY MEDICAL SCHOOL

SR
8-20

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00 Effective: 2/1/2009 Expiration: 12/31/2012
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2010 (Jan-Mar) (Apr-June) √ (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 7/27/2010 C: 7/27/2010		G: 7/27/2010 C: 7/27/2010		G: 7/27/2010 C: 7/27/2010			
Times at Which Samples Were Collected		G: 8:25 AM C: 8:25am-3:00pm		G: 10:30am C: 8:15am-4:15pm		G: 8:35am C: 8:35am-2:50pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	28	C	39	C	21		mg/L
Chemical Oxygen Demand	****	C	53	C	119	C	89		mg/L
Total Suspended Solids	****	C	22	C	58	C	74		mg/L
pH	5.5 - 11.5	G	8.74	G	8.22	G	8.53		pH
Oil & Grease	200	G	ND	G	13	G	ND		mg/L
Temperature	60	G	30	G	28	G	28		Celcius
Silver	0.5	C	ND	C	ND	C	ND		mg/L

You must complete and sign the certification statements on the reverse side.

RECEIVED
AUG 11 2010
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: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2010 (Jan-Mar) (Apr-June) √ (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 7/27/2010 C: 7/27/2010		G: 7/27/2010 C: 7/27/2010					
Times at Which Samples Were Collected		G: 7:55 AM C: 7:55 AM- 3:55 PM		G: 8:20 AM C: 8:20 am- 2:55 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	950.00	E	23,500.00				Gal/Day
Biological Oxygen Demand	****	C	7.00	C	24.00				mg/L
Chemical Oxygen Demand	****	C	16.00	C	16.00				mg/L
Total Suspended Solids	****	C	9.00	C	9.00				mg/L
pH	5.5 - 11.5	G	9.06	G	8.88				pH
Oil & Grease	200	G	ND	G	ND				mg/L
Temperature	60	G	28.00	G	30.00				Celcius
Silver	0.5	C	ND	C	ND				mg/L

You must complete and sign the certification statements on the reverse side.

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

August 4, 2010
Lab No. 10E-1316
P.O. No. 2909987P
Invoice No. 123159

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 7/27/10, 8:25 A.M.
WASTEWATER COMPOSITE, SP 001, 7/27/10, 8:25 A.M. – 3:00 P.M.
WASTEWATER GRAB, SP 003, 7/27/10, 10:30 A.M.
WASTEWATER COMPOSITE, SP. 003, 7/27/10, 8:15 A.M. – 4:15 P.M.
WASTEWATER GRAB, SP 005, 7/27/10, 8:35 A.M.
WASTEWATER COMPOSITE, SP 005, 7/27/10, 8:35 A.M. – 2:50 P.M.
WASTEWATER GRAB, SP 006, 7/27/10, 7:55 A.M.
WASTEWATER COMPOSITE, SP 005, 7/27/10, 7:55 A.M. – 3:55 P.M
WASTEWATER GRAB, SP 007, 7/27/10, 8:20 A.M.
WASTEWATER COMPOSITE, SP 007, 7/27/10, 8:20 A.M. – 2:55 P.M.

Units: mg/L Except As Noted

ANALYTE	006	007	MQL	METHOD NUMBER	DATE OF ANALYSIS
Biological Oxygen Demand (C)	7	24	5	405.1	08/02/10
Chemical Oxygen Demand (C)	16	40	10	410.4	07/30/10
Total Suspended Solids (C)	9	21	5	160.2	07/28/10
pH (Std. pH Units) (G)	9.06	8.88	----	150.1	07/27/10
Temperature, °C (G)	28	30	----	170.1	07/27/10
Oil & Grease (G)	ND	ND	5	1664	07/28/10
Silver (C)	ND	ND	0.05	200.7	08/01/10

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root, Manager
Environmental Testing

SR/krd

RECEIVED
AUG 11 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

August 4, 2010
Lab No. 10E-1316
P.O. No. 2909987P
Invoice No. 123159

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 7/27/10, 8:25 A.M.
WASTEWATER COMPOSITE, SP 001, 7/27/10, 8:25 A.M. – 3:00 P.M.
WASTEWATER GRAB, SP 003, 7/27/10, 10:30 A.M.
WASTEWATER COMPOSITE, SP. 003, 7/27/10, 8:15 A.M. – 4:15 P.M.
WASTEWATER GRAB, SP 005, 7/27/10, 8:35 A.M.
WASTEWATER COMPOSITE, SP 005, 7/27/10, 8:35 A.M. – 2:50 P.M.
WASTEWATER GRAB, SP 006, 7/27/10, 7:55 A.M.
WASTEWATER COMPOSITE, SP 005, 7/27/10, 7:55 A.M. – 3:55 P.M
WASTEWATER GRAB, SP 007, 7/27/10, 8:20 A.M.
WASTEWATER COMPOSITE, SP 007, 7/27/10, 8:20 A.M. – 2:55 P.M.

Units: mg/L Except As Noted

ANALYTE	001	003	005	MQL	METHOD NUMBER	DATE OF ANALYSIS
Biological Oxygen Demand (C)	28	39	21	5	405.1	08/02/10
Chemical Oxygen Demand (C)	53	119	89	10	410.4	07/30/10
Total Suspended Solids (C)	22	58	74	5	160.2	07/28/10
pH (Std. pH Units) (G)	8.74	8.22	8.53	----	150.1	07/27/10
Temperature, °C (G)	30	28	28	----	170.1	07/27/10
Oil & Grease (G)	ND	13	ND	5	1664	07/28/10
Silver (C)	ND	ND	ND	0.05	200.7	08/01/10

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

MEMBER ACIL

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NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS

INDUSTRIAL USER SELF MONITORING REPORT PAGE 2

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

NONE

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION
	All permittees must sign and complete the information below:
	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: Livi Isringhausen
	Title: Environmental Compliance Manager Telephone: 314-362-6735
	Signature: Date: 8/11/10

SR

METROPOLITAN SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **2010** ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.9907
Ca-45	0.0200
H-3	46.2159
I-125	0.1710
P-32	0.6048
S-35	0.2396
TOTAL ACTIVITY DISCHARGED:	**48.2419**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature:

Date: 07/20/2010

RE: radrpt.doc 2/00

RECEIVED
JUL 21 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

SR

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00 Effective: 2/1/2009 Expiration: 12/31/2012
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2010 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 5/6/2010 C: 5/6/2010		G: 5/6/2010 C: 5/6/2010		G: 5/6/2010 C: 5/6/2010			
Times at Which Samples Were Collected		G: 8:25 AM C: 8:25am-4:25pm		G: 8:05am C: 8:05am-4:05pm		G: 7:51am C: 7:51am-3:57pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	35	C	95	C	122		mg/L
Chemical Oxygen Demand	****	C	96	C	249	C	263		mg/L
Total Suspended Solids	****	C	57	C	76	C	75		mg/L
pH	5.5 - 11.5	G	8.06	G	7.48	G	8.75		pH
Oil & Grease 5	200	G	ND	G	15	G	6		mg/L
Temperature	60	G	23	G	18.4	G	23		Celcius
Silver .05	0.5	C	ND	C	ND	C	ND		mg/L

RECEIVED
MAY 25 2010
DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2010 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 4/12/2010 C: 4/12/2010		G: 5/6/2010 C: 5/6/2010					
Times at Which Samples Were Collected		G: 8:00 AM C: 8:00 AM- 4.00 PM		G: 8:20 AM C: 8:20 am- 4:16 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	950.00	E	23,500.00				Gal/Day
Biological Oxygen Demand	****	C	22.00	C	27.00				mg/L
Chemical Oxygen Demand	****	C	94.00	C	65.00				mg/L
Total Suspended Solids	****	C	64.00	C	35.00				mg/L
pH	5.5 - 11.5	G	7.36	G	7.80				pH
Oil & Grease 5	200	G	25.00	G	ND				mg/L
Temperature	60	G	17.70	G	25.00				Celcius
Silver .05	0.5	C	ND	C	ND				mg/L

You must complete and sign the certification statements on the reverse side.

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

May 13, 2010
Lab No. 10E-0826
P.O. No. 2910731A
Invoice No. 120180
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 05/06/10, 8:25 A.M.
WASTEWATER COMPOSITE, PT. 001, 05/06/10, 8:25 A.M. – 4:25 P.M.
WASTEWATER GRAB, PT. 003, 05/06/10, 8:05 A.M.
WASTEWATER COMPOSITE, PT. 003, 05/06/10, 8:05 A.M. – 4:05 P.M.
WASTEWATER GRAB, PT. 005, 05/06/10, 7:51 A.M.
WASTEWATER COMPOSITE, PT. 005, 05/06/10, 7:51 A.M. – 3:57 P.M.
WASTEWATER GRAB, PT. 007, 05/06/10, 8:20 A.M.
WASTEWATER COMPOSITE, PT. 007, 05/06/10, 8:20 A.M. – 4:16 P.M.

Units: mg/L Except As Noted

ANALYTE	001	003	005	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	35	56	122	27	5	405.1
Chemical Oxygen Demand (C)	96	147	263	65	10	410.4
Total Suspended Solids (C)	57	49	75	35	5	160.2
pH (Std. pH Units) (G)	8.06	7.79	8.75	7.80	----	150.1
Oil & Grease (G)	ND	14	6	ND	5	1664
Temperature, °C (G)	23	21	23	25	----	170.1
Silver (C)	ND	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root, Manager
Environmental Testing

SR/krd

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC
SEE REVERSE FOR CONDITIONS.

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS**.

NONE

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION
	All permittees must sign and complete the information below:
	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: M. Olivia Isringhausen
	Title: Environmental Compliance Manager Telephone: 314-362-6735
	Signature: [signature] Date: 5/25/10

RECEIVED

MAY 25 2010

DIVISION OF
ENVIRONMENTAL COMPLIANCE

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

April 19, 2010
Lab No. 10E-0673
P.O. No. 2910731A
Invoice No. 119323
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 006, 04/12/10, 8:00 A.M.
WASTEWATER COMPOSITE, PT. 006, 04/12/10, 8:00 A.M. – 4:00 P.M.

Units: mg/L Except As Noted

ANALYTE	006	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	22	5	405.1
Chemical Oxygen Demand (C)	94	10	410.4
Total Suspended Solids (C)	64	5	160.2
pH (Std. pH Units) (G)	7.36	----	150.1
Oil & Grease (G)	25	5	170.1
Temperature, °C (G)	17.7	----	1664
Silver (C)	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root

Steve Root, Manager
Environmental Testing

RECEIVED
MAY 25 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

SR/djl

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES INC
SEE REVERSE FOR CONDITIONS

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

April 27, 2010

M. Olivia Isringhausen
Environmental Compliance Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue, Campus Box 8229
St. Louis, MO 63110

RE: NOTICE OF VIOLATION – WASTEWATER DISCHARGE PERMIT NO. 5112216200
For premise at: 660 S. Euclid Avenue, 63110

Dear Ms. Isringhausen:

Thank you for your telephone call on April 5, 2010, and your letter dated April 14, 2010, advising MSD of your facility's failure to collect a wastewater sample at Sample Point 006. Your facility is regulated under the permit above, which requires you to self-monitor the discharge at each of the identified sampling points. Monitoring must occur for the parameters and frequency specified in your permit, and the results must be reported quarterly.

VIOLATION OF PERMIT TERMS/CONDITIONS:

Permit Standard Condition I.A.1 – requires sampling and analyses for all regulated substances at the frequencies specified in the permit. As you have informed us, MSD has not received analytical results for Sample Point 006 for the first quarter 2010 because no samples were collected.

REQUIRED ACTION/RESPONSE:

No further action or response is required. In your letter, you have addressed both the cause and a plan of corrective action. Please keep us informed of your progress.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

SM Rehmer

Scott M. Rehmer, Assistant Engineer

cc: Doug Mendoza

SR
4-23

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

5112-2162-00

Company Name: Washington University School of Medicine
Permit No: 5112262-00 Effective: 2/1/2009 Expiration: 12/31/2012
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2010 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 3/16/2010 C: 3/16/2010		G: 3/25/2010 C: 3/25/2010		G: 3/16/2010 C: 3/16/2010			
Times at Which Samples Were Collected		G: 7:50 AM C: 7:50am - 2:56pm		G: 9:10 a.m. C: 9:10am - 5:10 pm		G: 7:35am C: 7:35 am - 2:49 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	41	C	95	C	113		mg/L
Chemical Oxygen Demand	****	C	86	C	249	C	312		mg/L
Total Suspended Solids	****	C	40	C	76	C	75		mg/L
pH	5.5 - 11.5	G	8.96	G	7.48	G	9.25		pH
Oil & Grease	200	G	ND	G	15	G	ND		mg/L
Temperature	60	G	19	G	18.4	G	20		Celcius
Silver	0.5	C	ND	C	ND	C	ND		mg/L

You must complete and sign the certification statements on the reverse side.

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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: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2010 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: C:		G: 3/16/2010 C: 3/16/2010					
Times at Which Samples Were Collected		G: C:		G: 7:45 AM C: 7:45 am - 2:53 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	no flow	E	23,500				Gal/Day
Biological Oxygen Demand	****	C	no flow	C	40				mg/L
Chemical Oxygen Demand	****	C	no flow	C	85				mg/L
Total Suspended Solids	****	C	no flow	C	41				mg/L
pH	5.5 - 11.5	G	no flow	G	8.36				pH
Oil & Grease	200	G	no flow	G	ND				mg/L
Temperature	60	G	no flow	G	20				Celcius
Silver	0.5	C	no flow	C	ND				mg/L

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ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

NONE

PART IV: GENERAL CERTIFICATION STATEMENTS

B DISCHARGE MONITORING REPORT CERTIFICATION

All permittees must sign and complete the information below:

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: M. Olivia Isringhausen

Title: Environmental Compliance Manager Telephone: 314-362-6735

Signature: _____ Date: 4/7/10

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

March 23, 2010
Lab No. 10E-0488
P.O. No. 2910731A
Invoice No. 118242
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 03/16/10, 7:50 A.M.
WASTEWATER COMPOSITE, PT. 001, 03/16/10, 7:50 A.M. – 2:56 P.M.
WASTEWATER GRAB, PT. 005, 03/16/10, 7:35 A.M.
WASTEWATER COMPOSITE, PT. 005, 03/16/10, 7:35 A.M. – 2:49 P.M.
WASTEWATER GRAB, PT. 006, 03/16/10, NO FLOW
WASTEWATER COMPOSITE, PT. 006, 03/16/10, NO FLOW
WASTEWATER GRAB, PT. 007, 03/16/10, 7:45 A.M.
WASTEWATER COMPOSITE, PT. 007, 03/16/10, 7:45 A.M. – 2:53 P.M.

Units: mg/L Except As Noted

ANALYTE	001	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	41	113	NO FLOW	40	5	405.1
Chemical Oxygen Demand (C)	86	312		85	10	410.4
Total Suspended Solids (C)	40	75		41	5	160.2
pH (Std. pH Units) (G)	8.96	9.25		8.36	----	150.1
Oil & Grease (G)	ND	ND		ND	5	170.1
Temperature, °C (G)	19	20		20	----	1664
Silver (C)	ND	ND		ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root, Manager
Environmental Testing

SR/djl

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APR 23 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

MEMBER ACIL

AN OFFICIAL COPY OF THIS REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC
SEE REVERSE FOR CONDITIONS

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

March 31, 2010
Lab No. 10E-0582
P.O. No. 2910731A
Invoice No. 118595
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 003, 03/25/10, 9:10 A.M.
WASTEWATER COMPOSITE, PT. 003, 03/25/10, 9:10 A.M. – 5:10 P.M.
WASTEWATER GRAB, PT. 006, 03/25/10, NO FLOW
WASTEWATER COMPOSITE, PT. 006, 03/25/10, NO FLOW

Units: mg/L Except As Noted

ANALYTE	003	006	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	95	NO FLOW	5	405.1
Chemical Oxygen Demand (C)	249		10	410.4
Total Suspended Solids (C)	76		5	160.2
pH (Std. pH Units) (G)	7.48		----	150.1
Oil & Grease (G)	15		5	170.1
Temperature, °C (G)	18.4		----	1664
Silver (C)	ND		0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root, Manager
Environmental Testing

SR/djl

RECEIVED
APR 23 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

MEMBER ACIL

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SEE REVERSE FOR CONDITIONS.

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: S112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **2010** [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.4870
H-3	139.1002
I-125	0.1410
P-32	0.5832
S-35	0.3354
TOTAL ACTIVITY DISCHARGED:	**140.6468**

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

[DMK] 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature: D. K

Date: 04/20/2010

RE: radrpt.doc 2/00

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APR 22 2010

DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis

Environmental Health & Safety

April 14, 2010

Mr. Douglas M. Mendoza
Manager of Industrial Pretreatment
Metropolitan Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147-2913

RE: No Flow at Sample Point 006 Reported on 1st Quarter Self Monitoring Report 2010- Wastewater Discharge Permit NO. 5112216200 for premise at: 660 S. Euclid, 63110

Dear Mr. Mendoza:

With regard to the no flow at Sample Point 006 reported on our 1st Quarter Self Monitoring Report 2010, the following is WUSM's report of corrective actions, to ensure compliance with MSD reporting requirements.

The reason that WUSM reported no flow at sample point 6 is summarized below:
On March 2, 2010, WUSM hired a company to run a camera thru the drains in building # 80, as labeled on our industry sampling map (4500 Parkview). The purpose was to verify all drains were intact prior to the future closing of building #80. WUSM's sampling contractor tried to obtain a sample on March 16, 2010 at sample point 006 and reported they did not detect any flow at the sample point. On March 25, 2010, our contractor tried to retrieve another sample with no success. On April 10, 2010 another camera was dropped into the sewer at sample point 006. It showed that the trap at the sample point was clogged with sediment and, once through the clog, there was flow. It is our determination that the March 2nd sampling camera, which was fed into the sewer lines from the interior of the building, pushed sediment into the trap of sample point 006, blocking sample collection and flow measurement access at that point. The sediment in the trap of sample point 006 was cleared on April 10th and we have scheduled samples to be retaken at that site.

Corrective action:
Washington University School of Medicine instructed our testing contractor to take our samples early in the quarter so that any problems can be detected and taken care of before the end of the quarter. A WUSM employee will also oversee the sampling to insure that a sample can be obtained.

If you should need any additional information please feel free to contact me at 314-362-6735.

Sincerely,

Livi Isringhausen
Environmental Compliance Manager

Cc: Linda Vishino, EH&S
File

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APR 15 2010
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ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis, Campus Box 1010, 350 North Skinker Boulevard, St. Louis, Missouri 63130
(314) 935-9264, Fax (314) 935-9266, esafety@msnotes.wustl.edu, www.ehs.wustl.edu

WASHINGTON UNIVERSITY
MEDICAL SCHOOL
5172216200

Doug Mendoza

From: Doug Mendoza
Sent: Friday, February 26, 2010 2:15 PM
To: 'Kershman, David'
Subject: RE: New BJCIH building

Okay, David. That will work out fine.

Doug Mendoza
MSD

From: Kershman, David [mailto:kershmad@wusm.wustl.edu]
Sent: Friday, February 26, 2010 1:46 PM
To: Doug Mendoza
Subject: New BJCIH building

Doug,
Just to recap our phone conversation; for future reporting purposes I will roll the radioactive discharges to the sewer from the new BJCIH building into the 'Industrial User Radioactive Materials Discharge Report' for the Washington University Medical School Campus. I have verified that this building will be on the Medical School's Industrial Discharge Permit.

Sincerely,

David Kershman
Washington University in St. Louis
Radiation Safety Office
Office: 314-362-2996
Pager: 314-294-8392
Mobile: 314-629-3253
Fax: 314-362-2989
https://radsafety.wustl.edu

"*Thoughts lead on to purposes; purposes go forth in action; actions form habits; habits decide character; and character fixes our destiny.*" – AUTHOR UNKNOWN

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2/26/2010

SR
1-27

METROPOLITAN SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **2009** ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0246
H-3	28.5478
I-125	0.1493
P-32	0.4453
S-35	0.2971
TOTAL ACTIVITY DISCHARGED:	**29.4641**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature:

Date: 1/21/2010

RE: radrpt.doc 2/00

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JAN 2 5 2010

DIVISION OF
ENVIRONMENTAL COMPLIANCE

SR
1-8-10

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

5112-2162-00

Company Name: Washington University School of Medicine
Permit No: ~~5112262-00~~ Effective: 2/1/2009 Expiration: 12/31/2012
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2009 (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 12/17/2009 C: 12/17/2009		G: 12/17/2009 C: 12/17/2009		G: 12/17/2009 C: 12/17/2009			
Times at Which Samples Were Collected		G: 8:10 AM C: 8:10am - 3:45pm		G: 7:55 a.m. C: 7:55am - 4:00 pm		G: 8:20am C: 8:20 am - 4:05 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	75	C	122	C	152		mg/L
Chemical Oxygen Demand	****	C	160	C	339	C	319		mg/L
Total Suspended Solids	****	C	86	C	156	C	73		mg/L
pH	5.5 - 11.5	G	8.67	G	8.49	G	7.95		pH
Oil & Grease	200	G	ND	G	ND	G	7		mg/L
Temperature	60	G	19	G	14	G	16		Celcius
Silver	0.5	C	ND	C	ND	C	ND		mg/L

You must complete and sign the certification statements on the reverse side.

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ENVIRONMENTAL COMPLIANCE

MSD 043516

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2009 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 12/17/2009 C: 12/17/2009		G: 12/17/2009 C: 12/17/2009					
Times at Which Samples Were Collected		G: 10:00 AM C: 10:00 am - 6:00 pm		G: 8:05 AM C: 8:05 am - 3:40 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	950	E	23,500				Gal/Day
Biological Oxygen Demand	****	C	102	C	79				mg/L
Chemical Oxygen Demand	****	C	313	C	187				mg/L
Total Suspended Solids	****	C	134	C	6				mg/L
pH	5.5 - 11.5	G	8.85	G	8.73				pH
Oil & Grease	200	G	71	G	25				mg/L
Temperature	60	G	10	G	19				Celcius
Silver	0.5	C	ND	C	ND				mg/L

You must complete and sign the certification statements on the reverse side.

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JAN 08 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

NONE

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION
	All permittees must sign and complete the information below:
	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: M. Olivia Isringhausen
	Title: Environmental Compliance Manager Telephone: 314-362-6735
	Signature: [signature] Date: 1/4/10

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JAN 08 2010
DIVISION OF
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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

December 23, 2009
Lab No. 09E-2377
P.O. No. 2910731A
Invoice No. 115132
Page 1 of 1
(Corrected Report 01/04/10)

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 12/17/09, 8:10 A.M.
WASTEWATER COMPOSITE, PT. 001, 12/17/09, 8:10 A.M. – 3:45 P.M.
WASTEWATER GRAB, PT. 003, 12/17/09, 7:55 A.M.
WASTEWATER COMPOSITE, PT. 003, 12/17/09, 7:55 A.M. – 4:00 P.M.
WASTEWATER GRAB, PT. 005, 12/17/09, 8:20 A.M.
WASTEWATER COMPOSITE, PT. 005, 12/17/09, 8:20 A.M. – 4:05 P.M.
WASTEWATER GRAB, PT. 006, 12/17/09, 10:00 A.M.
WASTEWATER COMPOSITE, PT. 006, 12/17/09, 10:00 A.M. – 6:00 P.M.
WASTEWATER GRAB, PT. 007, 12/17/09, 8:05 A.M.
WASTEWATER COMPOSITE, PT. 007, 12/17/09, 8:05 A.M. – 3:40 P.M.

Units: mg/L Except As Noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	75	122	152	102	79	5	405.1
Chemical Oxygen Demand (C)	160	339	319	313	187	10	410.4
Total Suspended Solids (C)	86	156	72	134	6	5	160.2
pH (Std. pH Units) (G)	8.67	8.49	7.95	8.85	8.73	---	150.1
Oil & Grease (G)	ND	ND	7	71	25	5	1664
Temperature, °C (G)	19	14	16	10	19	---	170.1
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7
Copper (C)	---	---	ND	---	---	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root, Manager
Environmental Testing

SR/djl

MEMBER ACIL

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JAN 0 8 2010
DIVISION OF
ENVIRONMENTAL COMPLIANCE

SR
1-4-10

Scott Rehmer

WASH. U. MED. SCL.
660 S. EUCLID
5112-2162-00

From: Isringhausen, Mary [isringhausenm@wusm.wustl.edu]
Sent: Monday, January 04, 2010 12:21 PM
To: Scott Rehmer
Subject: FW: SLTL LAB NO. 09E-2377 Corrected
Attachments: 09E2377c-1.pdf

Good afternoon! Please see copper results for Sample point 005. I believe this is the last information needed for the NOV. Please let me know if you need anything else.

Livi Isringhausen
Environmental Compliance Manager
Washington University School of Medicine
office 314-362-6735
cell 314-713-3901
fax 314-362-1095

From: Deanna@labinc.com [mailto:Deanna@labinc.com]
Sent: Monday, January 04, 2010 11:12 AM
To: Isringhausen, Mary
Subject: SLTL LAB NO. 09E-2377 Corrected

Livi,
Please see the attached corrected report for Lab No. 09E-2377.

Thanks!

Deanna Lubenkov
Secretary
St. Louis Testing Laboratories, Inc.
(314) 531-8080

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

December 23, 2009
Lab No. 09E-2377
P.O. No. 2910731A
Invoice No. 115132
Page 1 of 1
(Corrected Report 01/04/10)

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 12/17/09, 8:10 A.M.
WASTEWATER COMPOSITE, PT. 001, 12/17/09, 8:10 A.M. – 3:45 P.M.
WASTEWATER GRAB, PT. 003, 12/17/09, 7:55 A.M.
WASTEWATER COMPOSITE, PT. 003, 12/17/09, 7:55 A.M. – 4:00 P.M.
WASTEWATER GRAB, PT. 005, 12/17/09, 8:20 A.M.
WASTEWATER COMPOSITE, PT. 005, 12/17/09, 8:20 A.M. – 4:05 P.M.
WASTEWATER GRAB, PT. 006, 12/17/09, 10:00 A.M.
WASTEWATER COMPOSITE, PT. 006, 12/17/09, 10:00 A.M. – 6:00 P.M.
WASTEWATER GRAB, PT. 007, 12/17/09, 8:05 A.M.
WASTEWATER COMPOSITE, PT. 007, 12/17/09, 8:05 A.M. – 3:40 P.M.

Units: mg/L Except As Noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	75	122	152	102	79	5	405.1
Chemical Oxygen Demand (C)	160	339	319	313	187	10	410.4
Total Suspended Solids (C)	86	156	72	134	6	5	160.2
pH (Std. pH Units) (G)	8.67	8.49	7.95	8.85	8.73	----	150.1
Oil & Grease (G)	ND	ND	7	71	25	5	1664
Temperature, °C (G)	19	14	16	10	19	----	170.1
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7
Copper (C)	----	----	ND	----	----	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root, Manager
Environmental Testing

SR/djl

MEMBER ACIL

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SEE REVERSE FOR CONDITIONS.

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 17, 2009

Livi Isringhausen
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S Euclid Ave., Campus Box 8229
St. Louis, MO 63110

Dear Livi Isringhausen:

As the owner of an Industrial Wastewater Discharge Permit from MSD, you are required to submit quarterly self-monitoring reports to MSD. As part of the reporting requirements, all permittees must complete general certification B on the self-monitoring report. Most permittees also must initial certain other general or special certifications on the report. Failure to complete the required certifications is a violation of the permit conditions.

The self-monitoring report forms currently contain all potential certifications, regardless of whether they apply to a particular permittee. Sometimes, the permittee will not initial the correct certifications. MSD realizes that it can be difficult for the permittee to correctly determine the applicable certifications that must be initialed. Therefore, to help eliminate confusion, we have developed a customized self-monitoring report form for you to use.

The attached self-monitoring report form contains only those certifications required by your Industrial Wastewater Discharge Permit. Please begin using this new form immediately.

Each certification on your customized report form should be initialed, or signed for general certification B. We realize that special certifications A and D sometimes do not have to be initialed for each report. However, it also is not inappropriate to initial them for each report.

Thank you for helping us to 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.
Manager of Industrial Pretreatment

Enclosure: permit-customized self-monitoring report form

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: WASHINGTON UNIVERSITY MEDICAL SCHOOL

Permit No: 5112216200-2 Effective Date: 2/1/2008 Expiration Date: 12/31/2012

Premise Address: 660 S. Euclid Ave., St. Louis, MO 63110

Monitoring Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

Samples Collected By: _____

Analyses Performed By: _____

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ⇨								
DATES ON WHICH SAMPLES WERE COLLECTED ⇨								
TIMES AT WHICH SAMPLES WERE COLLECTED ⇨								
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW (G=grab, C=composite, M=measured flow, E=estimated flow)						UNITS
FLOW								

You must complete and sign the certification statements on the second page.

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS**.

NONE

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION
	All permittees must sign and complete the information below: 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: _____ Title: _____ Telephone: _____ Signature: _____ Date: _____

Scott Rehmer

WASH. U. MED. SCL.
5112-2162-00

From: Isringhausen, Mary [isringhausenm@wusm.wustl.edu]
Sent: Thursday, December 10, 2009 9:12 AM
To: Scott Rehmer
Subject: FW: SLTL LAB NO. 09E-2291
Attachments: 09E2291-1.pdf

Please see attached results.

Livi Isringhausen
Environmental Compliance Manager
Washington University School of Medicine
office 314-362-6735
cell 314-713-3901
fax 314-362-1095

From: Deanna@labinc.com [mailto:Deanna@labinc.com]
Sent: Wednesday, December 09, 2009 4:22 PM
To: Isringhausen, Mary
Subject: SLTL LAB NO. 09E-2291

Livi,
Please see the attached results for wastewater composite SP 005. If you have any questions please contact us.

Thanks!

Deanna Lubenkov
Secretary
St. Louis Testing Laboratories, Inc.
(314) 531-8080

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

December 9, 2009
Lab No. 09E-2291
Invoice No. 114594
P.O. No. 2910731A

WASHINGTON UNIVERSITY
Campus Box 8229
660 S. Euclid Ave.
St. Louis, Mo 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER COMPOSITE SP 005,
12/08/09, 7:15 A.M. – 3:15 P.M.

Units: mg/L

ANALYTE	SP 005	MQL	TEST METHOD	DATE OF ANALYSIS
Copper	ND	0.05	200.7	12/08/09

Identification of tested specimens provided by the client.

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

Steve Root, Manager
Environmental Testing

SR/djl

MEMBER ACIL

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Metropolitan Saint Louis Sewer District
2350 Market Street
Saint Louis, Missouri 63103-2555

WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave.
St. Louis, MO 63110

Attn: Livi Isringhausen
Env. Compliance Manager

INDUSTRIAL WASTEWATER DISCHARGE PERMIT NUMBER 5112216200.

ANNUAL PERMIT FEE NOTICE

For permits in effect as of 10/01/2009.

Fee will be included in a **separate bill** from the Metropolitan St. Louis Sewer District.

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2009 through September 30, 2010 issued in accordance with the Metropolitan St. Louis District Ordinance #12413 for the location at **660 S. Euclid Ave.**

Base charge @ $150.00 per permit			$150.00
Volume charge @ $0.72 per average daily Ccf	433.96	Ccf(s)	$312.45
Sample Point Charge @ $100.00 per sample point	5	Point(s)	$500.00
		Total Fee Due:	**$962.45**

For inquiries about the Annual Permit Fee, please call 314-436-8756. For inquiries about payment of the fee, which will appear on your upcoming monthly bill, please call 1-866-281-5737.

THIS IS NOT A BILL

DO NOT PAY NOW

FEE WILL BE INCLUDED IN A SEPARATE BILL

MEMO TO FILE

WASH UNIV MED SCHOOL

5112-2162-00

660 S Euclid Ave, 63110

Violations from 7/1/09 thru 12/31/09

Date	SP	Poll	Type	TRC	Status
21-Sep	005	Cu	DM	Y	Already collected 1 compliant sample 4-Nov Two more samples required Making arrangements

Spoke with Livy Isringhausen
12/2/2009
Scott Rehmer

Washington University in St. Louis

SR

Environmental Health & Safety

November 25, 2009

Mr. Scott Rehmer
Assistant Engineer
Metropolitan Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147-2913

RE: Notice of Violation- Wastewater Discharge Permit NO. 5112216200 for premise at: 660 S. Euclid, 63110

Dear Mr. Rehmer:

With regard to the Notice of Violation sent October 28, 2009, the following is WUSM's report of corrective actions, to ensure compliance with MSD limitations for Copper and MSD reporting requirements.
On September 21, 2009 during the sampling period, Washington University's School of Medicine (WUSM's) Power Plant was in the process of installing a new chiller, which required piping changes. The installation and piping changes moved patina from the evaporator tubes through the piping system, and this settled in the new chiller. Patina is the green film that forms naturally on copper and consists of a mixture of copper carbonate and copper chloride. During the flushing process, the combination of copper carbonate and copper chloride of the patina being removed from the chiller into the sewer caused the sample to have 5.15 mg/l of copper. These piping changes are very rare, and not expected to occur again anytime in the near future.

Corrective actions:

1. To ensure compliance with MSD limitations for copper, Washington University School of Medicine will implement a maintenance cleaning program for copper piping by controlling the number of pipes cleaned and having more frequent cleaning so not as much patina builds up.
    a. This corrective action will be implemented by January 2010.
2. To ensure compliance with MSD reporting requirements, Washington University School of Medicine has updated the notification spreadsheet to include all limitations.
    a. The monitoring results will be entered and compared the day the analytical is received from the lab. If there is a self-monitoring discharge violation, MSD will be notified within one business day.

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ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis, Campus Box 1010, 350 North Skinker Boulevard, St. Louis, Missouri 63130
(314) 935-9264, Fax (314) 935-9266, esafety@msnotes.wustl.edu, www.ehs.wustl.edu

b. Also a resample will be taken and the results will be submitted to MSD within 30 days.

3. Washington University School of Medicine has submitted 1(one) additional sample to MSD on 11/17/09. Results were within limits, and are included with this letter. Two additional samples will be taken and analyzed, one being part of WUSM's fourth quarter 2009 self-monitoring report.
   a. The sample already analyzed and the 2 (two) additional samples will be taken from the identified sample point. This sample point 005 is a manhole located 200"W of Taylor Ave. on South side of Scott Ave in the street.
   b. The sample already analyzed and the 2 (two) additional samples will be composite samples.
   c. The sample already analyzed and the 2 (two) additional samples will be taken at times representative of normal operations.
4. The enclosure was referred to for additional information for preparing WUSM's action plan for the Notice of Violation.
5. This response has been sent on November 25, 2009.

If you should need any additional information please feel free to contact me at 314-362-6735.

Sincerely,

Livi Isringhausen
Environmental Compliance Manager

Cc:
Linda Vishino EH&S
Randy Hensler Power Plant
File

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November 10, 2009
Lab No. 09E-2100
Invoice No. 113565
P.O. No. 2910731A
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 S. Euclid Ave.
St. Louis, Mo 63110

Attention: Livi Isringhausen

ALREADY IN

REPORT OF TESTS

SAMPLE ID: WASTEWATER COMPOSITE SP 005, 11/04/09, 6:30 A.M. – 2:30 P.M.

Units: mg/L

ANALYTE	SP 005	MQL	TEST METHOD	DATE OF ANALYSIS
Copper	ND	0.05	200.7	11/06/09

Identification of tested specimens provided by the client.

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

Steve Root, Manager
Environmental Testing

SR/djl

MEMBER ACIL

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DIVISION OF ENVIRONMENTAL COMPLIANCE

From: Scott Rehmer [srehmer@stlmsd.com]
Sent: Tuesday, November 17, 2009 3:03 PM
To: Isringhausen, Mary
Subject: RE: Copper testing

Livi,

Thanks for the copper results.
Please remember to send the corrective action response no later than November 30.
Also, collect and analyze two more Copper samples at 005 before the end of the year.
One will be your fourth quarter sample, and then one additional.

Thank you.
Scott Rehmer
314.436.8756

From: Isringhausen, Mary [mailto:isringhausenm@wusm.wustl.edu]
Sent: Tuesday, November 17, 2009 2:16 PM
To: Scott Rehmer
Subject: Copper testing

Good afternoon. Please see attached copper results for sample taken 11/04/09. Thanks.

Livi Isringhausen
Environmental Compliance Manager
Washington University School of Medicine
office 314-362-6735
cell 314-713-3901
fax 314-362-1095

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SR
11-18

Scott Rehmer

From: Isringhausen, Mary [isringhausenm@wusm.wustl.edu] WASH. U. Med. School
Sent: Tuesday, November 17, 2009 2:16 PM S112-2162-00
To: Scott Rehmer
Subject: Copper testing
Attachments: copper111009.pdf

Good afternoon. Please see attached copper results for sample taken 11/04/09. Thanks.

Livi Isringhausen
Environmental Compliance Manager
Washington University School of Medicine
office 314-362-6735
cell 314-713-3901
fax 314-362-1095

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November 10, 2009
Lab No. 09E-2100
Invoice No. 113565
P.O. No. 2910731A
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 S. Euclid Ave.
St. Louis, Mo 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER COMPOSITE SP 005, 11/04/09, 6:30 A.M. – 2:30 P.M.

Units: mg/L

ANALYTE	SP 005	MQL	TEST METHOD	DATE OF ANALYSIS
Copper	ND	0.05	200.7	11/06/09

Identification of tested specimens provided by the client.

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

Steve Root, Manager
Environmental Testing

SR/djl

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 5112216200
Premise Address: 660 S. Euclid Zip Code: 63110
MSD Classes: SIU ☒ CIU ☐ Surch ☐ Potential Toxic Waste ☒ Non-Toxic Proc Waste ☐
No Process Flow ☐ Multi-User ☐ Special Handling/Billing ☐
Company Representative: Livi Isringhausen
Title: Environmental Compliance Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 10/28/09 Time: From 09:00 am To 11:30 am (Last Insp. 11/19/08)

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION OBTAINED OR PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL NON-STORMWATER ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00, 51122176-01,90006372-01
   B. Did all acct no's have water usage on PIMS? Yes☒ No☐
   C. If no to B, explain: _____

2. PROCESSES & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont		Yes	daily	001,003,005, 007
Housing & care of research mice	Cont		Yes	daily	003,005,007
Food preparation	Batch		Yes	daily	005
Cleanup at hazardous materials storage area(Bldg 80)	Batch		Yes	daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (other than grease traps) - describe:

	Sample pt.
pH neutralization for labs	003,005,006, 007
Silver recovery	001,003,005, 006

4. DOES COMPANY HAVE ANY GREASE TRAPS? Yes☒ No☐
If yes: A. List sample points: 005
B. What is the frequency for cleaning & maintenance? quarterly
C. Are enzymes (not bacteria) used in traps? Yes☐ No☒
D. If yes to C, was co. told to stop or switch to approved bacteria? Yes☐ No☐
E. Was co. informed that MSD performs separate grease trap inspections? Yes☒ No☐

5. HAS COMPANY CONSTRUCTED NEW BLDGS/ADDITIONS WITH SEWERS SINCE LAST INSP? Yes☐ No☒
If yes: A. Ask company: Did they notify MSD's Plan Review group? Unknown☐ Yes☐ No☒
B. If no or unknown, has inspector notified Plan Review group? Yes☐ No☐
C. Comments: _____

6. HAS COMPANY BEGUN DISCHARGING ANY NEW POLLUTANTS SINCE THE LAST INSP? Yes☐ No☒
If yes: A. List pollutants & process: _____
B. Will MSD STP exceed existing NPDES discharge limit(s)? Yes☐ No☐
C. Will MSD STP's discharge exceed 0.1 mg/l for any new pollutant? Yes☐ No☐
(MSD must notify MDNR if B or C is yes and discharge will continue.)
D. Comments: _____

7. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes☐ No☒

If yes: A. List reg. & describe (including any discharge):

_____

8. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes☐ No☒

If yes: A. At which points? _____

B. Current applied factor: _____ Is it correct? Yes☐ No☐

C. If no, list correct factor/explain? _____

9. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes☐ No☒

If yes: A. At which points? _____

B. Since calculation of the current limits, has the long term avg production rate or discharge volume changed by 20% or more? Yes☐ No☐

C. If yes to B, explain: _____

10. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes☒ No☐

If yes: A. Describe operations & disposal: Materials are collected from all buildings and brought to Bldg 80 for disposal. Solids are hauled, liquids are decayed & sewered.

B. Does company have MSD authorization for disposal to sewer? NA☐ Yes☒ No☐

C. Most recent authorization date: 7/8/94

D. Amount discharged in most recent complete calendar year: 633.6 mCi

11. DOES PROCESS or P&E WASHDOWN WATER USE APPEAR EXCESSIVE? Yes☐ No☒

A. Explain how use was verified & any needed changes:
High volume usage from water records appears consistent with the types of activities performed. Labs account for a large volume of the usage.

12. BASED ON OBSERVATIONS DURING INSPECTION, DOES COMPANY APPEAR TO HAVE SOME WATER THAT IS NOT DISCHARGED TO SEWER? Yes☒ No☐

If yes: A. Describe: CT and boiler evaporative loss

B. Was "Return Factor Program" brochure given to company? Yes☒ No☐
(regardless of whether some water is not discharged to sewer)

13. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS (if last insp <12 months ago)? Yes☒ No☐

If yes: A.

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
Copper	9/21/09	005	Yes	Chiller maintenance procedure revised after Cu scale entered CT during piping replacement
			N/A	
			N/A	
			N/A	
			N/A	

B. Comments: _____

14. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐

If yes: A.

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

B. Comments: _____

16. COULD SPILLS OR LEAKS OF PROCESS TANKS, STORED WASTES, OR STORED CHEMICALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒

If yes: A. What needs to be done? _____

If no: B. How are they controlled?
Materials kept in drums have secondary containment. Waste management training is given for handling of chemicals in quantity.

17. BASED ON OBSERVATIONS DURING INSPECTION, ARE THERE ANY AREAS WHERE COMPANY ACTIVITIES APPEAR TO IMPAIR STORMWATER RUNOFF? Yes☐ No☒

If yes: A. Describe: _____
B. What needs to be done? _____
C. Was "Illicit Stormwater Discharges" brochure given to company? Yes☒ No☐
(regardless of whether there are any problem areas)

18. DOES COMPANY HAVE ANY SPILL CONTROL OR SLUG DISCHARGE CONTROL PLANS? Yes☒ No☐

If yes: A.

	Title	Last Update	Update needed? Explain if yes
1.	SPCCP	2/1/03	No
2.			N/A

B. Are any Plans needed (in addition to those listed in Part A)? Yes☐ No☒
(If yes, write company and request)

19. DOES COMPANY HAVE ANY MAINTENANCE SHOP PARTS WASHERS? Yes☒ No☐

If yes: A. Parts washer solvent name: Mineral spirits
B. Priority pollutants (or "none"): BTEX
C. How is spent solvent disposed? hauled off
(Parts washer solvents are not included in database's priority pollutants list, nor monitored for unless conditions show potential discharges)

20. ARE ANY ORGANICS OR SOLVENTS USED (OTHER THAN IN PARTS WASHERS)? Yes☒ No☐

If yes: A.

Solvent name/ components	Used for?	413/433/469 Process?	How disposed?	Priority Pollutant?
Phenol	lab disinfection	Yes☐ No☒	Hauled off	Yes☒ No☐
Meth. chloride	lab tests	Yes☐ No☒	Hauled off	Yes☒ No☐
Toluene	lab tests	Yes☐ No☒	Hauled off	Yes☒ No☐
Chloroform	lab tests	Yes☐ No☒	Hauled off	Yes☒ No☐
Alcohol	lab tests	Yes☐ No☒	Hauled off	Yes☐ No☒
		Yes☐ No☐		Yes☐ No☐

21. DOES COMPANY HAVE A 413/433/469 SOLVENT MANAGEMENT PLAN? Yes☐ No☒

If yes: A. Is it part of a Spill/Slug Control Plan listed above? Yes[1.☐ 2.☐] No☐
B. If no to A, date of last update for SMP: _____
C. Is there a copy of the Spill/Slug Plan or SMP in the files? Yes☐ No☐
D. Does SMP address all 413/433/469 solvents? Yes☐ No☐
(If no to C or D, write company and require submittal and/or update)

22. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED THAT INCLUDE MSD CONTACTS? Yes☒ No☐
A. Was company provided notification cards & told to post where emergency response personnel can locate them? Yes☒ No☐
(Must post if co. generates process wastewater or stores chemicals of concern)

23. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐

If yes: A. Is requirement contained in permit ☒ or other document ☐.
B. If other document, date & description: _____
C. How frequently is sampling required? quarterly
D. How frequently are reports required? quarterly
E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐
F. If no, explain: _____

24. DOES COMPANY SELF-MONITOR ITS WASTEWATER DISCHARGE? Yes☒ No☐

If yes: A. Is the self-monitoring required by MSD? Yes☒ No☐

B. Are representative grab/comp samples collected? Yes☒ No☐

C. Does sample collection time period match company's production shifts (is it representative)? Yes☒ No☐

D. Are EPA-approved 40 CFR 136 wastewater test methods used? Yes☒ No☐

E. If no to B, C, or D, explain needed changes: _____

25. DOES CO. CONTINUOUSLY MONITOR AT SAMPLE POINT AND KEEP A PERMANENT RECORD FOR: pH ☐, TEMP ☐, LEL ☐? Yes☐ No☒

If yes: A. At which SPs? _____

B. Does company submit quarterly summaries? Yes☐ No☐

C. If no, explain: _____

26. DOES MSD SPLIT SAMPLES WITH THE COMPANY? Yes☐ No☒

If yes: A. Is company having the samples analyzed Yes☐ No☐

B. How does company insure proper preservation, holding times & analytical methods? _____

C. Has company submitted results of all split sample analyses since the last insp? Yes☐ No☐

D. Have results been submitted within 28 days of the collection's calendar quarter? Yes☐ No☐

E. If no to C, or D, explain: _____

F. Does company still want to split samples? Yes☐ No☐

G. Comments: _____

27. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒

If yes: A. Type and date: _____

B. Have the reports & actions been on-time & complete? Yes☐ No☐

C. If no, explain: _____

28. ASK COMPANY: IS CO. IN COMPLIANCE W/APPLICABLE NESHAP REGS FOR WW DISCHARGES? Yes☒ No☐
[Some MDNR-issued Title V air permits for specific processes allow pre-approved WW discharge.] [City/County-issued air permits are not NESHAP permits.]

If no: A. Describe: _____

B. Was MDNR Air Pollution Control informed? (must be done) Yes☐ No☐

29. DOES COMPANY RETAIN ALL WASTEWATER RECORDS FOR AT LEAST 5 YEARS? Yes☒ No☐

If no: A. How long does company retain records? _____

B. Was company told to retain for at least 5 years, per ordinance? Yes☐ No☐

C. Where are they kept? Environmental Compliance Manager's office

30. DO MSD CLASSIFICATIONS NEED TO BE REVISED? Yes☐ No☒

If yes: A. Indicate correct classifications:

SIU ☐ CIU ☐ Surch. ☐ Potential Toxic Waste ☐ Non-Toxic Proc Waste ☐

No Process Discharge ☐ Multi-User ☐ Special Handling/Billing ☐

B. Explain changes: _____

31. SAMPLE POINTS

						DJ(y/n)
SP #	001	Fed.Reg.	n/a	Components:	Sanitary + NCCW + p&e washdown + research & teaching labs + softener regeneration + storm water	No
SP #	003	Fed.Reg.	n/a	Components:	Sanitary + NCCW + research & teaching labs + p&e washdown + storm water	No
SP #	005	Fed.Reg.	n/a	Components:	Sanitary + NCCW + kitchen waste + animal care + teaching labs + p&e washdown + softener regen + boiler blowdown + storm water	No
SP #	006	Fed.Reg.	n/a	Components:	Sanitary + cleanup at waste storage facility + storm water	No
SP #	007	Fed.Reg.	n/a	Components:	Sanitary + NCCW + teaching labs + animal care + p&e washdown + storm water	No

32. ARE ANY SAMPLE POINTS TRAPPED VENTS? Yes☒ No☐
If yes: A. List SPs: 006
B. Was co. informed that T-vents are preferred, and told why? Yes☒ No☐

33. ARE DISCHARGES AT ANY SPs SMALL/IRREGULAR ENOUGH TO ALLOW GRAB SAMPLES? Yes☐ No☒
If yes: A. List SPs and reasons: _____

34. ARE THERE ANY UNSAMPLED DISCHARGES? (list each lateral separately) Yes☐ No☒

Dummy SP #		Components:	
Dummy SP #		Components:	

35. DO ANY SAMPLE POINTS (including Unsampled/Dummy SPs) RECEIVE STORMWATER? Yes☒ No☐
If yes: A. List Sample Points: 001,003,005,006,007

36. WERE ALL SAMPLE POINTS (except Dummy SPs) OPENED & INSPECTED? No SPs☐ Yes☒ No☐
A. If any SPs cannot be located or opened, explain: _____
B. If any SP descript's need to be changed, explain: _____
C. Was ANY grease or other problem/debris observed in any SP? Yes☐ No☒
D. If yes to C, list SPs & describe: _____
E. If yes to C, was company directed to take corrective actions? Yes☐ No☐

37. REVIEW THE SAMPLE POINT MAP! Last map revision date: 2/25/09
A. Is the map correct and accurate in all its details? Yes☒ No☐
B If no, what changes are needed: _____

38. DO INSTRUCTIONS FOR "Contact Prior to Sampling" OR FIELD VISIT "Special Instructions" NEED REVISION? Yes☒ No☐
If yes: A. List needed changes: SP006 is located in secured area. Contact number is on gate.

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.
Construction of new building at 4900 S. Euclid continues. The building will house numerous labs. The contact will send in information as construction nears completion.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

INDUSTRIAL USER CLASSIFICATIONS

01/12/1999	**SIU**
06/09/1998	**PTW**

WUNNENBERG INFO.

Base Map 19G3
Wun: St. Louis City & Co.
Grid: J 20 Page 26

SIU CRITERIA

PR25 Process Disch => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO. 63110

Billing Address
660 S. Euclid Ave.
St Louis, MO. 63110

INSPECTION INFORMATION

Next Due	Insp Rslt	
10/28/2009	RIN	James Goodall

PERMIT INFORMATION

Issue Date:	01/01/2008
Expire Date:	12/31/2012
Extended Date:	01/31/2008
Writer	Scott Rehmer
Issue Date:	02/01/2008
Expire Date:	12/31/2012
Extended Date:	
Writer	Scott Rehmer

IUQ INFORMATION

IUQ Recvd Date:	08/19/2002
Reviewer:	Fabian Grabski
IUQ Recvd Date:	06/28/2007
Reviewer:	James Goodall

CONTACTS

BILL	Livi Isringhausen	Environmental Compliance Manager	OFF	(314) 362-6735 Ext.
FLD1	Livi Isringhausen	Environmental Compliance Manager	FAX	(314) 362-1995 Ext.
	Livi Isringhausen	Environmental Compliance Manager	OFF	(314) 362-6735 Ext.
FLD2	Linda Vishino	Environmental Compliance Officer	OFF	(314) 935-7864 Ext.
OFF1	Livi Isringhausen	Environmental Compliance Manager	FAX	(314) 362-1095 Ext.
	Livi Isringhausen	Environmental Compliance Manager	OFF	(314) 362-6735 Ext.

OPERATIONAL INFORMATION

Work Days: 7

				S	M	T	W	T	F	S
1	6,000	09:00AM	8.0	Y	Y	Y	Y	Y	Y	Y
2	400	06:00PM	8.0	Y	Y	Y	Y	Y	Y	Y

Total Emp: 6,400 **Hrs:** 16.0

OTHER AGENCIES INFORMATION

01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/04/1997	MDNR - Hazardous Waste Program	01591
01/04/1997	MDNR - Hazardous Waste Program	01591
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00377308
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00377308
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498

NON-SEWERED WASTE

On-Site Storage Y **On-Site Disposal** N **Off-Site Disposal** Y

06/28/2007	Acids and/or Alkalies		800	GAL
06/28/2007	Equipment Oils and/or Grease		1250	GAL
06/28/2007	Infectious Waste		398000	LBS
06/28/2007	Kitchen/Food Service Grease		1280	LBS
06/28/2007	Organic Compounds		3520	GAL
06/28/2007	Paints or Paint Sludges		4280	LBS
06/28/2007	Radioactive Waste		1500	LBS
06/28/2007	Solvents/Thinners		500	LBS
06/28/2007	Other	Lab chemicals/reagents	127000	LBS

COMMENTS

RAW MATERIALS

EFF DATE	MATERIAL_DESCRIPTION	QUANTITY	UNIT
05/07/2004	Laboratory chemicals & reagents		

SIC INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

PRODUCTS

EFF DATE	DESCRIPTION	UNIT	AVG_PROD	MAX_PROD
05/07/2004	Medical school			
05/07/2004	Research institution			
05/07/2004	Research animal care & housing			

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SEWER ACCOUNTS

Sewer Accounts

5112216200
5112216100
5112216700
5112216800
5112217601
9000637201

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Start Date = 10/01/2008 12:00:00AM **End Date =** 12/31/2009 12:59:59PM

Acct. No.			Consumption CCF's	Gallons		Wdays	Cdays	Discharge Gal/ Wday	Gal/ Cday
5112216100									
5112216100	08/05/2008	11/21/2008	1,670	1,670	A	109	109	109	
5112216100	11/22/2008	02/13/2009	900	2,570		84	84	193	
5112216100	02/14/2009	05/04/2009	1,330	3,900		80	80	273	
5112216100	05/05/2009	08/06/2009	1,500	5,400		94	94	367	
RF 1.00	**Acct. Total**		5,400	4,039,481		367	367	11,007	11,007
5112216200			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216200	08/05/2008	11/05/2008	2,798	2,798	A	93	93	93	
5112216200	11/06/2008	02/11/2009	8,927	11,725		98	98	191	
5112216200	02/12/2009	05/13/2009	10,391	22,116		91	91	282	
5112216200	05/14/2009	08/18/2009	18,891	41,007		97	97	379	
RF 0.91	**Acct. Total**		41,007	30,675,368		379	379	73,653	73,653
5112216700			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216700	08/22/2008	12/02/2008	12,889	12,889	A	103	103	103	
5112216700	12/03/2008	02/24/2009	11,131	24,020		84	84	187	
5112216700	02/25/2009	05/18/2009	53,730	77,750		83	83	270	
5112216700	05/19/2009	08/25/2009	110,935	188,685		99	99	369	
RF 0.73	**Acct. Total**		188,685	141,146,192		369	369	279,232	279,232
5112216800			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216800	08/15/2008	12/01/2008	1,000	1,000	A	109	109	109	
5112216800	12/02/2008	02/24/2009	500	1,500		85	85	194	
5112216800	02/25/2009	05/18/2009	500	2,000		83	83	277	
5112216800	05/19/2009	08/25/2009	5,000	7,000		99	99	376	
RF 1.00	**Acct. Total**		7,000	5,236,364		376	376	13,927	13,927
5112217601			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112217601	08/26/2008	12/01/2008	0	0	A	98	98	98	
5112217601	12/02/2008	02/18/2009	1	1		79	79	177	
5112217601	02/19/2009	05/04/2009	0	1		75	75	252	
5112217601	05/05/2009	08/18/2009	0	1		106	106	358	
RF 1.00	**Acct. Total**		1	748		358	358	2	2
9000637201			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
9000637201	08/16/2008	12/01/2008	17,344	17,344	A	108	108	108	
9000637201	12/02/2008	02/10/2009	12,853	30,197		71	71	179	
9000637201	02/11/2009	05/04/2009	11,962	42,159		83	83	262	
9000637201	05/05/2009	08/06/2009	22,652	64,811		94	94	356	
RF 0.58	**Acct. Total**		64,811	48,481,998		356	356	78,988	78,988
	Facility Total		306,904						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
01	Sanitary Or Combined	20G2	232C	Trunk Sewer	Western Mill Creek

Description Lateral from buildings located S of McKinley Av & E of Euclid Av

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT NO. 001 Ordinance **NPDES Outfall No.**

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		2,019	GPD		GPD	D	7/18/07
Non Contact Cooling Water		3,250	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		468	GPD		GPD	D	7/18/07
Regeneration/Reject Wat	Water softener regeneration	3,518	GPD		GPD	D	7/18/07
Process Waste	Photographic & teaching labs	3,851	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	1,733	GPD		GPD	D	7/18/07
	Total Flow Avg =	**14,839**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
02	Sanitary Or Combined	19G3	229C	Trunk Sewer	Western Mill Creek

Description Lateral from buildings N&S of Scott Av & E of Euclid

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT NO. 005 Ordinance **NPDES Outfall No.**

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		64,878	GPD		GPD	D	7/18/07
Kitchen Waste		9,176	GPD		GPD	D	7/18/07
Process Waste	Photographic & teaching labs, animal care, etc.	82,658	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Regeneration/Reject Wat	Water softener regeneration	32,761	GPD		GPD	D	7/18/07
Boiler Blowdown		39,666	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		1,996	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	22,155	GPD		GPD	D	7/18/07
Non Contact Cooling Water		88,038	GPD		GPD	D	7/18/07
	Total Flow Avg =	**341,328**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Lemay
03	Sanitary Or Combined	19G3	543C	Trunk Sewer	River des Peres - Forest Park

Description Lateral N from Building 14 W of Euclid Av to courtyard

Sewer Route W across S Kingshighway Blvd into Forest Park to trunk to treatment plant

SAMPLE POINT NO. 003 Ordinance **NPDES Outfall No.**

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		26,187	GPD		GPD	D	7/18/07
Non Contact Cooling Water		6,120	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		2,179	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	18,128	GPD		GPD	D	7/18/07
Process Waste	Photographic & teachng labs, animal care	11,489	GPD		GPD	D	7/18/07
	Total Flow Avg =	**64,103**		**Max =**			

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
04	Sanitary Or Combined	19G3	259C	Trunk Sewer	Western Mill Creek

Description 8" lateral E from Building 80 at Taylor and Parkview to an unnamed street

Sewer Route N to Parkview to Duncan, E to trunk to treatment plant

SAMPLE POINT NO. 006 Ordinance **NPDES Outfall No.**

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		549	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Plant & Equipment Washdown	Waste storage facility	485	GPD		GPD	D	7/18/07
	Total Flow Avg =	**1,034**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
05	Sanitary Or Combined	20G2	235C	Trunk Sewer	Western Mill Creek

Description Multiple lines from Bldg 63 N to McKinley

Sewer Route E on McKinley to Taylor, S to Clayton, E to Boyle, N to Duncan, then E to trunk to treatment plant

SAMPLE POINT NO. 007 Ordinance **NPDES Outfall No.**

Description Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		4,798	GPD		GPD	D	7/18/07
Non Contact Cooling Water		413	GPD		GPD	D	7/18/07
Process Waste		5,997	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	4,780	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		7,462	GPD		GPD	D	7/18/07
	Total Flow Avg =	**23,450**		**Max =**			

PRETREATMENT TYPES

SP	EFF_DATE	TYPE	DESCRIPTION
001	09/02/1998	DC32	Metallic Replacement
003	09/02/1998	DC37	pH Adjustment / Neutralization
003	09/02/1998	DC32	Metallic Replacement
005	06/16/1999	DC28	Grease Trap
005	07/17/2007	DC37	pH Adjustment / Neutralization
005	07/17/2007	DC32	Metallic Replacement
006	06/19/2000	DC32	Metallic Replacement
006	05/08/2001	DC37	pH Adjustment / Neutralization
007	07/17/2007	DC37	pH Adjustment / Neutralization

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
Acenaphthylene	SP	Acenaphthene	SP	4-Chloro-3-Methylphenol	SP
2,4,6-Trichlorophenol	SP	2,4-Dimethylphenol	SP	2,4-Dinitrotoluene	SP
1,2-Diphenylhydrazine	KP	3,3-Dichlorobenzidine	KP	Bis (2-Chloroethoxy) Methane	SP
Anthracene	SP	2,6-Dinitrotoluene	SP	2,4-Dichlorophenol	KP
2-Nitrophenol	KP	Naphthalene	SP	N-Nitrosodimethylamine	SP
Bis (2-Chloroisopropyl) Ether	SP	Bis (2-Chloroethyl) Ether	KP	1,2-Dichloropropane	KP
Trans-1,2-Dichloroethene	KP	Dibromochloromethane	SP	Bromodichloromethane	SP
1,2-Dichlorobenzene	KP	1,1-Dichloroethane	KP	Trichloroethene	KP
Ethylbenzene	SP	Chloroethane	SP	Acrylonitrile	SP
1,4-Dichlorobenzene	KP	1,1,2,2-Tetrachloroethane	KP	1,1-Dichloroethene	KP
Cyanide (Total)	KP	Asbestos (Fibrous)	KP	Silver (Total)	KP
Selenium (Total)	KP	Copper (Total)	KP	Cadmium (Total)	SP
Zinc (Total)	KP	Thallium (Total)	KP	Nickel (Total)	KP
Mercury (Total)	KP	Lead (Total)	KP	Chromium (Total)	KP
Arsenic (Total)	KP	1,2,4-Trichlorobenzene	SP	Phenol	KP
4-Nitrophenol	KP	2,4-Dinitrophenol	SP	2-Chlorophenol	SP
Nitrobenzene	KP	Benzo (A) Pyrene	KP	Benzidine	KP
Acrolein	KP	Toluene	KP	Methylene Chloride	KP
Chloromethane	SP	Chlorobenzene	KP	1,3-Dichlorobenzene	KP
1,1,1-Trichloroethane	SP	Tetrachloroethene	KP	Chloroform	KP
Carbon Tetrachloride	KP	Bromomethane	SP	Benzene	KP
2-Chloroethyl vinyl ether	SP	1,2-Dichloroethane	KP	1,1,2-Trichloroethane	SP
(cis & trans) 1,3-Dichloropropene	KP				

EXTRA STRENGTH SURCHARGE INFORMATION

PIMS FACILITY CONTACTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

For Account Number Selecte **5112216200**
Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type

Contact Type	Contact Name		Contact Title	Phone Type	Number	Ext.
Billing Address						
Billing Contact	Livi	Isringhausen	Environmental Compliance Manager	OFF	(314)362-6735	
Office Mailing Address						
Office Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	FAX	(314)362-1095	
Office Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	OFF	(314)362-6735	
Premise Address						
Field Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	FAX	(314)362-1995	
Field Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	OFF	(314)362-6735	
Field Contact 1st Alt	Linda	Vishino	Environmental Compliance Officer	OFF	(314)935-7864	

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2010
	T237000	pH	Once/year	Grab	06/30/2010
	T247000	Temperature	Once/year	Grab	06/30/2010
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2010
	T309000	Benzene	Once/year	Grab	06/30/2010
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2010
	T332000	Chloroform	Once/year	Grab	06/30/2010
	T371000	Methylene Chloride	Once/year	Grab	06/30/2010
	T375000	Naphthalene	Once/year	Grab	06/30/2010
	T388000	Phenol	Once/year	Grab	06/30/2010
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T397000	Toluene	Once/year	Grab	06/30/2010
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2010

003 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2010
	T237000	pH	Once/year	Grab	06/30/2010
	T247000	Temperature	Once/year	Grab	06/30/2010
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2010
	T309000	Benzene	Once/year	Grab	06/30/2010
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2010
	T332000	Chloroform	Once/year	Grab	06/30/2010
	T371000	Methylene Chloride	Once/year	Grab	06/30/2010
	T375000	Naphthalene	Once/year	Grab	06/30/2010
	T388000	Phenol	Once/year	Grab	06/30/2010
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T397000	Toluene	Once/year	Grab	06/30/2010
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2010

005 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2010
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2010
	T237000	pH	Once/year	Grab	06/30/2010
	T247000	Temperature	Once/year	Grab	06/30/2010
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2010
	T309000	Benzene	Once/year	Grab	06/30/2010
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2010
	T332000	Chloroform	Once/year	Grab	06/30/2010
	T371000	Methylene Chloride	Once/year	Grab	06/30/2010
	T375000	Naphthalene	Once/year	Grab	06/30/2010
	T388000	Phenol	Once/year	Grab	06/30/2010
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T397000	Toluene	Once/year	Grab	06/30/2010
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2010

006 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS		CITY	ST	ZIP

	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2010
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2010
	T237000	pH	Once/year	Grab	06/30/2010
	T247000	Temperature	Once/year	Grab	06/30/2010
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2010
	T309000	Benzene	Once/year	Grab	06/30/2010
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2010
	T332000	Chloroform	Once/year	Grab	06/30/2010
	T371000	Methylene Chloride	Once/year	Grab	06/30/2010
	T375000	Naphthalene	Once/year	Grab	06/30/2010
	T388000	Phenol	Once/year	Grab	06/30/2010
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T397000	Toluene	Once/year	Grab	06/30/2010
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2010

007 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2010
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2010
	T237000	pH	Once/year	Grab	06/30/2010
	T247000	Temperature	Once/year	Grab	06/30/2010
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2010
	T309000	Benzene	Once/year	Grab	06/30/2010
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2010
	T332000	Chloroform	Once/year	Grab	06/30/2010
	T371000	Methylene Chloride	Once/year	Grab	06/30/2010
	T375000	Naphthalene	Once/year	Comp-Time 04 Hrs	06/30/2010
	T388000	Phenol	Once/year	Comp-Time 04 Hrs	06/30/2010
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2010
	T397000	Toluene	Once/year	Grab	06/30/2010
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2010

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

October 28, 2009

M. Olivia Isringhausen
Environmental Compliance Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue, Campus Box 8229
St. Louis, MO 63110

RE: NOTICE OF VIOLATION – WASTEWATER DISCHARGE PERMIT NO. 5112216200
For premise at: 660 S. Euclid Ave, 63110

Dear Ms. Isringhausen:

We have reviewed the third quarter 2009 self-monitoring report, required under the permit referenced above, that you recently submitted to MSD. Unfortunately, the following violation of permit limitations was identified in your report:

I. VIOLATION OF DISCHARGE LIMITATION:

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	PARAMETER	PERMIT LIMIT	LIMIT TYPE	VALUE FOUND
09-21-09	1505	005	7 Hr Comp	Copper (T)	2.70 mg/L	DM	5.15 mg/L **

Sample Point 005 is the Manhole 200' West of Taylor Avenue on the South side of Scott Avenue in the street
Comp = Composite T = Total mg/L = milligrams per liter DM = Daily Maximum
See enclosure for explanation of asterisks which appear in the Value Reported column

II. VIOLATION OF PERMIT TERMS/CONDITIONS:

Permit Standard Condition I.A.10 requires you to notify MSD within one business day of becoming aware of any discharge violation. Your report was received on October 22, 2009, and our records show that MSD received no such notification. Our experience shows that analytical results generally become available within four weeks of sampling. Upon your receipt of those results, comparison with the permit discharge limits should enable immediate identification and prompt reporting of any violations.

III. REQUIRED ACTION / RESPONSE:

1. Submit a report of corrective actions, to ensure compliance with MSD limitations for Copper. In the report:

    a. Indicate which corrective actions are initiated and which are still to come

2. Submit a report of corrective actions, to ensure compliance with MSD reporting requirements. In the report:

    a. Include actions to ensure that you will report any future self-monitoring discharge violations, within one business day of your becoming aware of them
    b. Include actions to ensure that you will resample and submit the results to MSD within 30 days of becoming aware of any future self-monitoring discharge violation

3. Submit all additional sampling results to MSD. Sample collection must occur as follows:

    a. Sample at the identified sampling point
    b. Collect composite samples for Copper
    c. Take samples at times representative of normal operations

4. Refer to the enclosure for additional information on:
    a. Potential enforcement actions should noncompliance continue
    b. The meaning of any asterisks that appear in the Value Found column above
    c. Percentages applicable to Significant Noncompliance, when planning for additional sampling

5. Submit your response no later than November 30, 2009.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott Rehmer
Assistant Engineer

Enclosure: SNC enclosure

SR
10-26

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 51122162-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2009 (Jan-Mar) (Apr-June) √ (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 9/21/2009 C: 9/21/2009		G: 9/21/2009 C: 3/21/2009		G: 9/21/2009 C: 9/21/2009			
Times at Which Samples Were Collected		G: 8:25a.m. C: 8:25am - 3:10pm		G: 8:05 a.m. C: 8:15am - 4:15 pm		G: 8:35am C: 8:35 am - 3:05 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	28,250	E	55,500	E	450,000		Gal/Day
Biological Oxygen Demand	****	C	44	C	57	C	97		mg/L
Chemical Oxygen Demand	****	C	165	C	148	C	286		mg/L
Total Suspended Solids	****	C	77	C	107	C	125		mg/L
pH	5.5 - 11.5	G	8.67	G	8.77	G	8.65		pH
Oil & Grease	200	G	8	G	7	G	7		mg/L
Temperature	60	G	26	G	25	G	25		Celcius
KP SP Silver	***	C	ND	C	ND	C	ND		mg/L
Cadmium	***	C	ND	C	ND	C	ND		mg/L
Chromium	***	C	ND	C	ND	C	ND		mg/L
Total Cyanide	***	G	ND	G	ND	G	ND		mg/L
Copper	***	G	ND	G	ND	G	5.15		mg/L
Lead	***	G	ND	G	ND	G	ND		mg/L
Nickel	***	C	ND	C	ND	C	ND		mg/L
Selenium	***	C	ND	C	ND	C	ND		mg/L
Thallium	***	C	ND	C	ND	C	ND		mg/L
Zinc	***	C	0.18	C	0.05	C	0.15		mg/L
Mercury TRE	***	C	ND	C	ND	C	ND		mg/L
1,1,1-Tetrachloroethane	***	G	ND	G	ND	G	ND		ug/L
1,1,2,2-Tetrachloroethane	***	G	ND	G	ND	G	ND		ug/L
1,1,2-Trichloroethane	***	G	ND	G	ND	G	ND		ug/L
1,1-Dichloroethane	***	G	ND	G	ND	G	ND		ug/L
1,1-Dichloroethene	***	G	ND	G	ND	G	ND		ug/L
1,2,4-Trichlorobenzene	***	G	ND	G	ND	G	ND		ug/L
1,2-Dichlorobenzene	***	G	ND	G	ND	G	ND		ug/L

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			1		3		5		
1,2-Dichloroethane	***	G	ND	G	ND	G	ND		ug/L
1,2-Dichloropropane	***	G	ND	G	ND	G	ND		ug/L
1,3-Dichlorobenzene	***	G	ND	G	ND	G	ND		ug/L
1,4-Dichlorobenzene	***	G	ND	G	ND	G	ND		ug/L
2-Chloroethyl vinyl ether	***	G	ND	G	ND	G	ND		ug/L
Acrolein	***	G	ND	G	ND	G	ND		ug/L
Acrylonitrile	***	G	ND	G	ND	G	ND		ug/L
Benzene	***	G	ND	G	ND	G	ND		ug/L
Bromodichloromethane	***	G	ND	G	ND	G	ND		ug/L
Bromomethane	***	G	ND	G	ND	G	ND		ug/L
Carbon Tetrachloride	***	G	ND	G	ND	G	ND		ug/L
Chlorobenzene	***	G	ND	G	ND	G	ND		ug/L
Chloroethane	***	G	ND	G	ND	G	ND		ug/L
Chloroform	***	G	ND	G	ND	G	5		ug/L
Chloromethane	***	G	ND	G	ND	G	ND		ug/L
cis-1,3-Dichloropropene	***	G	ND	G	ND	G	ND		ug/L
Dibromochloromethane	***	G	ND	G	ND	G	ND		ug/L
Ethylbenzene	***	G	ND	G	ND	G	ND		ug/L
Methylene Chloride	***	G	ND	G	ND	G	ND		ug/L
Naphthalene	***	G	ND	G	ND	G	ND		ug/L
Nitrobenzene	***	G	ND	G	ND	G	ND		ug/L
Tetrachloroethane	***	G	ND	G	ND	G	ND		ug/L
Toluene	***	G	ND	G	ND	G	ND		ug/L
trans-1,2-dichloroethene	***	G	ND	G	ND	G	ND		ug/L
trans-1,3-Dichloropropene	***	G	ND	G	ND	G	ND		ug/L
Trichloroethene	***	G	ND	G	ND	G	ND		ug/L
2,4,6-Trichlorophenol	***	G	ND	G	ND	G	ND		mg/L
2,4-Dichlorophenol	***	G	ND	G	ND	G	ND		mg/L
2,4-Dimethylphenol	***	G	ND	G	ND	G	ND		mg/L
2,4-Dinitrophenol	***	G	ND	G	ND	G	ND		mg/L
2,4-Dinitrotoluene	***	G	ND	G	ND	G	ND		mg/L
2,6-Dinitrotoluene	***	G	ND	G	ND	G	ND		mg/L
2-Chlorophenol	***	G	ND	G	ND	G	ND		mg/L
2-Nitrophenol	***	G	ND	G	ND	G	ND		mg/L
3,3-Dichlorobenzidine	***	G	ND	G	ND	G	ND		mg/L
4-Chloro-3-methylphenol	***	G	ND	G	ND	G	ND		mg/L
4-Nitrophenol	***	G	ND	G	ND	G	ND		mg/L
Acenaphthene	***	G	ND	G	ND	G	ND		mg/L
Acenaphthylene	***	G	ND	G	ND	G	ND		mg/L
Anthracene	***	G	ND	G	ND	G	ND		mg/L
Azobenzene	***	G	ND	G	ND	G	ND		mg/L
Benzidine	***	G	ND	G	ND	G	ND		mg/L
Benzo(a)pyrene	***	G	ND	G	ND	G	ND		mg/L
Bis(2-chloroethoxy)methane	***	G	ND	G	ND	G	ND		mg/L
Bis(2-Chloroethyl) ether	***	G	ND	G	ND	G	ND		mg/L

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You must complete and sign the certification statements on the reverse side.

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OCT 22 2009

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			6		7				
1,2-Dichloropropane	***	G	ND	G	ND				ug/L
1,3-Dichlorobenzene	***	G	ND	G	ND				ug/L
1,4-Dichlorobenzene	***	G	ND	G	ND				ug/L
2-Chloroethyl vinyl ether	***	G	ND	G	ND				ug/L
Acrolein	***	G	ND	G	ND				ug/L
Acrylonitrile	***	G	ND	G	ND				ug/L
Benzene	***	G	ND	G	ND				ug/L
Bromodichloromethane	***	G	ND	G	ND				ug/L
Bromomethane	***	G	ND	G	ND				ug/L
Carbon Tetrachloride	***	G	ND	G	ND				ug/L
Chlorobenzene	***	G	ND	G	ND				ug/L
Chloroethane	***	G	ND	G	ND				ug/L
Chloroform	***	G	5.2	G	ND				ug/L
Chloromethane	***	G	ND	G	ND				ug/L
cis-1,3-Dichloropropene	***	G	ND	G	ND				ug/L
Dibromochloromethane	***	G	ND	G	ND				ug/L
Ethylbenzene	***	G	ND	G	ND				ug/L
Methylene Chloride	***	G	ND	G	ND				ug/L
Naphthalene	***	G	ND	G	ND				ug/L
Nitrobenzene	***	G	ND	G	ND				ug/L
Tetrachloroethane	***	G	ND	G	ND				ug/L
Toluene	***	G	ND	G	ND				ug/L
trans-1,2-dichloroethene	***	G	ND	G	ND				ug/L
trans-1,3-Dichloropropene	***	G	ND	G	ND				ug/L
Trichloroethene	***	G	ND	G	ND				ug/L
2,4,6-Trichlorophenol	***	G	ND	G	ND				ug/L
2,4-Dichlorophenol	***	G	ND	G	ND				ug/L
2,4-Dimethylphenol	***	G	ND	G	ND				mg/L
2,4-Dinitrophenol	***	G	ND	G	ND				mg/L
2,4-Dinitrotoluene	***	G	ND	G	ND				mg/L
2,6-Dinitrotoluene	***	G	ND	G	ND				mg/L
2-Chlorophenol	***	G	ND	G	ND				mg/L
2-Nitrophenol	***	G	ND	G	ND				mg/L
3,3-Dichlorobenzidine	***	G	ND	G	ND				mg/L
4-Chloro-3-methylphenol	***	G	ND	G	ND				mg/L
4-Nitrophenol	***	G	ND	G	ND				mg/L
Acenaphthene	***	G	ND	G	ND				mg/L
Acenaphthylene	***	G	ND	G	ND				mg/L
Anthracene	***	G	ND	G	ND				mg/L
Azobenzene	***	G	ND	G	ND				mg/L
Benzidine	***	G	ND	G	ND				mg/L
Benzo(a)pyrene	***	G	ND	G	ND				mg/L
Bis(2-chloroethoxy)methane	***	G	ND	G	ND				mg/L
Bis(2-Chloroethyl) ether	***	G	0.055	G	ND				mg/L
Bis(2-chloroisopropyl)ether	***	G	ND	G	ND				mg/L
N-Nitrosodimethylamine	***	G	ND	G	ND				mg/L
Phenol	***	G	ND	G	ND				mg/L

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

October 2, 2009
Lab No. 09E-1797
P.O. No. 2910731A
Invoice No. 112213
Page 1 of 5

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 9/21/09, 8:25 A.M.
WASTEWATER COMPOSITE, SP 001, 9/21/09, 8:25 A.M. – 3:10 P.M.
WASTEWATER GRAB, SP 003, 9/21/09, 8:05 A.M.
WASTEWATER COMPOSITE, SP 003, 9/21/09, 8:15 A.M. – 4:15 P.M.
WASTEWATER GRAB, SP 005, 9/21/09, 8:35 A.M.
WASTEWATER COMPOSITE, SP 005, 9/21/09, 8:35 A.M. – 3:05 P.M.
WASTEWATER GRAB, SP 006, 9/21/09, 7:45 A.M.
WASTEWATER COMPOSITE, SP 006, 9/21/09, 8:00 A.M. 4:00 P.M.
WASTEWATER GRAB, SP 007, 9/21/09, 8:20 A.M.
WASTEWATER COMPOSITE, SP 007, 9/21/09, 8:20 A.M. – 3:20 P.M.

Units: mg/L Except As Noted

ANALYTE	SP 001	SP 003	SP 005	SP 006	SP 007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	44	57	97	106	16	10	405.1
Chemical Oxygen Demand (C)	165	148	286	474	129	10	410.4
Total Suspended Solids (C)	77	107	125	188	73	5	160.2
pH (Std. pH Units) (G)	8.67	8.77	8.65	9.10	8.96	---	150.1
Temperature, °C (G)	26	25	25	24	28	---	170.1
Oil & Grease (G)	8	7	7	22	ND	5	1664
Total Cyanide (G)	ND	ND	0.10	ND	ND	0.02	335.2

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
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October 2, 2009
Lab No. 09E-1797
P.O. No. 2910731A
Invoice No. 112213
Page 2 of 5

Attention: Livi Isringhausen

REPORT OF TESTS

Units: mg/L

ANALYTE	SP 001	SP 003	SP 005	SP 006	SP 007	MQL	METHOD NUMBER
Cadmium (C)	ND	ND	ND	ND	ND	0.05	200.7
Chromium (C)	ND	ND	ND	ND	ND	0.05	200.7
Copper (C)	ND	ND	5.15	ND	0.07	0.05	200.7
Lead (C)	ND	ND	ND	ND	ND	0.05	200.7
Nickel (C)	ND	ND	ND	ND	ND	0.05	200.7
Selenium (C)	ND	ND	ND	ND	ND	0.10	200.7
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7
Thallium (C)	ND	ND	ND	ND	ND	0.05	200.7
Zinc (C)	0.18	0.05	0.15	0.24	0.21	0.05	200.7
Mercury (C)	ND	ND	ND	ND	ND	0.0005	245.1

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite

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October 2, 2009
Lab No. 09E-1797
P.O. No. 2910731A
Invoice No. 112213
Page 3 of 5

Attention: Livi Isringhausen

Units: µg/L **VOLATILE ORGANIC COMPOUNDS BY SW-846 5030, 8260B**

TRS ANALYTE	SP001 (G)	SP 003 (G)	SP 005 (G)	SP 006 (G)	SP 007 (G)	MQL
1,1,1,-Tetrachloroethane	ND	ND	ND	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	5
1,1,2- Trichoroethane	ND	ND	ND	ND	ND	5
1,1-Dichloroethane	ND	ND	ND	ND	ND	5
1,1-Dichloroethene	ND	ND	ND	ND	ND	5
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	5
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	5
1,2-Dichloroethane	ND	ND	ND	ND	ND	5
1,2- Dichloropropane	ND	ND	ND	ND	ND	5
1,3- Dichlorobenzene	ND	ND	ND	ND	ND	5
1,4- Dichlorobenzene	ND	ND	ND	ND	ND	5
2-Chloroethyl vinyl ether	ND	ND	ND	ND	ND	20
Acrolein	ND	ND	ND	ND	ND	100
Acrylonitrile	ND	ND	ND	ND	ND	5
Benzene	ND	ND	ND	ND	ND	2
Bromodichloromethane	ND	ND	ND	ND	ND	5
Bromomethane	ND	ND	ND	ND	ND	10
Carbon tetrachloride	ND	ND	ND	ND	ND	5
Chlorobenzene	ND	ND	ND	ND	ND	5
Chloroethane	ND	ND	ND	ND	ND	10
Chloroform	ND	ND	5.0	5.2	ND	5
Chloromethane	ND	ND	ND	ND	ND	10
cis-1,3 – Dichloropropene	ND	ND	ND	ND	ND	5
Dibromochloromethane	ND	ND	ND	ND	ND	5
Ethylbenzene	ND	ND	ND	ND	ND	5
Methylene chloride	ND	ND	ND	ND	ND	5
Naphthalene	ND	ND	ND	ND	ND	10
Nitrobenzene	ND	ND	ND	ND	ND	50
Tetrachloroethene	ND	ND	ND	ND	ND	5
Toluene	ND	ND	ND	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	5
Trichloroethene	ND	ND	ND	ND	ND	5

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(G) = Grab Sample
Date of Analysis: 09/23/09

MEMBER ASTM

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October 2, 2009
Lab No. 09E-1797
P.O. No. 2910731A
Invoice No. 112213
Page 4 of 5

Attention: Livi Isringhausen

Units: mg/L SEMI-VOLATILE ORGANIC COMPOUNDS BY SW-846 3510C, METHOD 8270C

ANALYTE	SP001 (G)	SP 003 (G)	SP 006 (G)	SP 007 (G)	MQL
2,4,6-Trichlorophenol	ND	ND	ND	ND	0.010
2,4,Dichlorophenol	ND	ND	ND	ND	0.010
2,4-Dimethylphenol	ND	ND	ND	ND	0.010
2,4-Dinitrophenol	ND	ND	ND	ND	0.020
2,4-Dinitrotoluene	ND	ND	ND	ND	0.010
2,6-Dinitrotoluene	ND	ND	ND	ND	0.010
2-Chlorophenol	ND	ND	ND	ND	0.010
2-Nitrophenol	ND	ND	ND	ND	0.020
3,3-Dichlorobenzidine	ND	ND	ND	ND	0.010
4-Chloro-3-methylphenol	ND	ND	ND	ND	0.020
4-Nitrophenol	ND	ND	ND	ND	0.020
Acenaphthene	ND	ND	ND	ND	0.010
Acenaphthylene	ND	ND	ND	ND	0.010
Anthracene	ND	ND	ND	ND	0.010
Azobenzene +	ND	ND	ND	ND	0.010
Benzidine	ND	ND	ND	ND	0.040
Benzo(a)pyrene	ND	ND	ND	ND	0.010
Bis(2-chloroethoxy)methane	ND	ND	ND	ND	0.010
Bis(2-chloroethyl)ether	ND	ND	0.055	ND	0.010
Bis(2-chloroisopropyl)ether	ND	ND	ND	ND	0.010
N-Nitrosodimethylamine	ND	ND	ND	ND	0.020
Phenol	ND	ND	ND	ND	0.005

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(G) = Grab Sample
Date of Analysis: 09/23/09

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

WASHINGTON UNIVERSITY

October 2, 2009
Lab No. 09E-1797
P.O. No. 2910731A
Invoice No. 112213
Page 5 of 5

Attention: Livi Isringhausen

Units: mg/L **SEMI-VOLATILE ORGANIC COMPOUNDS BY SW-846 3510C, METHOD 8270C**

ANALYTE	SP 005 (G)	*MQL
2,4,6-Trichlorophenol	ND	0.05
2,4,Dichlorophenol	ND	0.05
2,4-Dimethylphenol	ND	0.05
2,4-Dinitrophenol	ND	0.095
2,4-Dinitrotoluene	ND	0.05
2,6-Dinitrotoluene	ND	0.05
2-Chlorophenol	ND	0.05
2-Nitrophenol	ND	0.095
3,3-Dichlorobenzidine	ND	0.05
4-Chloro-3-methylphenol	ND	0.095
4-Nitrophenol	ND	0.095
Acenaphthene	ND	0.05
Acenaphthylene	ND	0.05
Anthracene	ND	0.05
Azobenzene +	ND	0.05
Benzidine	ND	0.19
Benzo(a)pyrene	ND	0.05
Bis(2-chloroethoxy)methane	ND	0.05
Bis(2-chloroethyl)ether	ND	0.05
Bis(2-chloroisopropyl)ether	ND	0.05
N-Nitrosodimethylamine	ND	0.095
Phenol	ND	0.025

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(G) = Grab Sample
Date of Analysis: 09/23/09

* Elevated MQL due to high non-target analyte(s). Dilution Factor - 5

Steve Root

Steve Root, Manager
Environmental Testing

SR/djl

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____.

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:

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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 22 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Print or type name of signing official: M. Olivia Isringhausen

Title: Environmental Compliance Mgr Telephone: 314-362-6735

Signature: _____ Date: 10/21/09

SR

METROPOLITAN SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **2009** ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.3827
Ge-68	0.2240
H-3	48.0668
I-125	0.2045
P-32	0.3068
S-35	0.4071
U-238	0.0160
TOTAL ACTIVITY DISCHARGED:	**49.6079**

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

DMK

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 atachments were prepared under my direct 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 22 2009
DIVISION OF ENVIRONMENTAL COMPLIANCE

Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature:

Date: 10/21/2009

RE: radrpt.doc 2/00

5172216200

Washington University in St. Louis

Environmental Health & Safety **Radiation Safety Office**

12 October 2009

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, Missouri 63147

RE: Notification of Annual Increase in Aqueous Radioactive Waste Discharge to Sewer: Pursuant to Article VIII, Section Six of Ordinance No. 12559

Dear Mr. Mendoza:

In accordance with Article VIII, Section Six of Ordinance No. 12559, on 18 May 2009 we informed you that our expected release of radioactivity to the sewer would exceed last year's release by greater than 20%. At that time we projected the Washington University Medical School would discharge approximately 566 mCi, with the large majority of the activity to be tritium. We promptly received your acknowledgement of the notification.
We are now expecting to increase this projected amount to approximately 800 mCi, with the large majority, approximately 98%, of the activity still being tritium. This additional increase is due to aqueous waste generated by a researcher who has since left the University. We do not anticipate the need for any additional increases during calendar year 2009 and anticipate that the releases during the calendar year 2010 will be lower than during 2009.

If you have any questions please feel free to call me at 314.362.2996 or email me at dkershman@wustl.edu. Thank you for your assistance in this matter.

Sincerely,

David M. Kershman, Radiation Safety Specialist
Washington University in St. Louis

RECEIVED
OCT 16 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis, Campus Box 8053, 660 S. Euclid Avenue, St. Louis, Missouri 63110-1093
(314) 362-3476, *Fax* (314) 362-4776, radsafety@wustl.edu, http://radsafety.wustl.edu

SR

METROPOLITAN SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **(2009)** ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.3742
Gd-153	0.0270
H-3	86.9770
I-125	0.1583
P-32	0.3602
S-35	0.3624
U-238	0.0260
TOTAL ACTIVITY DISCHARGED:	**88.2851**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature:

Date: 7/21/2009

RECEIVED
RE: radrpt.doc 2/00
JUL 24 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE

SR
7-6

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: **IDENTIFYING INFORMATION**

Company Name: Washington University School of Medicine
Permit No: ~~5112262-00~~ → 5112-2162-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2009 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: **ANALYTICAL RESULTS OF SELF MONITORING**

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 6/17/2009 C: 6/17/2009		G: 6/17/2009 C: 6/17/2009		G: 6/17/2009 C: 6/17/2009			
Times at Which Samples Were Collected		G: 10:25 AM C: 10:25am - 3:53pm		G: 9:03 a.m. C: 9:03am - 5:03 pm		G: 8:50am C: 8:50 am - 2:45 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	32	C	64	C	58		mg/L
Chemical Oxygen Demand	****	C	114	C	159	C	241		mg/L
Total Suspended Solids	****	C	181	C	169	C	77		mg/L
pH	5.5 - 11.5	G	8.42	G	8.06	G	8.14		pH
Oil & Grease	200	G	6	G	21	G	5		mg/L
Temperature	60	G	30	G	26	G	27		Celcius
Silver	0.5	C	ND	C	ND	C	ND		mg/L

You must complete and sign the certification statements on the reverse side.

RECEIVED
JUL 0 6 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE
MSD 043563

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____

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:

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: M. Olivia Isringhausen

Title: Environmental Compliance Manager

Telephone: 314-362-6735

Signature: [signature]

Date: 6/25/09

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JUL 06 2009
DIVISION OF ENVIRONMENTAL COMPLIANCE

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

June 25, 2009
Lab No. 09E-1149
Invoice No. 108512
P.O. No. 2904133N
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 06/17/09, 10:25 A.M.
WASTE WATER COMPOSITE, PT. 001, 06/17/09, 10:25 A.M. – 3:53 P.M.
WASTE WATER GRAB, PT. 003, 06/17/09, 9:03 A.M.
WASTE WATER COMPOSITE, PT. 003, 06/17/09, 9:03 A.M. – 5:03 P.M.
WASTE WATER GRAB, PT. 005, 06/17/09, 8:50 A.M.
WASTE WATER COMPOSITE, PT. 005, 06/17/09, 8:50 A.M. – 2:45 P.M.
WASTE WATER GRAB, PT. 006, 06/17/09, 8:35 A.M.
WASTE WATER COMPOSITE, PT. 006, 06/17/09, 8:35 A.M. – 4:35 P.M.
WASTE WATER GRAB, PT. 007, 06/17/09, 10:15 A.M.
WASTE WATER COMPOSITE, PT. 007, 06/17/09, 10:15 A.M. – 3:50 P.M.

Units: mg/L except as otherwise noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	32	64	58	132	21	10	405.1
Chemical Oxygen Demand (C)	114	159	241	382	89	10	410.4
Total Suspended Solids (C)	181	169	77	317	143	5	160.2
pH (Std. pH Units) (G)	8.42	8.06	8.14	7.61	8.47	-----	150.1
Oil & Grease (G)	6	21	5	108	ND	5	1664
Temperature, °C (G)	30	26	27	25	28	-----	170.1
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

G - Grab
C - Composite

SR/djl

Steve Root, Manager
Environmental Testing

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 22, 2009

5112216 2.00

David Kershman
WASHINGTON UNIVERSITY IN ST. LOUIS
Campus Box 8053
660 S. Euclid Ave.
St. Louis, MO 63110

Re: Radiation Discharge Increase Notification Requirement
School of Medicine Bldg @ 4444 Forest Park Parkway

Dear Mr. Kershman:

We have reviewed your letter dated June 12, 2009 and received June 19, 2009 requesting a modified notification level for increases in radiation discharges to MSD. Based on the small annual amount currently discharged, you requested a modified level of 5 millicuries/year instead of after a 20% increase.

We have reviewed the information you provided in your request, as well as the MSD database. We agree with your request, and are allowing the 4444 Forest Park Parkway to refrain from required notification of radiation discharges to MSD, until the annual discharge will increase by 5 millicuries/year or more.

Thank you for helping us to 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.
Manager of Industrial Pretreatment

cc: Scott Rehmer

OFFICE OF ENVIRONMENTAL COMPLIANCE
MEMORANDUM

MEMO TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL [5112216200]

FROM: Tom Boehn

DATE: June 17, 2009

SUBJECT: **Phenolics on Field Sampling Requirements**

Phenol and many other semi-volatiles are present on site and used in research, according to IUQ. Even though no results > 1 mg/l, they were left on Field Sampling Requirements for this facility due to the large amount of usage on site.

M:\phenol\ phenol cleanup w061709 - WASHINGTON UNIVERSITY MEDICAL SCHOOL [5112216200]

5112216250

for SR

Washington University in St. Louis

Environmental Health & Safety **Radiation Safety Office**

18 May 2009

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, Missouri 63147

RE: Notification of Annual Increase in Aqueous Radioactive Waste Discharge to Sewer: Pursuant to Article VIII, Section Six of Ordinance No. 12559

Dear Mr. Mendoza:

We have reviewed our data and expect the radioactivity released to the sewer to increase more than 20% this year over last year. The increase is related to an unexpected increase in one lab's usage of tritium. We expect to discharge approximately 566 mCi from the Washington University Medical School, with the large majority of this activity to be tritium. In the calendar year 2008, the Washington University Medical School discharged approximately 186 mCi including approximately 170 mCi of tritium.

If you have any questions please feel free to call me at 314.362.2996 or email me at dkershman@wustl.edu. Thank you for your assistance in this matter.

Sincerely,

David M. Kershman, Radiation Safety Specialist
Washington University in St. Louis

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MAY 20 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis, Campus Box 8053, 660 S. Euclid Avenue, St. Louis, Missouri 63110-1093
(314) 362-3476, *Fax* (314) 362-4776, radsafety@wustl.edu, http://radsafety.wustl.edu

5112216279

Vm
2R

Washington University in St. Louis

Environmental Health & Safety **Radiation Safety Office**

18 May 2009

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, Missouri 63147

RE: Amended Industrial User Radioactive Materials Discharge Report

Dear Mr. Mendoza:

After reviewing our data, I am submitting an amended Industrial User Radioactive Materials Discharge report for the **Washington University Medical School**. The amended report is enclosed with this letter.

If you have any questions please feel free to call me at 314.362.2996 or email me at dkershman@wustl.edu. Thank you for your assistance in this matter.

Sincerely,

David M. Kershman, Radiation Safety Specialist
Washington University in St. Louis

RECEIVED
MAY 20 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis, Campus Box 8053, 660 S. Euclid Avenue, St. Louis, Missouri 63110-1093
(314) 362-3476, *Fax* (314) 362-4776, radsafety@wustl.edu, http://radsafety.wustl.edu

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT (Amended)

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **(2009)** [X] **(JAN-MAR)** [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	1.6833
Cr-51	0.0001
H-3	464.8354
I-125	0.1494
P-32	0.3605
S-35	2.0608
Se-75	0.0350
TOTAL ACTIVITY DISCHARGED:	**469.1246**

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

[Dmk] 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

RECEIVED

Signature:

Date: 5/18/2009

MAY 20 2009

RE: radrpt.doc 2/00

DIVISION OF ENVIRONMENTAL COMPLIANCE

ER
5-5

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **(2009)** [X] **(JAN-MAR)** [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	1.6833
Cr-51	0.0001
H-3	85.2234
I-125	0.1494
P-32	0.3605
S-35	2.0608
Se-75	0.0350
TOTAL ACTIVITY DISCHARGED:	**89.5126**

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

[DMK] 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: D K Date: 4/24/2009

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APR 27 2009

DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

SR
3-30

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

5112-2162-00

Company Name: Washington University School of Medicine
Permit No: ~~5112262-00~~ SR
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2009 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005		
Dates on Which Samples Were Collected		G: 3/10/2009 C: 3/10/2009		G: 3/10/2009 C: 3/10/2009		G: 3/10/2009 C: 3/10/2009		
Times at Which Samples Were Collected		G: 8:00 AM C: 8:00am - 2:08pm		G: 7:30 a.m. C: 7:30am - 2:15 pm		G: 8:08am C: 8:08 am - 2:03 pm		
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow	***	E	14,500	E	64,500	E	340,000	Gal/Day
Biological Oxygen Demand	****	C	52	C	99	C	104	mg/L
Chemical Oxygen Demand	****	C	115	C	198	C	274	mg/L
Total Suspended Solids	****	C	53	C	28	C	109	mg/L
pH	5.5 - 11.5	G	8.02	G	8.1	G	8.80	pH
Oil & Grease	200	G	ND	G	ND	G	ND	mg/L
Temperature	60	G	19	G	10	G	19	Celcius
Silver	0.5	C	ND	C	ND	C	ND	mg/L

You must complete and sign the certification statements on the reverse side.

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MAR 30 2009
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: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2009 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 3/10/2009 C: 3/10/2009		G: 3/10/2009 C: 3/10/2009					
Times at Which Samples Were Collected		G: 7:15 AM C: 7:15 am - 2:30 pm		G: 7:55 AM C: 7:55 am - 2:12 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	950	E	23,500				Gal/Day
Biological Oxygen Demand	****	C	44	C	35				mg/L
Chemical Oxygen Demand	****	C	136	C	84				mg/L
Total Suspended Solids	****	C	54	C	48				mg/L
pH	5.5 - 11.5	G	8.79	G	8.28				pH
Oil & Grease	200	G	41	G	ND				mg/L
Temperature	60	G	10	G	12				Celcius
Silver	0.5	C	ND	C	ND				mg/L

You must complete and sign the certification statements on the reverse side.

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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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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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MAR 30 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Print or type name of signing official: M. Olivia Isringhausen

Title: Environmental Compliance Manager Telephone: 314-362-6735

Signature: _____ Date: 3/23/09

St. Louis Testing Laboratories
INCORPORATED
2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085
Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

March 18, 2009
Lab No. 09E-0476
P.O. No. 2904133N
Invoice No. 104658
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 03/10/09, 8:00 A.M.
WASTEWATER COMPOSITE, PT. 001, 03/10/09, 8:00 A.M. – 2:08 P.M.
WASTEWATER GRAB, PT. 003, 03/10/09, 7:30 A.M.
WASTEWATER COMPOSITE, PT. 003, 03/10/09, 7:30 A.M. – 2:15 P.M.
WASTEWATER GRAB, PT. 005, 03/10/09, 8:08 A.M.
WASTEWATER COMPOSITE, PT. 005, 03/10/09, 8:08 A.M. – 2:03 P.M.
WASTEWATER GRAB, PT. 006, 03/10/09, 7:15 A.M.
WASTEWATER COMPOSITE, PT. 006, 03/10/09, 7:15 A.M. – 2:30 P.M.
WASTEWATER GRAB, PT. 007, 03/10/09, 7:55 A.M.
WASTEWATER COMPOSITE, PT. 007, 03/10/09, 7:55 A.M. – 2:12 P.M.

Units: mg/L Except As Noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	52	99	104	44	35	5	405.1
Chemical Oxygen Demand (C)	115	198	274	136	84	10	410.4
Total Suspended Solids (C)	53	28	109	51	48	5	160.2
pH (Std. pH Units) (G)	8.02	8.10	8.80	8.79	8.28	----	150.1
Oil & Grease (G)	ND	ND	ND	41	ND	5	170.1
Temperature, °C (G)	19	10	19	10	12	----	1664
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

Steve Root

Steve Root, Manager
Environmental Testing

SR/djl

MEMBER ACIL

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MAR 30 2009
DIVISION OF ENVIRONMENTAL COMPLIANCE

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: S112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **(2008)** ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ **(OCT-DEC)**

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.4978
Cr-51	0.0002
H-3	60.2006
I-125	0.1506
P-32	0.3571
S-35	0.4071
TOTAL ACTIVITY DISCHARGED:	**61.6134**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature:

Date: 1/16/2009

RECEIVED

JAN 20 2009

DIVISION OF ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT SR 1-16

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: ~~5112262-00~~ 5112-2162-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 12/18/2008 C: 12/18/2008		G: 12/18/2008 C: 12/18/2008		G: 12/18/2008 C: 12/18/2008			
Times at Which Samples Were Collected		G: 9:10a.m. C: 9:10am - 3:05pm		G: 9:00 a.m. C: 9:00am - 5:00 pm		G: 9:20 C: 9:20 am - 3:15 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	205	C	214	C	48		mg/L
Chemical Oxygen Demand	****	C	417	C	331	C	176		mg/L
Total Suspended Solids	****	C	172	C	60	C	61		mg/L
pH	5.5 - 11.5	G	8.67	G	7.63	G	8.75		pH
Oil & Grease	200	G	11	G	11	G	5		mg/L
Temperature	60	G	15	G	9	G	12		Celcius
Silver	0.5	C	ND	C	ND	C	ND		mg/L

You must complete and sign the certification statements on the reverse side.

RECEIVED
JAN 14 2009
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: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 12/19/2008 C: 12/19/2008		G: 12/18/2008 C: 12/18/2008					
Times at Which Samples Were Collected		G: 7:15 AM C: 7:15 am - 3:14 pm		G: 9:15 AM C: 9:15 am - 3:10 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	950	E	23,500				Gal/Day
Biological Oxygen Demand	****	C	44	C	102				mg/L
Chemical Oxygen Demand	****	C	470	C	278				mg/L
Total Suspended Solids	****	C	180	C	126				mg/L
pH	5.5 - 11.5	G	9.04	G	8.67				pH
Oil & Grease	200	G	93	G	7				mg/L
Temperature	60	G	173	G	17				Celcius
Silver	0.5	C	ND	C	ND				mg/L

RECEIVED
JAN 14 2009
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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
JAN 14 2009
DIVISION OF ENVIRONMENTAL COMPLIANCE

Print or type name of signing official: M. Olivia Isringhausen

Title: Environmental Compliance Manager Telephone: 314-362-6735

Signature: _____ Date: 12/12/08

Metropolitan Saint Louis Sewer District
2350 Market Street
Saint Louis, Missouri 63103-2555

WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave.
St. Louis, MO 63110

Attn: Livi Isringhausen
Environmental Compliance Mgr.

INDUSTRIAL WASTEWATER DISCHARGE PERMIT NUMBER 5112216200.

ANNUAL PERMIT FEE NOTICE

For permits in effect as of 10/01/2008.

Fee will be included in a separate bill from the Metropolitan St. Louis Sewer District.

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2008 through September 30, 2009 issued in accordance with the Metropolitan St. Louis District Ordinance #8660 for the location at **660 S. Euclid Ave.**

Base charge @ $150.00 per permit			$150.00
Volume charge @$0.72 per average daily Ccf	529.20	Ccfs	$381.02
Sample Point Charge @$100.00 per sample point	5	points	$500.00

For inquiries about the Annual Permit Fee, please call 314-436-8710. For inquiries about payment of the fee, which will appear on your upcoming monthly bill, please call 1-866-281-5737.

THIS IS NOT A BILL

DO NOT PAY NOW

FEE WILL BE INCLUDED IN A SEPARATE BILL

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 5112216200
Premise Address: 660 S. Euclid Ave. Zip Code: 63110
MSD Classes: SIU ☒ CIU ☐ Surcharge ☐ Potential Toxic Waste ☒ Non-Toxic Waste ☐
No Process Flow ☐ Multi-User ☐ Special Handling/Billing ☐
Company Representative: Livi Isringhausen
Title: Environmental Compliance Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 11/19/08 Time: From 08:30 AM To 11:00 AM (Last Insp. 7/17/07)

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00, 51122176-01,90006372-01
   B. Were all acct no's verified & active on billing system(or corrected)? Yes☒ No☐
   C. Did all acct no's have water usage on PIMS? Yes☒ No☐
   D. If no to B or C, explain: _____

2. PROCESSES & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont		Yes	Daily	001,003,005, 007
Housing & care of research mice	Cont		Yes	Daily	003,005,007
Food preparation	Batch		Yes	Daily	005
Cleanup at hazardous materials storage area(Bldg 80)	Batch		Yes	Daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (other than grease traps) - describe:

	Sample pt.
pH neutralization for labs	003,005,006, 007
Silver recovery	001,003,005, 006

4. DOES COMPANY HAVE ANY GREASE TRAPS? Yes☒ No☐
   If yes: A. List sample points: 005
   B. What is the frequency for cleaning & maintenance? Quarterly
   C. Are enzymes (not bacteria) used in traps? Yes☐ No☒
   D. If yes to C, was co. told to stop or switch to approved bacteria? Yes☐ No☐
   E. Was co. informed that MSD performs separate grease trap inspections? Yes☒ No☐

5. HAS COMPANY CONSTRUCTED ANY NEW BLDGS OR ADDITIONS SINCE THE LAST INSP? Yes☒ No☐
   If yes: A. Did company notify MSD Engineering's Plan Review group? Unknown☐ Yes☒ No☐
   B. If no or unknown, has inspector notified Plan Review group? Yes☐ No☐
   C. Comments: Construction of the new building at 4900 S. Euclid is in progress.

14. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐

If yes: A.

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

B. Comments: _____

15. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes☐ No☒

If yes: A. Upsets? ☐ Bypasses of pretreatment facilities? ☐
Spills? ☐ Slug discharges? ☐ Other? _____
B. Explain any marked: _____

16. ARE ANY SOLVENTS USED? Yes☒ No☐

If yes: A.

Solvent name & components	Used for?	How disposed?	Priority Pollutant?	413/433/469 Process?
Phenol	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Meth. chloride	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Toluene	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Chloroform	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Alcohol	Lab	Hauled off	Yes☐ No☒	Yes☐ No☒
Mineral spirits	Parts washers	Hauled off	Yes☐ No☒	Yes☐ No☒

17. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒

If yes: A. What needs to be done?
_____

If no: B. How are they controlled?
Materials kept in drums have secondary containment. Waste management training is given for handling of chemicals in quantity.

18. ARE THERE ANY AREAS WHERE COMPANY ACTIVITIES IMPAIR STORMWATER RUNOFF? Yes☐ No☒

If yes: A. Describe: _____
B. What needs to be done? _____
C. Was "Illicit Stormwater Discharges" brochure given to company? Yes☒ No☐
(regardless of whether there are any problem areas)

19. DOES COMPANY HAVE ANY SPILL, SLUG, OR SOLVENT MANAGEMENT PLANS (SMP)? Yes☒ No☐

If yes: A.

Title	SMP? 413/433		Last Update		Copy in File? (SMP only)	Update needed? Explain if yes
SPCCP	N/A		2/1/03		No	No
	N/A				N/A	N/A

B. Are any Plans needed (in addition to those listed in Part A)? Yes☐ No☒
(If yes, write company and request)

20. HAZARDOUS WASTES:

A. Was the company informed/reminded that solid & hazardous waste management regulations (RCRA) exist and may potentially apply to industrial users? Yes☒ No☐

B. Is there any discharge to the sewers of hazardous waste which has not been previously reported to MSD (under 40 CFR 403.12(p))? Yes☐ No☒

C. If yes to B, list haz wastes: _____

D. Was the company provided with a "Public Notice/Haz. Waste Discharge Notification" form for the above regulations? (regardless of whether there are any discharges) Yes☒ No☐

E. Comments: _____

21. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED THAT INCLUDE MSD CONTACTS? Yes☒ No☐
A. Was company provided notification cards & told to post where emergency response personnel can locate them? Yes☒ No☐
(Must post if co. generates process wastewater or stores chemicals of concern)

22. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐
If yes: A. Is requirement contained in permit ☒ or other document ☐.
B. If other document, date & description: _____
C. How frequently is sampling required? Quarterly
D. How frequently are reports required? Quarterly
E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐
F. If no, explain: _____

23. DOES COMPANY SELF-MONITOR ITS WASTEWATER DISCHARGE? Yes☒ No☐
If yes: A. Is the self-monitoring required by MSD? Yes☒ No☐
B. Are representative grab/comp samples collected? Yes☒ No☐
C. Does sample collection time period match company's production shifts (is it representative)? Yes☒ No☐
D. Are EPA-approved 40 CFR 136 wastewater test methods used? Yes☒ No☐
E. If no to B, C, or D, explain needed changes: _____

24. DOES CO. CONTINUOUSLY MONITOR & RECORD AT SP FOR pH ☐, TEMP ☐, LEL ☐? Yes☐ No☒
If yes: A. At which SPs? _____
B. Does company submit quarterly summaries? Yes☐ No☐
C. If no, explain: _____

25. DOES MSD SPLIT SAMPLES WITH THE COMPANY? Yes☐ No☒
If yes: A. Is company having the samples analyzed Yes☐ No☐
B. How does company insure proper preservation, holding times & analytical methods? _____
C. Has company submitted results of all split sample analyses since the last insp? Yes☐ No☐
D. Have results been submitted within 28 days of the collection's calendar quarter? Yes☐ No☐
E. If no to C, or D, explain: _____
F. Does company still want to split samples? Yes☐ No☐
G. Comments: _____

26. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒
If yes: A. Type and date: _____
B. Have the reports & actions been on-time & complete? Yes☐ No☐
C. If no, explain: _____

27. ASK COMPANY: IS CO. IN COMPLIANCE W/APPLICABLE NESHAP REGS FOR WW DISCHARGES? Yes☒ No☐
[Some MDNR-issued Title V air permits for specific processes allow pre-approved WW discharge.] [City/County-issued air permits are not NESHAP permits.]
If no: A. Describe: _____
B. Was MDNR Air Pollution Control informed? (must be done) Yes☐ No☐

28. DOES COMPANY RETAIN ALL WASTEWATER RECORDS FOR AT LEAST 5 YEARS? Yes☒ No☐
If no: A. How long does company retain records? _____
B. Was company told to retain for at least 5 years, per ordinance? Yes☐ No☐
C. Where are they kept? Environmental Compliance Manager's office

29. DO MSD CLASSIFICATIONS NEED TO BE REVISED? Yes☐ No☒
If yes: A. Indicate correct classifications:
SIU ☐ CIU ☐ Surcharge ☐ Potential Toxic Waste ☐ Non-Toxic Waste ☐
No Process Flow ☐ Multi-User ☐ Special Handling/Billing ☐
B. Explain changes: _____

30. SAMPLE POINTS

						DJ(y/n)
SP #	001	Fed.Reg.	n/a	Components:	Sanitary + NCCW + p&e washdown + research & teaching labs + softener regeneration	No
SP #	003	Fed.Reg.	n/a	Components:	Sanitary + NCCW + research & teaching labs + p&e washdown	No
SP #	005	Fed.Reg.	n/a	Components:	Sanitary + NCCW + kitchen waste + animal care + teaching labs + p&e washdown + softener regen + boiler blowdown	No
SP #	006	Fed.Reg.	n/a	Components:	Sanitary + cleanup at waste storage facility	No
SP #	007	Fed.Reg.	n/a	Components:	Sanitary + NCCW + teaching labs + animal care + p&e washdown	No

31. ARE ANY SAMPLE POINTS TRAPPED VENTS? Yes☒ No☐

If yes: A. List SPs: 006

B. Was co. informed that T-vents are preferred, and told why? Yes☒ No☐

32. ARE DISCHARGES AT ANY SPs SMALL/IRREGULAR ENOUGH TO ALLOW GRAB SAMPLES? Yes☐ No☒

If yes: A. List SPs and reasons: _____

33. ARE THERE ANY UNSAMPLED DISCHARGES? (list each lateral separately) Yes☐ No☒

Dummy SP #		Components:	
Dummy SP #		Components:	

34. DO ANY SAMPLE POINTS (including Unsampled/Dummy SPs) RECEIVE STORMWATER? Yes☒ No☐

If yes: A. List Sample Points: 001,003,005,006,007

35. WERE ALL SAMPLE POINTS (except for Dummy SPs) 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: _____

C. Was ANY grease or other problem/debris observed in any SP? Yes☐ No☒

D. If yes to C, list SPs & describe: _____

E. If yes to C, was company directed to take corrective actions? Yes☐ No☐

36. REVIEW THE SAMPLE POINT MAP! Last map revision date: 7/6/05

A. Is the map correct and accurate in all its details? Yes☒ No☐

B If no, what changes are needed: Sample point map is currently under revision by Doug Mendoza.

37. DO INSTRUCTIONS FOR "Contact Prior to Sampling" OR FIELD VISIT "Special Instructions" NEED REVISION? Yes☐ No☒

If yes: A. List needed changes: _____

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.

_____

MSD 043584

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

INDUSTRIAL USER CLASSIFICATIONS

01/12/1999	SIU
06/09/1998	PTW

WUNNENBERG INFO.

Base Map 19G3
Wun: St. Louis City & Co.
Grid: J 20 Page 26

SIU CRITERIA

PR25 Process Disch => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO. 63110

Billing Address
660 S. Euclid Ave.
St Louis, MO. 63110

INSPECTION INFORMATION

Next Due	Insp Rslt	
11/19/2008	RIN	James Goodall

PERMIT INFORMATION

Issue Date:	01/01/2008
Expire Date:	12/31/2012
Extended Date:	01/31/2008
Writer	Scott Rehmer
Issue Date:	02/01/2008
Expire Date:	12/31/2012
Extended Date:	
Writer	Scott Rehmer

IUQ INFORMATION

IUQ Recvd Date:	08/19/2002
Reviewer:	Fabian Grabski
IUQ Recvd Date:	06/28/2007
Reviewer:	James Goodall

CONTACTS

BILL	Livi Isringhausen	Environmental Compliance Manager	OFF	(314) 362-6735 Ext.
FLD1	Livi Isringhausen	Environmental Compliance Manager	FAX	(314) 362-1995 Ext.
	Livi Isringhausen	Environmental Compliance Manager	OFF	(314) 362-6735 Ext.
FLD2	Linda Vishino	Environmental Compliance Officer	OFF	(314) 935-7864 Ext.
OFF1	Livi Isringhausen	Environmental Compliance Manager	FAX	(314) 362-1095 Ext.
	Livi Isringhausen	Environmental Compliance Manager	OFF	(314) 362-6735 Ext.

OPERATIONAL INFORMATION

Work Days: 7

				S	M	T	W	T	F	S
1	6,000	09:00AM	8.0	Y	Y	Y	Y	Y	Y	Y
2	400	06:00PM	8.0	Y	Y	Y	Y	Y	Y	Y

Total Emp: 6,400 **Hrs:** 16.0

OTHER AGENCIES INFORMATION

01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/04/1997	MDNR - Hazardous Waste Program	01591
01/04/1997	MDNR - Hazardous Waste Program	01591
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00377308
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00377308
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498

NON-SEWERED WASTE

On-Site Storage Y **On-Site Disposal** N **Off-Site Disposal** Y

06/28/2007	Acids and/or Alkalies		800	GAL
06/28/2007	Equipment Oils and/or Grease		1250	GAL
06/28/2007	Infectious Waste		398000	LBS
06/28/2007	Kitchen/Food Service Grease		1280	LBS
06/28/2007	Organic Compounds		3520	GAL
06/28/2007	Paints or Paint Sludges		4280	LBS
06/28/2007	Radioactive Waste		1500	LBS
06/28/2007	Solvents/Thinners		500	LBS
06/28/2007	Other	Lab chemicals/reagents	127000	LBS

COMMENTS

RAW MATERIALS

EFF DATE	MATERIAL_DESCRIPTION	QUANTITY	UNIT
05/07/2004	Laboratory chemicals & reagents		

SIC INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

PRODUCTS

EFF DATE	DESCRIPTION	UNIT	AVG_PROD	MAX_PROD
05/07/2004	Medical school			
05/07/2004	Research institution			
05/07/2004	Research animal care & housing			

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SEWER ACCOUNTS

Sewer Accounts
5112216200
5112216100
5112216700
5112216800
5112217601
9000637201

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Start Date = 10/01/2007 12:00:00AM **End Date =** 12/31/2008 12:59:59PM **Wdays** **Cdays**

Acct. No.			Consumption CCF's	Consumption Gallons		Wdays	Cdays	Discharge Gal/ Wday	Discharge Gal/ Cday
5112216100									
5112216100	08/02/2007	11/02/2007	1,530	1,530	A	93	93	93	
5112216100	11/03/2007	02/08/2008	1,320	2,850		98	98	191	
5112216100	02/09/2008	05/13/2008	1,460	4,310		95	95	286	
5112216100	05/14/2008	08/04/2008	1,520	5,830		83	83	369	
RF 1.00	**Acct. Total**		5,830	4,361,143		369	369	11,819	11,819
5112216200			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216200	08/03/2007	11/28/2007	4,157	4,157	A	118	118	118	
5112216200	11/29/2007	02/08/2008	10,636	14,793		72	72	190	
5112216200	02/09/2008	05/06/2008	9,354	24,147		88	88	278	
5112216200	05/07/2008	08/04/2008	-3,034	21,113		90	90	368	
RF 0.91	**Acct. Total**		21,113	15,793,622		368	368	39,055	39,055
5112216700			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216700	08/14/2007	11/16/2007	80,400	80,400	A	95	95	95	
5112216700	11/17/2007	02/08/2008	21,867	102,267		84	84	179	
5112216700	02/09/2008	05/13/2008	20,432	122,699		95	95	274	
5112216700	05/14/2008	08/21/2008	48,620	171,319		100	100	374	
RF 0.73	**Acct. Total**		171,319	128,155,521		374	374	250,143	250,143
5112216800			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216800	08/02/2007	11/28/2007	1,000	1,000	A	119	119	119	
5112216800	11/29/2007	02/21/2008	1,000	2,000		85	85	204	
5112216800	02/22/2008	05/22/2008	1,000	3,000		91	91	295	
5112216800	05/23/2008	08/14/2008	200	3,200		84	84	379	
RF 1.00	**Acct. Total**		3,200	2,393,766		379	379	6,316	6,316
5112217601			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112217601	08/02/2007	11/07/2007	0	0	A	98	98	98	
5112217601	11/08/2007	02/11/2008	0	0		96	96	194	
5112217601	02/12/2008	05/06/2008	0	0		85	85	279	
5112217601	05/07/2008	08/25/2008	0	0		111	111	390	
RF 1.00	**Acct. Total**		0	0		390	390	1	1
9000637201			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
9000637201	08/02/2007	11/01/2007	21,863	21,863	A	92	92	92	
9000637201	11/02/2007	02/21/2008	12,049	33,912		112	112	204	
9000637201	02/22/2008	05/22/2008	11,105	45,017		91	91	295	
9000637201	05/23/2008	08/15/2008	28,803	73,820		85	85	380	
RF 0.58	**Acct. Total**		73,820	55,221,199		380	380	84,285	84,285
	Facility Total		275,282						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
01	Sanitary Or Combined	20G2	232C	Trunk Sewer	Western Mill Creek

Description Lateral from buildings located S of McKinley Av & E of Euclid Av

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT NO. 001 Ordinance **NPDES Outfall No.**

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		2,019	GPD		GPD	D	7/18/07
Non Contact Cooling Water		3,250	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		468	GPD		GPD	D	7/18/07
Regeneration/Reject Wat	Water softener regeneration	3,518	GPD		GPD	D	7/18/07
Process Waste	Photographic & teaching labs	3,851	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	1,733	GPD		GPD	D	7/18/07
	Total Flow Avg =	**14,839**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
02	Sanitary Or Combined	19G3	229C	Trunk Sewer	Western Mill Creek

Description Lateral from buildings N&S of Scott Av & E of Euclid

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT NO. 005 Ordinance **NPDES Outfall No.**

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		64,878	GPD		GPD	D	7/18/07
Kitchen Waste		9,176	GPD		GPD	D	7/18/07
Process Waste	Photographic & teaching labs, animal care, etc.	82,658	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Regeneration/Reject Wat	Water softener regeneration	32,761	GPD		GPD	D	7/18/07
Boiler Blowdown		39,666	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		1,996	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	22,155	GPD		GPD	D	7/18/07
Non Contact Cooling Water		88,038	GPD		GPD	D	7/18/07
	Total Flow Avg =	**341,328**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Lemay
03	Sanitary Or Combined	19G3	543C	Trunk Sewer	River des Peres - Forest Park

Description Lateral N from Building 14 W of Euclid Av to courtyard

Sewer Route W across S Kingshighway Blvd into Forest Park to trunk to treatment plant

SAMPLE POINT NO. 003 Ordinance **NPDES Outfall No.**

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		26,187	GPD		GPD	D	7/18/07
Non Contact Cooling Water		6,120	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		2,179	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	18,128	GPD		GPD	D	7/18/07
Process Waste	Photographic & teachng labs, animal care	11,489	GPD		GPD	D	7/18/07
	Total Flow Avg =	**64,103**		**Max =**			

METROPOLITAN ST. LOUIS SEWER DISTRICT
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PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
04	Sanitary Or Combined	19G3	259C	Trunk Sewer	Western Mill Creek

Description 8" lateral E from Building 80 at Taylor and Parkview to an unnamed street

Sewer Route N to Parkview to Duncan, E to trunk to treatment plant

SAMPLE POINT NO. 006 Ordinance **NPDES Outfall No.**

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		549	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Plant & Equipment Washdown	storage facility	485	GPD		GPD	D	7/18/07
	Total Flow Avg =	**1,034**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
05	Sanitary Or Combined	20G2	235C	Trunk Sewer	Western Mill Creek

Description Multiple lines from Bldg 63 N to McKinley

Sewer Route E on McKinley to Taylor, S to Clayton, E to Boyle, N to Duncan, then E to trunk to treatment plant

SAMPLE POINT NO. 007 Ordinance **NPDES Outfall No.**

Description Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		4,798	GPD		GPD	D	7/18/07
Non Contact Cooling Water		413	GPD		GPD	D	7/18/07
Process Waste		5,997	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	4,780	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Plant & Equipment Washdown		7,462	GPD		GPD	D	7/18/07
	Total Flow Avg =	**23,450**		**Max =**			

PRETREATMENT TYPES

SP	EFF_DATE	TYPE	DESCRIPTION
001	09/02/1998	DC32	Metallic Replacement
003	09/02/1998	DC37	pH Adjustment / Neutralization
003	09/02/1998	DC32	Metallic Replacement
005	06/16/1999	DC28	Grease Trap
005	07/17/2007	DC37	pH Adjustment / Neutralization
005	07/17/2007	DC32	Metallic Replacement
006	06/19/2000	DC32	Metallic Replacement
006	05/08/2001	DC37	pH Adjustment / Neutralization
007	07/17/2007	DC37	pH Adjustment / Neutralization

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
Acenaphthylene	SP	Acenaphthene	SP	4-Chloro-3-Methylphenol	SP
2,4,6-Trichlorophenol	SP	2,4-Dimethylphenol	SP	2,4-Dinitrotoluene	SP
1,2-Diphenylhydrazine	KP	3,3-Dichlorobenzidine	KP	Bis (2-Chloroethoxy) Methane	SP
Anthracene	SP	2,6-Dinitrotoluene	SP	2,4-Dichlorophenol	KP
2-Nitrophenol	KP	Naphthalene	SP	N-Nitrosodimethylamine	SP
Bis (2-Chloroisopropyl) Ether	SP	Bis (2-Chloroethyl) Ether	KP	1,2-Dichloropropane	KP
Trans-1,2-Dichloroethene	KP	Dibromochloromethane	SP	Bromodichloromethane	SP
1,2-Dichlorobenzene	KP	1,1-Dichloroethane	KP	Trichloroethene	KP
Ethylbenzene	SP	Chloroethane	SP	Acrylonitrile	SP
1,4-Dichlorobenzene	KP	1,1,2,2-Tetrachloroethane	KP	1,1-Dichloroethene	KP
Cyanide (Total)	KP	Asbestos (Fibrous)	KP	Silver (Total)	KP
Selenium (Total)	KP	Copper (Total)	KP	Cadmium (Total)	SP
Zinc (Total)	KP	Thallium (Total)	KP	Nickel (Total)	KP
Mercury (Total)	KP	Lead (Total)	KP	Chromium (Total)	KP
Arsenic (Total)	KP	1,2,4-Trichlorobenzene	SP	Phenol	KP
4-Nitrophenol	KP	2,4-Dinitrophenol	SP	2-Chlorophenol	SP
Nitrobenzene	KP	Benzo (A) Pyrene	KP	Benzidine	KP
Acrolein	KP	Toluene	KP	Methylene Chloride	KP
Chloromethane	SP	Chlorobenzene	KP	1,3-Dichlorobenzene	KP
1,1,1-Trichloroethane	SP	Tetrachloroethene	KP	Chloroform	KP
Carbon Tetrachloride	KP	Bromomethane	SP	Benzene	KP
2-Chloroethyl vinyl ether	SP	1,2-Dichloroethane	KP	1,1,2-Trichloroethane	SP
(cis & trans) 1,3-Dichloropropene	KP				

EXTRA STRENGTH SURCHARGE INFORMATION

PIMS FACILITY CONTACTS

For Account Number Selecte **5112216200** **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type / Contact Type	Contact Name		Contact Title	Phone Type	Number	Ext.
Billing Address						
Billing Contact	Livi	Isringhausen	Environmental Compliance Manager	OFF	(314)362-6735	
Office Mailing Address						
Office Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	FAX	(314)362-1095	
Office Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	OFF	(314)362-6735	
Premise Address						
Field Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	FAX	(314)362-1995	
Field Contact - Primary	Livi	Isringhausen	Environmental Compliance Manager	OFF	(314)362-6735	
Field Contact 1st Alt	Linda	Vishino	Environmental Compliance Officer	OFF	(314)935-7864	

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2009
	T237000	pH	Once/year	Grab	06/30/2009
	T247000	Temperature	Once/year	Grab	06/30/2009
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2009
	T309000	Benzene	Once/year	Grab	06/30/2009
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2009
	T332000	Chloroform	Once/year	Grab	06/30/2009
	T371000	Methylene Chloride	Once/year	Grab	06/30/2009
	T375000	Naphthalene	Once/year	Grab	06/30/2009
	T388000	Phenol	Once/year	Grab	06/30/2009
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T397000	Toluene	Once/year	Grab	06/30/2009
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2009

003 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2009
	T237000	pH	Once/year	Grab	06/30/2009
	T247000	Temperature	Once/year	Grab	06/30/2009
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2009
	T309000	Benzene	Once/year	Grab	06/30/2009
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2009
	T332000	Chloroform	Once/year	Grab	06/30/2009
	T371000	Methylene Chloride	Once/year	Grab	06/30/2009
	T375000	Naphthalene	Once/year	Grab	06/30/2009
	T388000	Phenol	Once/year	Grab	06/30/2009
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T397000	Toluene	Once/year	Grab	06/30/2009
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2009

005 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2009
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2009
	T237000	pH	Once/year	Grab	06/30/2009
	T247000	Temperature	Once/year	Grab	06/30/2009
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2009
	T309000	Benzene	Once/year	Grab	06/30/2009
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2009
	T332000	Chloroform	Once/year	Grab	06/30/2009
	T371000	Methylene Chloride	Once/year	Grab	06/30/2009
	T375000	Naphthalene	Once/year	Grab	06/30/2009
	T388000	Phenol	Once/year	Grab	06/30/2009
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T397000	Toluene	Once/year	Grab	06/30/2009
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2009

006 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS		CITY	ST	ZIP
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2009
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2009
	T237000	pH	Once/year	Grab	06/30/2009
	T247000	Temperature	Once/year	Grab	06/30/2009
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2009
	T309000	Benzene	Once/year	Grab	06/30/2009
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2009
	T332000	Chloroform	Once/year	Grab	06/30/2009
	T371000	Methylene Chloride	Once/year	Grab	06/30/2009
	T375000	Naphthalene	Once/year	Grab	06/30/2009
	T388000	Phenol	Once/year	Grab	06/30/2009
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T397000	Toluene	Once/year	Grab	06/30/2009
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2009

007 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2009
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2009
	T237000	pH	Once/year	Grab	06/30/2009
	T247000	Temperature	Once/year	Grab	06/30/2009
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2009
	T309000	Benzene	Once/year	Grab	06/30/2009
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2009
	T332000	Chloroform	Once/year	Grab	06/30/2009
	T371000	Methylene Chloride	Once/year	Grab	06/30/2009
	T375000	Naphthalene	Once/year	Comp-Time 04 Hrs	06/30/2009
	T388000	Phenol	Once/year	Comp-Time 04 Hrs	06/30/2009
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2009
	T397000	Toluene	Once/year	Grab	06/30/2009
Ordinance / 413/433	T999000	Total Toxic Organics	Once/year	Grab	06/30/2009

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

November 7, 2008

Livi Isringhausen
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
Campus Box 8229
660 S. Euclid
St. Louis, MO 63110

Dear Ms. Isringhausen:

We have reviewed your application dated November 6, 2008, requesting approval to discharge 165 gallons of wastewater to the Metropolitan St. Louis Sewer District for treatment. This wastewater is used antifreeze/water mixture from the chiller system at the Washington University School of Medicine facility located at 660 S. Euclid Avenue, St. Louis, Missouri. We understand the wastewater is to be discharged to a floor drain located in the McDonnell Sciences Building.

Based on the analytical results, this wastewater meets MSD Ordinance 12559 standards and is approved for discharge into a sanitary sewer on site. The discharge into the sewer must be controlled at a rate that will not surcharge the lines in that area. This approval is valid for 30 days from the date of this letter.

You must be certain the waste is discharged into a sanitary sewer inlet only. This letter does not authorize any discharge to a separate storm sewer, or to any watercourse, as any such discharge would be in violation of state and federal laws. **Please notify me at the number below when the discharge is to commence.**

This discharge has been approved based upon the information and sample analysis you provided, and is subject to the conditions stated above. This approval may be revoked by the District at any time if any of the information is found to be incorrect, or if the conditions of this approval are violated. Also, if the discharge causes any operational or maintenance problem within the District's collection or treatment system, or results in violations of any conditions of the District's NPDES permit, Washington University School of Medicine will be considered responsible for damages.

If you have any questions, please call me at (314) 436-8755.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Steven M. Grace

Steve Grace
Environmental Assistant Engineer

bv

pc: Roland Biehl

File: IU, WASHINGTON UNIVERSITY MEDICAL SCHOOL [5112216200], 660 S. Euclid Ave., St. Louis

C1A

SD EVALUATION CHECKLIST - ON SITE

APPLICATION INFORMATION

Source Name: Wash. U School of Medicine Evaluated by: SMG

Premise Address: 660 S. Euclid Ave. Date: 11/7/08

Send approval letter to applicant

Application Dated: 11/6/08 Received: 11/6/08 All Requested Info. Received: 11/6/08

SOURCE FILING/DESCRIPTION

1 - Source in PIMS? (Y) / N
2 - If No, on IU Cross-Ref list? * Y / N
3 - If No, MSD Account # from E-CIS? Y / N
4 - If none, on "Source" list (pre-IMS)? ** Y / N
5 - If No, assigned SOUR# from PIMS.

* o:\costrecovery\cross reference xls file
** o:\costrecovery\sourlist xls file

SOURCE TYPE (circle): (IU) / Dead IU / SD

INDUSTRY ID: 51122162-00

Sample Point: No. Assigned: 804 Description: used antifreeze / water mixture from chiller system

Normal WW flow from premise? (N/A) _____ ccf/month, _____GPD, _____GPH.

REGULATORY STATUS

Is waste a Hazardous Waste? (N) / Y _____

Categorical standards apply? (N) / Y _____

Contain PCB/ asbestos/ radioactive/ dioxin/ used oil? (N) / Y _____

Regulatory Agency Oversight? (N) / Y _____

DISCHARGE CONSIDERATIONS At MSD's connection:

Ordinance Limits (12559, p32) exceeded? N / (Y) Cu, Pb, Zn exceed, but flow rate calcs. indicate discharge will take less than 1 hour & will not be a concern to treatment plant

Ordinance other limits exceeded (dye, flash pt <140F, temp >140F, obstruction, nuisance foaming/odor, corrosion causing): (N) / Y _____

Water Quality Standard exceeded? (N) / Y _____

Fumes in sewer exceed PEL/TLV limits? (N) / Y _____

Vapors in sewer exceed 10% of LEL? (N) / Y _____

RECOMMENDATION: (APPROVE) / DENY (cc WWTP Mgr for timed discharge)

APPROVAL CONDITIONS:

Timed Discharge (COD/BOD/WQ/foam): (N) / Y Limit = _____ gal/hour

Require Treatment before Discharge? (N) / Y _____

Laboratory analysis fee due? (N) / Y $_____

SMR required? (N) / Y Frequency/analysis: _____

SMR log: (N/A) / Remediation.xls / Nonremediation.xls

Volume Billing applies (water unmetered or credited)? (N) / Y

Bill High Strength? (N) / Y Yes, If use >60,000 gal/month water ___and, > norm WW strgth

Surcharge calculation attached: (N/A) / N / Y

Expiration log updated: (N/A) / N / Y

O:\CostRecovery\Special Discharge\C1a.Checklist.doc

On-Site Special Discharge High Strength Flow Rate and Surcharge Calculator

1 GENERAL INFORMATION:

Date: 11/06/08
Calculated by: Steve Grace
Source name: Washington Univ. School of Medicine McDonnell Sciences Bldg.
Waste material: used antifreeze/water mixture from chiller system
Discharge volume: 165 gallons

2 STRENGTH INFORMATION:

Sample BOD =	0	mg/l =	0	lbs BOD to be discharged
Sample COD =	575,000	mg/l =	791	lbs COD to be discharged
Sample TSS =	0	mg/l =	for surcharge calculation only	

3 PLANT DATA: 2007

Treatment area: Lemay

	Flow (MGD)	BOD (mg/L)	COD (mg/L)	BOD (lb/hr)	COD (lb/hr)	Max Loading = 10% BOD (lb/hr)	COD (lb/hr)
Bissell	140	146	292	7,113	14,227	711	1,423
Coldwater	23	226	452	1,768	3,535	177	354
Fenton	5	307	614	482	964	48	96
Grand Glaize	16	152	399	830	2,183	83	218
Lemay	**122**	**81**	**228**	**3,438**	**9,610**	**344**	**961**
Lower Meramec	10	124	364	452	1,326	45	133
Missouri River	28	281	561	2,732	5,465	273	546

4 MINIMUM REQUIRED FLOW RATE:

	BOD (hours	BOD (gpm)	COD (hours)	COD (gpm)
Bissell	0.00	0	0.56	5
Coldwater	0.00	0	2.24	1
Fenton	0.00	0	8.20	0
Grand Glaize	0.00	0	3.62	1
Lemay	**0.00**	**0**	**0.82**	**3**
Lower Meramec	0.00	0	5.97	0
Missouri River	0.00	0	1.45	2

5 SURCHARGE AND VOLUME BILLING

Is volume subject to billing? no (yes/no)
Ratio of BOD/COD = 0.00

(Sample BOD) - 300 = 0 mg/l subject to surcharge
(sample COD) - 600 = 574400 mg/l subject to surcharge
(sample TSS) - 300 = 0 mg/l subject to surcharge

If BOD/COD ratio <= 0.35, the following calculations use the COD value. Otherwise they use the BOD value

Current rates under Ordinance: 12561

Volume = $ 1.88 /CcF
BOD = $ 529.56 /ton
COD = $ 264.78 /ton
TSS = $ 218.90 /ton

Flow charge = $ - based on volume = 0 CcF
BOD surcharge = $ -
COD surcharge = $ -
TSS surcharge = $ -
Total discharge charge = $ -
Customer charge = $ - DEC charges special discharge customers for total charges > $20.00
Approximate charge/gallon = $ -

Comments

no surcharge billing applies

On-Site Special Discharge Flow Rate Calculator

This calculator does not consider attributable concentrations from normal flow

1 GENERAL INFORMATION:

Date: 11/07/08
Calculated by: Steve Grace
Source name: Washington University School of Medicine
Waste material: used antifreeze/water mixture from chiller system
Discharge volume: 165 gallons

2 PLANT DATA (as needed): 0 does not conisder removal data, see HWRS acceptance caluclator

Treatment area: Lemay

	Flow (MGD)
Bissell	140
Coldwater	23
Fenton	5
Grand Glaize	16
Lemay	122
Lower Meramec	10
Missouri River	28

3 MINIMUM REQUIRED FLOW RATE:

SD Concentration = 26.200 mg/L
SD Limit = 3.000 mg/L Define the SD limit here = ex: Ord 12559 Zn
Normal Flow Rate = 7,231 GPH Use normal flow, RF, upstream flow and plant flow, as applicable
Safety Factor = 10% default is 10%, apply more as neccessary
SD Flow Rate = 842 GPH
SD Flow Rate = 14 GPM
Total discharge time = 0 Hours

Comments:

On-Site Special Discharge Flow Rate Calculator

This calculator does not consider attributable concentrations from normal flow

1 GENERAL INFORMATION:

Date:	11/07/08
Calculated by:	Steve Grace
Source name:	Washington University School of Medicine
Waste material:	used antifreeze/water mixture from chiller system
Discharge volume:	165 gallons

2 PLANT DATA (as needed): 0 — does not conisder removal data, see HWRS acceptance caluclator

Treatment area: Lemay

	Flow (MGD)
Bissell	140
Coldwater	23
Fenton	5
Grand Glaize	16
Lemay	122
Lower Meramec	10
Missouri River	28

3 MINIMUM REQUIRED FLOW RATE:

SD Concentration =	18.110	mg/L	
SD Limit =	2.700	mg/L	Define the SD limit here = ex: Ord 12559 Cu
Normal Flow Rate =	7,231	GPH	Use normal flow, RF, upstream flow and plant flow, as applicable
Safety Factor =	10%	default is 10%, apply more as neccessary	
SD Flow Rate =	**1140**	**GPH**	
SD Flow Rate =	**19**	**GPM**	
Total discharge time =	**0**	**Hours**	

Comments:

On-Site Special Discharge Flow Rate Calculator

This calculator does not consider attributable concentrations from normal flow

1 GENERAL INFORMATION:

Date: 11/07/08
Calculated by: Steve Grace
Source name: Washington University School of Medicine
Waste material: used antifreeze/water mixture from chiller system
Discharge volume: 165 gallons

2 PLANT DATA (as needed): 0 — does not conisder removal data, see HWRS acceptance caluclator

Treatment area: Lemay

	Flow (MGD)
Bissell	140
Coldwater	23
Fenton	5
Grand Glaize	16
Lemay	122
Lower Meramec	10
Missouri River	28

3 MINIMUM REQUIRED FLOW RATE:

SD Concentration =	1.700	mg/L
SD Limit =	0.400	mg/L — Define the SD limit here = ex: Ord 12559 Pb
Normal Flow Rate =	7,231	GPH — Use normal flow, RF, upstream flow and plant flow, as applicable
Safety Factor =	10%	default is 10%, apply more as neccessary
SD Flow Rate =	**2002**	**GPH**
SD Flow Rate =	**33**	**GPM**
Total discharge time =	**0**	**Hours**

Comments:

Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, MO 63103

APPLICATION FOR SPECIAL DISCHARGE APPROVAL

I. WASTEWATER SOURCE IDENTIFICATION:

Site Name: Washington University School of Medicine
Premise Address: 660 S Euclid Ave
City: St. Louis State: MO Zip: 63110
Owner:
Contact Person: Livi Isringhausen
Title: Environmental Compliance Manager
Phone: 314-362-6735 Fax: 314-362-1095

II. APPLICANT (mailing information):

Applicant Name: Livi Isringhausen
Title: Environmental Compliance Manager
Company Name: Washington University School of Medicine
Mailing Address: 660 S. Euclid Ave
Campus Box 8229
City: St. Louis State: MO Zip: 63110
Phone: 314-362-6735 Fax: 314-362-1095

III. A. MATERIAL TO BE DISCHARGED (check all applicable boxes):

1. Wastewater description/location: Antifreeze and water
2. Process/activity generating wastewater: HVAC system
3. Physical and chemical composition: List all constituents, and known or potentially present regulated contaminants below.
   ☐ See separate listing enclosed, and/or ☒ See analytical results enclosed, and/or ☐ Material Safety Data Sheet enclosed.

DESCRIPTION	RANGE	UNIT
antifreeze	50	%
water	50	%

DESCRIPTION *(continued)*	RANGE	UNIT

4. Is this wastewater from a process subject to EPA's categorical standards in 40 CFR Subchapter N? ☐ Yes ☒ No
   a. If yes, the applicable standards are in: 40 CFR Part _____, Subpart _____ ☐ Existing source ☐ New source
5. Does this wastewater contain polychlorinated biphenyls, asbestos or radioactive material? ☐ Yes ☒ No
   a. If yes, describe:
6. Representative sample: ☒ Laboratory results attached, and/or ☐ Sample provided (1/2 gallon minimum, clear container)
   a. Sample collection point/location: drum Collection method: Cativissa tube
   b. Sampler's name/Co.: Robert Anderson Sample date/time: 10/30/08 9:00 AM
   c. Attach chain of custody as available
7. Discharge will occur over the following time period: ☐ < 30 days ☐ ≥ Two years ☒ Other: 1 time
   a. Expected total volume of wastewater to be discharged over the time period above: 165 Gallons
   b. Proposed discharge volume: 165 Gallons, at a frequency of: ☒ One time ☐ Daily ☐ Weekly ☐ Monthly ☐ Once/three months ☐ Once/six months ☐ Other:
8. Pretreatment of wastewater prior to discharge: ☒ None ☐ Yes, describe:
   a. If yes, attach site plan, pretreatment system schematic, and design specifications.
9. Wastewater from a remediation project under: ☐ Superfund/CERCLA ☐ RCRA ☐ Voluntary program ☐ UST ☒ Not applicable
   a. If from a remediation project, briefly describe the past and present utilization of the property:

III.B. MATERIAL FROM UNDERGROUND STORAGE TANK SOURCE

☒ Not applicable (go to Section IV)

Please answer the following questions if you are requesting to discharge wastewater associated with an underground storage tank system.

1. a. Wastewater from: ☐ Inside UST(s) ☐ UST system pit ☐ Excavation outside UST system pit ☐ Monitoring well ☐ Groundwater remediation system

   b. UST project involves wastewater from: ☐ UST(s) closed in place ☐ UST(s) removed ☐ Remediation ☐ Upgrade ☐ Maintenance activities ☐ Well monitoring ☐ Other, explain: _____

   c. If wastewater is from a closure project, how long has UST(s) been out of service: _____ years

2. a. State assigned UST site identification number: _____ ☐ Not applicable

   b. Number of USTs affected: _____ ☐ Unknown

   c. For the UST(s) involved, their state identification number(s): _____ ☐ Not applicable

   d. Service Station Identification Number, as applicable: _____

3. Tank contents/former contents. ☐ Gasoline ☐ #2 diesel ☐ Used oil ☐ Unknown ☐ Other: _____

IV. DISCHARGE LOCATION

1. ☒ On-site. Describe proposed point of entry to sewer and the discharge rate (must be a sanitary or combined sewer): drain in McDonnell Sciences Building Note: Range of discharge must not surcharge sewer line.

2. ☐ Haul to MSD Bissell Point Hauled Waste Receiving Station at 10 E. Grand, St. Louis, MO.

   a. Transporters Name: _____ and MSD Hauler ID Number: _____

   b. Hazardous Waste Certification:

   For wastewater which is hauled to MSD's Bissell Point Hauled Waste Receiving Station, I hereby certify that to the best of my knowledge and belief, the above hauled waste is not classified as a RCRA "hazardous waste" as defined by the MDNR in 10 CSR 25 or USEPA in 40 CFR Part 261.

   Applicant Name (print): _____

   Signature: _____ **Date:** _____

ADDITIONAL INFORMATION:

_____

V. APPLICANT SIGNATURE AND CERTIFICATION

This application must be signed by the applicant: either the source contact, or a contractor or agent directly responsible for site activities.

I hereby certify that I am directly responsible for activities at the site regarding the wastewater to be discharged, and to the best of my knowledge and belief, based on appropriate inquiry, the information in this application is true, complete, and accurate. The samples or analyses submitted are representative of the materials to be discharged. If granted approval to discharge, I agree to abide by the MSD Ordinances, and all applicable federal, state and local regulations. I agree to pay the costs of any pre-approval analyses performed by MSD and to pay any applicable disposal charges for the volume and strength of the wastes discharged.

Applicant Name (print): Lin Teinghausen

Signature: _____ **Date:** 11/6/08

FOR MSD USE ONLY:

File Name: Washington University School of Medicine ID No. 51122162-00 Sample Point No. 804

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

November 5, 2008
Lab No. 08E-1714
Invoice No. 99903
P.O. No. 2904133N
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, Mo 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: ANTIFREEZE SOLUTION SAMPLE
SUBMITTED 10/30/08

Units: mg/L except as otherwise noted

ANALYTE	ANTIFREEZE	MQL	METHOD NUMBER	DATE OF ANALYSIS
PH (std pH units)	8.61	-----	9045 D	10/31/08
Chemical Oxygen Demand	575000	10000	410.4	10/31/08
Chromium	3.14	1.25	3050 B/6010 C	11/04/08
Copper	18.11	1.25	3050 B/6010 C	11/04/08
Iron	3.04	1.25	3050 B/6010 C	11/04/08
Lead	1.70	1.25	3050 B/6010 C	11/04/08
Zinc	26.2	1.25	3050 B/6010 C	11/04/08

MQL: Minimum Quantitative Limit

Identification of tested specimens provided by the client.

Steve Root
Steve Root, Manager
Environmental Testing

SR/djl

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES INC
SEE REVERSE FOR CONDITIONS

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Delo® Extended Life Prediluted 50/50 Coolant/Antifreeze

Product Use: Antifreeze/Coolant
Product Number(s): CPS227805
Company Identification
ChevronTexaco Global Lubricants
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevron-lubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
ChevronTexaco Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevrontexaco.com
Product Information: (800) LUBE TEK
MSDS Requests: (800) 414-6737

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene Glycol	107-21-1	40 - 50 %weight
Diethylene glycol	111-46-6	1 - 5 %weight
Sodium 2-ethylhexanoate	19766-89-3	1 - 5 %weight

SECTION 3 HAZARDS IDENTIFICATION

****

EMERGENCY OVERVIEW

- HARMFUL OR FATAL IF SWALLOWED
- CONTAINS MATERIAL THAT MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS BASED ON ANIMAL DATA
- POSSIBLE BIRTH DEFECT HAZARD - CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA
- CAUSES DAMAGE TO:
- KIDNEY

****

IMMEDIATE HEALTH EFFECTS
Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin.
Ingestion: Toxic; may be harmful or fatal if swallowed.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:
Reproduction and Birth Defects: Contains material that may cause adverse reproductive effects if swallowed based on animal data.Contains material that may cause birth defects based on animal data.
Target Organs: Contains material that causes damage to the following organ(s) if swallowed: Kidney
See Section 11 for additional information. Risk depends on duration and level of exposure.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

SECTION 5 FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

NFPA RATINGS: Health: 2 Flammability: 0 Reactivity: 0

FLAMMABLE PROPERTIES:
Flashpoint: Not Applicable
Autoignition: No Data Available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Dry Chemical, CO2, AFFF Foam or alcohol resistant foam.
PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: This material will not burn.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling.
General Handling Information: Do not taste or swallow antifreeze or solution. Keep out of the reach of children and animals.
General Storage Information: Do not store in open or unlabeled containers.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be

dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC or Vinyl).
Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.
Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH	–	–	100 mg/m3	–

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Red
Physical State: Liquid
Odor: Faint or Mild
pH: 8.1 - 8.5
Vapor Pressure: No data available
Vapor Density (Air = 1): 2.1
Boiling Point: 108.9°C (228°F)
Solubility: Miscible
Freezing Point: -36.7°C (-34°F)
Melting Point: No Data Available
Specific Gravity: 1 - 1.5 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)
Viscosity: No data available

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Hazardous Decomposition Products: Aldehydes (Elevated temperatures), Ketones (Elevated temperatures)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.
Skin Sensitization: No product toxicology data available.
Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.
Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.

This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.

2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE

This material is expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.
DOT Shipping Description: Anti-freeze Preparations, Proprietary
Additional Information: Bulk shipments with a reportable quantity (5000 pounds) of ethylene glycol are a hazardous material. The Proper Shipping Name is: Environmentally Hazardous Substance, Liquid, N.O.S. (ethylene glycol), 9, UN3082, III, RQ (ethylene glycol).

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

ICAO/IATA Shipping Description: Anti-freeze Preparations, Proprietary; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES: 1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: YES
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Diethylene glycol	07
Ethylene Glycol	03, 05, 06, 07

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

NEW JERSEY RTK CLASSIFICATION:
Refer to components listed in Section 2.

WHMIS CLASSIFICATION:
Class D, Division 1, Subdivision B: Toxic Material - Acute Lethality
Class D, Division 2, Subdivision A: Very Toxic Material - Teratogenicity and Embryotoxicity
Reproductive Toxicity

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 0 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 0 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:
Label Category : ANTIFREEZE/COOLANT 3

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 2,5,7,10,14,15,16
Revision Date: 01/31/2006

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - ChevronTexaco	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the ChevronTexaco Energy Research & Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Scott M. Rehmer WASH. U. MED. SCHOOL

From: Isringhausen, Mary [isringhausenm@wusm.wustl.edu] 5112-2162-00
Sent: Monday, November 03, 2008 2:33 PM
To: Scott M. Rehmer
Subject: RE: Organic List

SR
11-4
Added, then → Re-Process

Attachments: Organic report 102008

Organic report 102008 (570 KB)...

Good Afternoon Scott-
Here is the analytical from the lab, is there anything else you need? Do you want me to fill out a new report? Just let me know. L

Livi Isringhausen
Environmental Compliance Manager
Washington University School of Medicine
314-362-6735

(cis & trans) 1,3-Dichloropropene	KP
1,1,1-Trichloroethane	SP
1,1,2,2-Tetrachloroethane	KP
1,1,2-Trichloroethane	SP
1,1-Dichloroethane	KP
1,1-Dichloroethene	KP
1,2,4-Trichlorobenzene	SP
1,2-Dichlorobenzene	KP
1,2-Dichloroethane	KP
1,2-Dichloropropane	KP
1,2-Diphenylhydrazine	KP
1,3-Dichlorobenzene	KP
1,4-Dichlorobenzene	KP
2,4,6-Trichlorophenol	SP
2,4-Dichlorophenol	KP
2,4-Dimethylphenol	SP
2,4-Dinitrophenol	SP
2,4-Dinitrotoluene	SP
2,6-Dinitrotoluene	SP
2-Chloroethyl vinyl ether	SP
2-Chlorophenol	SP
2-Nitrophenol	KP
3,3-Dichlorobenzidine	KP
4-Chloro-3-Methylphenol	SP
4-Nitrophenol	KP
Acenaphthene	SP
Acenaphthylene	SP
Acrolein	KP
Acrylonitrile	SP
Anthracene	SP
Arsenic (Total)	KP
Asbestos (Fibrous)	KP
Benzene	KP
Benzidine	KP
Benzo (A) Pyrene	KP
Bis (2-Chloroethoxy) Methane	SP
Bis (2-Chloroethyl) Ether	KP
Bis (2-Chloroisopropyl) Ether	SP
Bromodichloromethane	SP
Bromomethane	SP
Cadmium (total)	SP
Carbon Tetrachloride	KP
Chlorobenzene	KP
Chloroethane	SP
Chloroform	KP
Chloromethane	SP
Chromium (Total)	KP
Copper (Total)	KP
Cyanide (Total)	KP

Dibromochloromethane	SP
Ethylbenzene	SP
Lead (Total)	KP
Mercury (Total)	KP
Methylene Chloride	KP
Naphthalene	SP
Nickel (Total)	KP
Nitrobenzene	KP
N-Nitrosodimethylamine	SP
Phenol	KP
Selenium (Total)	KP
Silver (Total)	KP
Tetrachloroethene	KP
Thallium (Total)	KP
Toluene	KP
Toxaphene	SP
Trans-1,2-Dichloroethene	KP
Trichloroethene	KP
Zinc (Total)	KP

Sampled on
0-25-2008

10-24-08
SR

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October 14, 2008
Lab No. 08E-1471
P.O. No. 2904133N
Invoice No. 99020
Page 1 of 4
(Revised Report 10/31/08)

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 9/25/08, 8:30 A.M.
WASTEWATER COMPOSITE, SP 001, 9/25/08, 8:30 A.M. – 2:35 P.M.
WASTEWATER GRAB, SP 003, 9/25/08, 8:50 A.M.
WASTEWATER COMPOSITE, SP 003, 9/25/08, 8:50 A.M. – 4:50 P.M.
WASTEWATER GRAB, SP 005, 9/25/08, 8:05 A.M.
WASTEWATER COMPOSITE, SP 005, 9/25/08, 8:05 A.M. – 2:25 P.M.
WASTEWATER GRAB, SP 006, 9/25/08, 7:50 A.M.
WASTEWATER COMPOSITE, SP 006, 9/25/08, 7:50 A.M. – 3:50 P.M.
WASTEWATER GRAB, SP 007, 9/25/08, 8:20 A.M.
WASTEWATER COMPOSITE, SP 007, 9/25/08, 8:20 A.M. – 2:30 P.M.

Units: mg/L Except As Noted

ANALYTE	SP 001	SP 003	SP 005	SP 006	SP 007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	38	43	66	ND	37	10	405.1
Chemical Oxygen Demand (C)	92	131	241	ND	102	10	410.4
Total Suspended Solids (C)	44	13	110	10	39	5	160.2
pH (Std. pH Units) (G)	7.49	7.04	7.71	7.50	7.51	---	150.1
Temperature, °C (G)	29	27	26	23	29	---	170.1
Oil & Grease (G)	ND	12	6	6	ND	5	1664
Silver (C)	0.08	ND	ND	ND	0.08	0.05	200.7
Arsenic (C)	ND	ND	ND	ND	ND	0.05	200.7
Chromium (C)	ND	ND	ND	ND	ND	0.05	200.7
Mercury (C)	ND	ND	ND	ND	ND	0.0005	245.1
Total Cyanide (G)	ND	ND	ND	ND	ND	0.02	335.2

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST. NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC. SEE REVERSE FOR CONDITIONS.

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Invoice No. 99020

(Revised Report 10/31/08)

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

Units: µg/L **VOLATILE ORGANIC COMPOUNDS BY SW-846 5030, 8260B**

ANALYTE	SP001 (G)	SP 003 (G)	SP 005 (G)	SP 006 (G)	SP 007 (G)	MQL
1,1,1,-~~Tetra~~TRI chloroethane	ND	ND	ND	ND	ND	5
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	5
1,1,2- Trichoroethane	ND	ND	ND	ND	ND	5
1,1-Dichloroethane	ND	ND	ND	ND	ND	5
1,1-Dichloroethene	ND	ND	ND	ND	ND	5
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	5
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	5
1,2-Dichloroethane	ND	ND	ND	ND	ND	5
1,2- Dichloropropane	ND	ND	ND	ND	ND	5
1,3- Dichlorobenzene	ND	ND	ND	ND	ND	5
1,4- Dichlorobenzene	ND	ND	ND	ND	ND	5
2-Chloroethyl vinyl ether	ND	ND	ND	ND	ND	20
Acrolein	ND	ND	ND	ND	ND	100
Acrylonitrile	ND	ND	ND	ND	ND	5
Benzene	ND	ND	ND	ND	ND	2
Bromodichloromethane	ND	ND	ND	ND	ND	5
Bromomethane	ND	ND	ND	ND	ND	10
Carbon tetrachloride	ND	ND	ND	ND	ND	5
Chlorobenzene	ND	ND	ND	ND	ND	5
Chloroethane	ND	ND	ND	ND	ND	10
Chloroform	ND	ND	5.7	7.1	ND	5
Chloromethane	ND	ND	ND	ND	ND	50
cis-1,3 – Dichloropropene	ND	ND	ND	ND	ND	5
Dibromochloromethane	ND	ND	ND	ND	ND	5
Ethyl benzene	ND	ND	ND	ND	ND	5
Methylene chloride	ND	ND	ND	ND	ND	5
Naphthalene	ND	ND	ND	ND	ND	10
Nitrobenzene	ND	ND	ND	ND	ND	50
Tetrachloroethene	ND	ND	ND	ND	ND	5
Toluene	ND	ND	ND	ND	ND	5
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	5
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	5
Trichloroethene	ND	ND	ND	ND	ND	5

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(G) = Grab Sample
Date of Analysis: 09/29/08

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(Revised Report 10/31/08)

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

Units: mg/L SEMI-VOLATILE ORGANIC COMPOUNDS BY SW-846 3510C, METHOD 8270C

ANALYTE	SP001 (G)	SP 003 (G)	SP 005 (G)	SP 006 (G)	SP 007 (G)	MQL
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	0.010
2,4,Dichlorophenol	ND	ND	ND	ND	ND	0.010
2,4-Dimethylphenol	ND	ND	ND	ND	ND	0.010
2,4-Dinitrophenol	ND	ND	ND	ND	ND	0.019
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	0.010
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	0.010
2-Chlorophenol	ND	ND	ND	ND	ND	0.010
2-Nitrophenol	ND	ND	ND	ND	ND	0.019
3,3-Dichlorobenzidine	ND	ND	ND	ND	ND	0.010
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	0.019
4-Nitrophenol	ND	ND	ND	ND	ND	0.019
Acenaphthene	ND	ND	ND	ND	ND	0.010
Acenaphthylene	ND	ND	ND	ND	ND	0.010
Anthracene	ND	ND	ND	ND	ND	0.010
Anzobenzene	ND	ND	ND	ND	ND	0.010
Benzidine	ND	ND	ND	ND	ND	0.038
Benzo(a)pyrene	ND	ND	ND	ND	ND	0.010
Bis(2-chloroethoxy)methane	ND	ND	ND	ND	ND	0.010
Bis(2-chloroethyl)ether	ND	ND	ND	ND	ND	0.010
Bis(2-chloroisopropyl)ether	ND	ND	ND	ND	ND	0.010
N-Nitrosodimethylamine	ND	ND	ND	ND	ND	0.019
Phenol	ND	ND	ND	ND	ND	0.005

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(G) = Grab Sample
Date of Analysis: 09/29/08

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660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 9/25/08, 8:30 A.M.
WASTEWATER GRAB, SP 003, 9/25/08, 8:50 A.M.
WASTEWATER GRAB, SP 005, 9/25/08, 8:05 A.M.
WASTEWATER GRAB, SP 006, 9/25/08, 7:50 A.M.
WASTEWATER GRAB, SP 007, 9/25/08, 8:20 A.M.

Units: million fibers/Liter **ASBESTOS ANALYSIS**

ANALYTE	SP 001	SP 003	SP 005	SP 006	SP 007
Total Asbestos Concentration	< 3.70	< 9.25	< 3.70	< 6.17	< 3.70
Asbestos Conc., fibers > 10 μm	< 3.70	< 9.25	< 3.70	< 6.17	< 3.70
Asbestos Type	NSD	NSD	NSD	NSD	NSD

NSD: No Structures Detected

Test Method: EPA 100.2

Steve Root, Manager
Environmental Testing

SR/djl

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METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **(2008)** ☐ (JAN-MAR) ☐ (APR-JUN) ☒ **(JUL-SEP)** ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.3609
Ge-68	0.0330
H-3	62.6082
I-125	0.1519
In-111	0.0063
P-32	0.5696
S-35	7.2192
U-238	0.0220
Zn-65	0.0130
TOTAL ACTIVITY DISCHARGED:	**70.9841**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

RECEIVED

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

OCT 31 2008

Signature:

Date: 10/21/2008

DIVISION OF ENVIRONMENTAL COMPLIANCE

RE: radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

SR
10-24

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: ~~5112262-00~~ 5112-2162-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 (Jan-Mar) (Apr-June) √ (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005		
Dates on Which Samples Were Collected		G: 9/25/2008 C: 9/25/2008		G: 9/25/2008 C: 9/25/2008		G: 9/25/2008 C: 9/25/2008		
Times at Which Samples Were Collected		G: 8:30a.m. C: 8:30am - 2:35pm		G: 8:50 a.m. C: 8:50am - 4:50 pm		G: 8:05am C: 8:05 am - 2:25 pm		
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow	***	E	28,250	E	55,500	E	450,000	Gal/Day
Biological Oxygen Demand	****	C	38	C	43	C	66	mg/L
Chemical Oxygen Demand	****	C	92	C	131	C	241	mg/L
Total Suspended Solids	****	C	44	C	13	C	110	mg/L
pH	5.5 - 11.5	G	7.49	G	7.04	G	7.71	pH
Oil & Grease	200	G	ND	G	12	G	6	mg/L
Temperature	60	G	29	G	27	G	26	Celcius
Silver	0.5	C	0.08	C	ND	C	ND	mg/L
Arsenic	***	C	ND	C	ND	C	ND	mg/L
Chromium	***	C	ND	C	ND	C	ND	mg/L
Mercury	***	C	ND	C	ND	C	ND	mg/L
Total Cyanide	***	G	ND	G	ND	G	ND	mg/L
Acrolein	***		ND		ND		ND	ug/L
Benzene	***		ND		ND		ND	ug/L
Carbon Tetrachloride	***		ND		ND		ND	ug/L
Chloroform	***		ND		ND		5.7	ug/L
Methylene Chloride	***		ND		ND		ND	ug/L
Toluene	***		ND		ND		ND	ug/L
2,4 Dinitrophenol	***		ND		ND		ND	mg/L
Benzidine	***		ND		ND		ND	mg/L
Phenol	***		ND		0.007		0.191	mg/L

You must complete and sign the certification statements on the reverse side.

RECEIVED
OCT 23 2008
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: Washington University School of Medicine
Permit No: ~~5112262-00~~
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 (Jan-Mar) (Apr-June) √ (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 9/25/2008 C: 9/25/2008		G: 9/25/2008 C: 9/25/2008					
Times at Which Samples Were Collected		G: 7:50 AM C: 7:50 am - 3:50 pm		G: 8:20 AM C: 8:20 am - 2:30 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	8,900				Gal/Day
Biological Oxygen Demand	****	C	ND	C	37				mg/L
Chemical Oxygen Demand	****	C	ND	C	102				mg/L
Total Suspended Solids	****	C	10	C	39				mg/L
pH	5.5 - 11.5	G	7.5	G	7.51				pH
Oil & Grease	200	G	6	G	ND				mg/L
Temperature	60	G	23	G	29				Celcius
Silver	0.5	C	ND	C	0.08				mg/L
Arsenic		C	ND	C	ND				mg/L
Chromium		C	ND	C	ND				mg/L
Mercury		C	ND	C	ND				mg/L
Total Cyanide		G	ND	G	ND				mg/L
Acrolein			ND		ND				ug/L
Benzene			ND		ND				ug/L
Carbon Tetrachloride			ND		ND				ug/L
Chloroform			7.1		ND				ug/L
Methylene Chloride			ND		ND				ug/L
Toluene			ND		ND				ug/L
2,4 Dinitrophenol			ND		ND				mg/L
Benzidine			ND		ND				mg/L
Phenol			ND		ND				mg/L
						RECEIVED			

You must complete and sign the certification statements on the reverse side.

OCT 23 2008
DIVISION OF
ENVIRONMENTAL COMPLIANCE

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____.

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:

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Livi Isringhausen

Title: Environmental Compliance Manager

Telephone: 314-362-6735

Signature: [signature]

Date: 10/16/08

RECEIVED
OCT 23 2008
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

October 14, 2008
Lab No. 08E-1471
P.O. No. 2904133N
Invoice No. 99020
Page 1 of 3

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 9/25/08, 8:30 A.M.
WASTEWATER COMPOSITE, SP 001, 9/25/08, 8:30 A.M. – 2:35 P.M.
WASTEWATER GRAB, SP 003, 9/25/08, 8:50 A.M.
WASTEWATER COMPOSITE, SP 003, 9/25/08, 8:50 A.M. – 4:50 P.M.
WASTEWATER GRAB, SP 005, 9/25/08, 8:05 A.M.
WASTEWATER COMPOSITE, SP 005, 9/25/08, 8:05 A.M. – 2:25 P.M.
WASTEWATER GRAB, SP 006, 9/25/08, 7:50 A.M.
WASTEWATER COMPOSITE, SP 006, 9/25/08, 7:50 A.M. – 3:50 P.M.
WASTEWATER GRAB, SP 007, 9/25/08, 8:20 A.M.
WASTEWATER COMPOSITE, SP 007, 9/25/08, 8:20 A.M. – 2:30 P.M.

Units: mg/L Except As Noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	38	43	66	ND	37	10	405.1
Chemical Oxygen Demand (C)	92	131	241	ND	102	10	410.4
Total Suspended Solids (C)	44	13	110	10	39	5	160.2
pH (Std. pH Units) (G)	7.49	7.04	7.71	7.50	7.51	---	150.1
Temperature, °C (G)	29	27	26	23	29	---	170.1
Oil & Grease (G)	ND	12	6	6	ND	5	1664
Silver (C)	0.08	ND	ND	ND	0.08	0.05	200.7
Arsenic (C)	ND	ND	ND	ND	ND	0.05	200.7
Chromium (C)	ND	ND	ND	ND	ND	0.05	200.7
Mercury (C)	ND	ND	ND	ND	ND	0.0005	245.1
Total Cyanide (G)	ND	ND	ND	ND	ND	0.02	335.2

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

October 14, 2008
Lab No. 08E-1471
P.O. No. 2904133N
Invoice No. 99020
Page 2 of 3

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 9/25/08, 8:30 A.M.
WASTEWATER GRAB, SP 003, 9/25/08, 8:50 A.M.
WASTEWATER GRAB, SP 005, 9/25/08, 8:05 A.M.
WASTEWATER GRAB, SP 006, 9/25/08, 7:50 A.M.
WASTEWATER GRAB, SP 007, 9/25/08, 8:20 A.M.

Units: µg/L

VOLATILE ORGANIC COMPOUNDS

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Arcolein	ND	ND	ND	ND	ND	100	EPA 600/624
Benzene	ND	ND	ND	ND	ND	2.0	EPA 600/624
Carbon Tetrachloride	ND	ND	ND	ND	ND	5.0	EPA 600/624
Chloroform	ND	ND	5.7	7.1	ND	5.0	EPA 600/624
Methylene Chloride	ND	ND	ND	ND	ND	5.0	EPA 600/624
Toluene	ND	ND	ND	ND	ND	5.0	EPA 600/624

Units: mg/L

SEMI-VOLATILE ORGANIC COMPOUNDS

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
2,4 Dinitrophenol	ND	ND	ND	ND	ND	0.021	EPA 600/625
Benzidine	ND	ND	ND	ND	ND	0.042	EPA 600/625
Phenol	ND	0.007	0.191	ND	ND	0.005	EPA 600/625

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

MEMBER ACIL

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NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC
SEE REVERSE FOR CONDITIONS.

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

October 14, 2008
Lab No. 08E-1471
P.O. No. 2904133N
Invoice No. 99020
Page 3 of 3

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, SP 001, 9/25/08, 8:30 A.M.
WASTEWATER GRAB, SP 003, 9/25/08, 8:50 A.M.
WASTEWATER GRAB, SP 005, 9/25/08, 8:05 A.M.
WASTEWATER GRAB, SP 006, 9/25/08, 7:50 A.M.
WASTEWATER GRAB, SP 007, 9/25/08, 8:20 A.M.

Units: million fibers/Liter **ASBESTOS ANALYSIS**

ANALYTE	001	003	005	006	007
Total Asbestos Concentration	< 3.70	< 9.25	< 3.70	< 6.17	< 3.70
Asbestos Conc., fibers > 10 µm	< 3.70	< 9.25	< 3.70	< 6.17	< 3.70
Asbestos Type	NSD	NSD	NSD	NSD	NSD

NSD: No Structures Detected

Test Method: EPA 100.2

Steve Root

Steve Root, Manager
Environmental Testing

SR/djl

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC
SEE REVERSE FOR CONDITIONS.

WASHINGTON UNIVERSITY
MEDICAL SCHOOL
~~11183601-00~~
51122162-00
MSD

Scott M. Rehmer

From: Scott M. Rehmer
Sent: Friday, September 12, 2008 9:17 AM
To: Jeffrey A. Meyer
Cc: Doug Mendoza
Subject: RE: P-1870-01 BJC / WUSM Bio-Med Research Bldg

Jeff,
Have received the updated plans; these plans are approved by DEC.
Scott Rehmer

-----Original Message-----
From: Jeffrey A. Meyer
Sent: Tuesday, June 24, 2008 8:33 AM
To: Scott M. Rehmer
Subject: RE: P-1870-01 BJC/WUSM Bio-Med Research Bldg

I have made the comment to the Engineer that the grease trap needs to be located on the outside of the building. I haven't heard a response at this time.

From: Scott M. Rehmer
Sent: Fri 6/20/2008 9:59 AM
To: Jeffrey A. Meyer
Cc: Doug Mendoza
Subject: RE: P-1870-01 BJC/WUSM Bio-Med Research Bldg

Jeff,
Thank you for the additional plans. The manhole configuration is fine. Have you heard about plans for a grease trap?

Thank you,
Scott Rehmer

From: Scott M. Rehmer
Sent: Thursday, June 12, 2008 12:49 PM
To: Jeffrey A. Meyer
Cc: Doug Mendoza
Subject: RE: P-1870-01 BJC/WUSM Bio-Med Research Bldg

Jeff,
Yes, please send the plumbing plans. Need more details from page C-12 regarding Sample Manholes 5, 7, and 17. Also, if there is to be a restaurant or food prep area, the grease trap must be shown outside the building with an accessible manhole.

Thank you,
Scott Rehmer

MSD

GENESIS ENGINEERING, INC.
16141 Swingley Ridge Road Suite 300
St. Louis, Missouri 63017
Phone: 636.534.7037 • Fax: 636.537.0275

August 28, 2008

Mr. Jeffrey Meyer, P.E.
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, Missouri 63103-2555

SEP 02 2008

RE: WUSM / BJH
Biomedical Research Building No. 1
Bid Package 5
MSD P-1870-01 GEI Project 07014

Dear Mr. Meyer:

Your review comments of the second submittal for the referenced project have been received. Following our telephone conversation, the plans are revised accordingly.

REQUIREMENTS FOR APPROVAL

1. Review Fee check ($168.26) included.
2. The MSD Connection Fee will be determined.

SPECIFIC COMMENTS

1. The plans and calculations are signed, sealed, and dated.

2. Upon receipt of the information regarding "water destroys" from the water division, the information will be included on the Sheet C-11.

3. The User Waste Survey form is forwarded as it has been received from the owner.

4. The owner has provided a copy of the Consolidation Plat reflecting the current status of the Plat in graphic form. A copy is included.

5. The existing reaches have been redefined and the hydraulic grade line computed.

6. The existing reaches have been redefined and the hydraulic grade line computed.

7. The existing reaches are defined and the hydraulic grade line computed.

8. The building sewer laterals are redefined and the plans and calculations revised accordingly.

9. The grease trap detail as prepared by the plumbing engineer has been added to the detail sheets. The grease trap is located within the loading dock area as shown on the previously submitted plumbing drawings. The area will be defined as "no parking" and MSD can access the trap at any time.

Metropolitan St. Louis Sewer District

ENGINEERING DEPARTMENT
2350 Market Street
St. Louis, MO 63103-2555
(314) 768-6272

LETTER OF TRANSMITTAL

MSD

Project Name: Bio-Medical Research Bldg BJH/WUSM	
Project No.	P-1870-01
Date:	09/04/08
Please notify us immediately if enclosures are not	
as indicated.	

9/5

TO: MSD
10 E. Grand
St. Louis, MO
ATTENTION: Scott Rehmer

GENTLEMEN:
WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via _____ the following items.
☐ Shop drawings ☐ Prints ☒⌘ Plans ☐ Easements ☐ Specifications ☐ Copy of letter
☐ Original drawings ☒ Other _____

COPIES	DATE	NO.	DESCRIPTION
1	8-25-08	set	Improvement Plans for review
1		page	Industrial User Wastewater Survey
1		page	Response comments

THESE ARE TRANSMITTED as checked below:
☐ For approval
☐ For your information
☐ As requested
☒ For review and comments
☐ Approved as submitted
☐ Approved as noted
☐ Returned for corrections
☐ _____

PLEASE:
☐ Resubmit ____ copies for approval
☐ Submit ____ copies for distribution
☐ Return ____ corrected prints
☐ _____

REMARKS: Attached is the Industrial User Wastewater Survey for your review and approval. Also, is the grease trap as shown on the plumbing plans in an acceptable location?

COPIES TO:

SIGNED: *Jeffrey A. Meyer*
768-6272

SR
7-22

METROPOLITAN SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: **(2008)** ☐ (JAN-MAR) ☒ **(APR-JUN)** ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.5868
Cr-51	0.0020
H-3	33.8171
I-125	0.1357
In-111	0.0030
Ni-63	0.7990
P-32	0.3442
S-35	0.4702
TOTAL ACTIVITY DISCHARGED:	**36.1580**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature: D K

Date: 7/18/2008

RECEIVED
RE: radrpt.doc 2/00
JUL 22 2008
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis

Environmental Health & Safety

IU 5112216200

Mary Isringhausen
Washington University in St. Louis
School of Medicine
660 South Euclid Avenue
Campus Box 8229
St. Louis, MO 63110

May 2, 2008

Douglas M. Mendoza
Manager of Industrial Pretreatment
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, Mo 63147

Dear Doug:

This letter is to notify the Metropolitan St. Louis Sewer District per 40 CFR 268.7(a)7, *If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is exempted from Subtitle C regulation under 40 CFR 261.2 through 261.6 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at 40 CFR 261.4(a)(2) or that are CWA-equivalent, or are managed in an underground injection well regulated by the SDWA), he must place a one-time notice describing such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from RCRA Subtitle C regulation, and the disposition of the waste, in the facility's on-site files.* Washington University School of Medicine located at 660South Euclid, St Louis, Mo utilizes exemption of 40 CFR 261.4 otherwise known as the Domestic Sewage Exemption. The primary discharge is material that meets the definition of D002 Corrosive Characteristic Wastes. These materials are neutralized prior to discharge as noted on our Industrial User Questionnaire.

Please contact myself at 314-362-6735 or Linda Vishino at 314-935-7864 if you have any questions.

Sincerely,

Mary Isringhausen
Environmental Manager

Attachment: MSD Division of Compliance Industrial User Questionnaire 2007

RECEIVED
MAY 13 2008
DIVISION OF
ENVIRONMENTAL COMPLIANCE

FOR MSD USE ONLY		
Account Number:	5112216200	Category
TA:		SIU
TS:		NONSIU
Reviewer:		CIU
Date:		NONTOX
		TOXIC
		SUR
		NOPROC
		MULTI

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL USER QUESTIONNAIRE

Note to Signing Official: In accordance with Title 40 of the Code of Federal Regulations Part 403, Section 403.14, information and data provided in this questionnaire, which identifies the nature and frequency of discharge, shall be available to the public without restriction. Requests for confidential treatment of other information shall be governed by procedures specified in 40 CFR Part 2. Should a discharge permit be required for your facility, the information in this questionnaire will be used to develop the permit.

SECTION A - GENERAL INFORMATION

1. Company Name: Washington University School of Medicine
2. Mailing Address: 660 South Euclid Avenue Campus Box 8229
   City: St. Louis State Missouri Zip Code 63110
3. Premise Address: 660 South Euclid Avenue
   City: St. Louis State Missouri Zip Code 63110
4. Person Authorized to Sign Reporting Documents (see note after Section H):
   Name: Michael J. Koch, CHMM
   Title: Environmental Manager Phone Number 362-6735
5. Check One: (●) Existing Discharge ( ) Proposed Discharge
   If proposed, indicate discharge start date: _____
6. Shift Information:
   a. Number of shifts per work day: 2 and work days per week: 7
   b. Average number of employees per shift: 1st 6000 2nd 400 3rd _____ Total: _____
   c. Shift start times: 1st 9:00 am (HH:MM AM/PM) 2nd 6:00 pm (HH:MM AM/PM) 3rd _____ (HH:MM AM/PM)

SECTION B - PRODUCT OR SERVICE INFORMATION

1. Briefly describe the primary manufacturing or service activities at the premise address and list the applicable SIC number for each activity:

	PRIMARY ACTIVITY	SIC NUMBER
a.	Research - Biomedical	8733
b.	Education - Graduate Medical snd Research Training	8221
c.	Animal Care - Research Animal Housing	0279
d.		
e.		
f.		

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MSD 043626

Company Name: WASH. U. School of MEDICINE
Premise Address: 660 S. EUCLID

SECTION B - PRODUCT OR SERVICE INFORMATION (Continued)

2. Are primary activities generally batch or continuous processes ? (•) batch ( ) continuous

3. Principal raw materials used: Laboratory Chemicals / Reagents

4. Principal products produced: None

5. Check all activities which are conducted at your premise in addition to the primary activities described in B.1 above Indicate the SIC number, if known. Do not check activities which are already included in B.1.

ACTIVITY (with related 40 CFR Part)	SIC NO.	ACTIVITY (with related 40 CFR Part)	SIC NO.
☐ a. Adhesive and Sealants Mfg.		☐ nn. Nonferrous Metals Mfg. (421)	
☐ b. Aluminum Forming (467)		☐ oo. Oil and Gas Extraction (435)	
☐ c. Asbestos Mfg. (427)		☐ pp. Ore Mining and Dressing (440)	
☐ d. Battery Mfg. (461)		☐ qq. Organic Chem/Plastics/Synthetic Fibers Mfg (414)	
☐ e. Carbon Black Mfg. (458)		☐ rr. Paint Formulating (446)	
☐ f. Cement Mfg. (411)		☒ ss. Painting, Finishing or Paint Stripping	
☐ g. Centralized (non-Haz.) Waste Treatment (437)		☒ tt. Parts Washing	
☐ h. Coal Mining (434)		☐ uu. Paving and Roofing Mat'ls (Tars & Asphalt) (443)	
☐ i. Coil Coating (465)		☐ vv. Pesticide Chem Mfg/Formulating/Packaging (455)	
☐ j. Concentrated Animal Feeding Operations (412)		☐ ww. Petroleum Refining (419)	
☐ k. Concentrated Aquatic Animal Production (451)		☐ xx. Pharmaceutical Mfg. (439)	
☐ l. Copper Forming (468)		☐ yy. Phosphate Mfg. (422)	
☐ m. Dairy Products Processing (405)		☒ zz. Photographic Processing (459)	
☐ n. Drum Reconditioning		☐ aaa. Plastic Molding and Forming (463)	
☐ o. Electrical and Electronic Components (469)		☐ bbb. Porcelain Enameling (466)	
☐ p. Electroplating (413)		☐ ccc. Printing and Publishing	
☐ q. Explosives Mfg. (457)		☐ ddd. Pulp, Paper and Paperboard Mfg. (430)	
☐ r. Ferroalloy Mfg. (424)		☐ eee. Q.C. Laboratory	
☐ s. Fertilizer Mfg. (418)		☐ fff. R & D Laboratory	
☒ t. Food Preparation		☐ ggg. Radioactive Materials Processing	
☐ u. Fruit and Vegetable Processing (407)		☐ hhh. Repair Shop, Garage	
☐ v. General Offices		☐ iii. Rubber and Rubber Products Mfg. (428)	
☐ w. Glass Mfg. (426)		☐ jjj. Seafood Processing (408)	
☐ x. Grain Milling (406)		☐ kkk. Soap and Detergent Mfg. (417)	
☐ y. Gum and Wood Chemical Mfg. (454)		☐ lll. Solvent Recycling	
☐ z. Haz. Waste Treatment, Storage or Disposal		☐ mmm. Steam Electric Power Generation (423)	
☐ aa. Health Care or Hospital (460)		☐ nnn. Sugar Processing (409)	
☐ bb. Industrial Laundry		☐ ooo. Textile Mills (410)	
☐ cc. Ink Formulating (447)		☐ ppp. Timber Products Mfg. (429)	
☐ dd. Inorganic Chemicals Mfg. (415)		☐ qqq. Transportation Equipment Cleaning (442)	
☐ ee. Iron and Steel Mfg. (420)		☐ rrr. Transportation Services	
☐ ff. Leather Tanning and Finishing (425)		☐ sss. Used Oil Reclamation	
☒ gg. Machine Shop		☐ ttt. Vehicle/Equipment Washing	
☐ hh. Machinery Mfg. or Rebuilding (438)		☐ uuu. Warehousing	
☐ ii. Meat Processing (432)		☐ vvv. Waste Combustors (444)	
☐ jj. Metal Finishing (433)		☐ www. Waste Recycling	
☐ kk. Metal Molding and Casting (464)		☐ xxx. Others (Describe)	
☐ ll. Mineral Mining and Processing (436)		☐ yyy. Others (Describe)	
☐ mm. Nonferrous Metals Forming/Metal Powders (471)		☐ zzz. Others (Describe)	

6. Are your activities subject to seasonal variation? If "Yes," explain and indicate the month(s) of peak activity:

( ) Yes (•) No

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Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION C - WATER CONSUMPTION AND WASTEWATER DISCHARGES

1. Raw Water Source(s):
   - [x] City of St. Louis Water Div.
   - [ ] Missouri American Water Co.
   - [ ] Other municipal source _____
   - [ ] Hauled by contractor
   - [ ] Surface water
   - [ ] Private well
   - [ ] Other (describe) _____

2. Water Bill Addressee: Washington University School of Medicine 660 S. Euclid Ave, Campus Box 8229 St. Louis, MO 63110

3. Water Service Account Numbers: _____

4. List past twelve months water usage from:

					Water Bills	Other Sources
1st 3 mo period	7/1/2005	through	9/30/2005		57,007 Ccf	Ccf
2nd 3 mo period	10/1/2005	through	12/31/2005		82,931 Ccf	Ccf
3rd 3 mo period	1/1/2006	through	3/31/2006		81,480 Ccf	Ccf
4th 3 mo period	4/1/2006	through	6/30/2006		66,683 Ccf	Ccf

Water Bills and Other Sources Total: 288,101 Ccf = 590,950 GPD-calendar = 590,950 GPD-work

5. Describe any treatment or conditioning process performed on the raw water before use (list regeneration/reject water volume in 6h below):
Acid Neutralization, Silver Recovery

6. Identify all water uses within your facility:

Water Uses	Estimated Average Daily Use (Gal per workday)
a. Sanitary	98,431
b. Irrigation & lawn watering	1,515
c. Non-contact cooling water	178,002
d. Contact cooling water	0
e. Process water	159,967
f. Plant & equipment washdown	12,590
g. Boiler	104,166
h. Regeneration/reject water	36,279
i. Other uses	0
j. Total of USES (6a through 6h):	590,950

(6a through 6i must equal total at item 4)

7. Identify all water losses and wastewater discharges from your facility:

Water Uses	Estimated Average Daily Loss/Discharge (Gal per workday)
a. Municipal sewer	444,754
b. Watercourse, storm drain, surface	1,515
c. Haulers	0
d. Evaporation	144,681
e. Contained in product	0

f. Total of LOSSES & DISCHARGES: 590,950

(7a through 7e must equal total at 6j)

8. For each activity you listed in Sections B.1 and B.5, list the average water usage and average wastewater discharge per workday. Attach additional sheets, if needed. (Total Avg. Water Use must equal total for 6e)

Item No	Activity	Type of Discharge: Cont	Batch	None	Avg. Water Use (GPD)	Avg. Discharge to Mun Sewer (GPD)	Date when activity first commenced at this facility
B.1 (a)	Research - Biomedical	●	○	○	46,796	46,796	
B.1 (b)	Education - Graduate classes	●	○	○	19,260	19,260	
B.1 (c)	Animal Care - Animal Housing	●	○	○	81,954	81,954	
B.5 (t)	Food Preparation	○	●	○	9,176	9,176	
B.5 (gg)	Machine Shop	○	●	○	522	522	
B.5(tt)	Parts Washing	○	○	●	0	0	
B.5(zz)	Photographic Processing (459)	○	●	○	2,057	2,057	
B.5(ss)	Painting, Finishing or Paint Stripping	○	●	○	202	202	
				Total:	159,967	159,967	

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Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION D - SEWER CONNECTION INFORMATION

1. Attach a scale drawing of your premise, which shows (for permit renewals, highlight any changes since last application):
   a. All buildings, structures, alleys, streets and other pertinent features.
   b. All sewers and drains, including all connections, inlets, manholes, vents and other access or control structures. Identify each sewer as sanitary, storm or combined and indicate its size.
   c. A sampling point for each connection to the public sewer.
   d. A sampling point for each discharge from a federally regulated categorical process.
   e. A sampling point for each discharge to a separate storm sewer or watercourse.

2. List each sampling point identified in 1c, d and e above and each connection for which there is no sampling point. Assign a sequential reference number to each location, starting with No. 1. Attach additional sheets, if needed.

Reference Number	Sewer Size (inches)	Description of sewer sampling point or connection. (Vent, manhole, valve, other appurtenance. Indicate size & location)	Upstream to other point? Yes	No	List Ref. No.	Total avg flow per workday(GPD)
1	10"	SP001 - MH 30'N, 10'W of NE CRNR of BLDG 27	○	●		14,839
2	30"	SP003 - MH N of BLDG 14 in Drive (6' S of O2 Tanks)	○	●		64,103
3	16"	SP005 - MH 200' W if Taylor on S side of Scott Ave. in St.	○	●		341,328
4	6"	SP006 - 6" Clay Pipe 13'N, 9'E of SE CRNR of BLDG 80	○	●		1,034
5	10"	SP007 - MH E of BLDG 63, 11' N, 2' E of SE CRNR if BLDG	○	●		23,450
6			○	○		
7			○	○		

Grand Total Average Flow per Workday: 444,754

SECTION E - WASTEWATER INFORMATION

1. For each point listed in Section D.2 above, list the wastewater discharge corresponding to each water usage listed in Section C.6. Attach additional sheets, if needed.

Type of Wastewater	Discharge Quantity (GPD-workday) for each sampling point or connection listed in D.2							Facility Total (See instr.)
	1	2	3	4	5	6	7	
	upstream to	upstream to	upstream to	upstream to	upstream to	upstream to	upstream to	
a. Sanitary	2,019	26,187	64,878	549	4,798			98,431
c. Non-contact cooling water	3,250	6,120	88,038	0	413			97,821
d. Contact cooling water	0	0	0	0	0			
e. Process (From C.8)								
Food Preparation	0	0	9,176	0	0			9,176
Machine Shop	0	0	522	0	0			522
Parts Washing	0	0	0	0	0			0
Photographic Processing (4	671	546	840	0	0			2,057
Research	1,733	18,128	22,155	0	4,780			46,796
Education	3,180	5,787	9,843	0	450			19,260
Animal Care	0	5,156	71,251	0	5,547			81,954
Painting, Finishing or Paint S	0	0	202	0	0			202
f. Plant & equipment washdown	468	2,179	1,996	485	7,462			12,590
g. Boiler blowdown	0	0	39,666	0	0			39,666
h. Regeneration/reject water	3,518	0	32,761	0	0			36,279
i. Other								
Totals (Same as D.2):	14,839	64,103	341,328	1,034	23,450			444,754

2. If any of the above points discharge to a watercourse or to a separate storm sewer, complete the following:

NPDES Outfall Number							
NPDES Permit Number							

3. Do any of the above sampling points also convey stormwater from your premise ?

Yes	Yes	Yes	Yes	Yes			

4. Do you pretreat any of the wastes discharged through any of the above points ?

Yes	Yes	Yes	Yes	Yes			

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Company Name: WASH. U. School of MEDICINE
Premise Address: 660 S. EUCLID

SECTION E - WASTEWATER INFORMATION (Continued)

5. Describe the type of wastewater pretreatment you employ prior to each point for which you marked "Yes" in E.4

Ref. No.	Pretreatment System Description
	SP001, SP003, SP005, SP006, - Silver Recovery Units (Photo Processing Equipment)
	SP005 has a grease trap for the cafeteria (service performed on a quarterly basis)
	SP003, SP005, SP006, SP007 have Neutralization Tanks

6. Does your facility have a written:

a.	Spill control plan ?	(•) Yes	( ) No	c.	Solvent management plan ?	(•) Yes	( ) No
b.	Waste minimization plan ?	( ) Yes	(•) No	d.	Slug discharge control plan ?	( ) Yes	(•) No

7. If any wastewater analyses have been performed on the wastewater discharges from your facility attach copies of the most recent data. Be sure to specify the locations from which the samples were collected. Attach sketches, plans, drawings, etc. as necessary. Permit renewal applications, only, may skip this item.

8. Priority Pollutant Information: Check one of the four boxes by each listed chemical to indicate whether it is: "Suspected Absent", "Known Absent", "Suspected Present" or "Known Present" ON YOUR PREMISE. Any chemical which is used in your manufacturing or service activity or is generated as a product or as a by-product should be marked "Known Present." Some pollutants are known by other names. Refer to the instruction booklet for synonyms for those pollutants which have an asterisk (*):

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

Item No	PRIORITY POLLUTANT	SA	KA	SP	KP
1.	asbestos (fibrous)	( )	( )	( )	(•)
2.	cyanide (total)	( )	( )	( )	(•)
3.	antimony (total)	(•)	( )	( )	( )
4.	arsenic (total)	( )	( )	( )	(•)
5.	beryllium (total)	(•)	( )	( )	( )
6.	cadmium (total)	( )	( )	(•)	( )
7.	chromium (total)	( )	( )	( )	(•)
8.	copper (total)	( )	( )	( )	(•)
9.	lead (total)	( )	( )	( )	(•)
10.	mercury (total)	( )	( )	( )	(•)
11.	nickel (total)	( )	( )	( )	(•)
12.	selenium (total)	( )	( )	( )	(•)
13.	silver (total)	( )	( )	( )	(•)
14.	thallium (total)	( )	( )	( )	(•)
15.	zinc (total)	( )	( )	( )	(•)
16.	acenaphthene	( )	( )	(•)	( )
17.	acenaphthylene	( )	( )	(•)	( )
18.	acrolein	( )	( )	( )	(•)
19.	acrylonitrile	( )	( )	(•)	( )
20.	aldrin	(•)	( )	( )	( )
21.	anthracene	( )	( )	(•)	( )
22.	benzene	( )	( )	( )	(•)
23.	benzidine	( )	( )	( )	(•)
24.	benzo (a) anthracene *	(•)	( )	( )	( )
25.	benzo (a) pyrene	( )	( )	(•)	( )
26.	benzo (b) fluoranthene	(•)	( )	( )	( )
27.	benzo (g,h,i) perylene *	(•)	( )	( )	( )
28.	benzo (k) fluoranthene *	(•)	( )	( )	( )
29.	alpha-BHC	(•)	( )	( )	( )
30.	beta-BHC	(•)	( )	( )	( )
31.	delta-BHC	(•)	( )	( )	( )
32.	gamma-BHC *	(•)	( )	( )	( )
33.	bis (2-chloroethyl) ether *	( )	( )	( )	(•)
34.	bis (2-chloroethoxy) methane *	( )	( )	(•)	( )
35.	bis (2-chloroisopropyl) ether *	( )	( )	(•)	( )
36.	Reserved				
37.	bis (2-ethylhexyl) phthalate	(•)	( )	( )	( )
38.	bromodichloromethane *	( )	( )	(•)	( )
39.	bromoform *	(•)	( )	( )	( )
40.	bromomethane *	( )	( )	(•)	( )
41.	4-bromophenylphenyl ether	(•)	( )	( )	( )
42.	butylbenzyl phthalate	(•)	( )	( )	( )
43.	carbon tetrachloride *	( )	( )	( )	(•)
44.	chlordane	(•)	( )	( )	( )
45.	4-chloro-3-methylphenol *	( )	( )	(•)	( )
46.	chlorobenzene	( )	( )	( )	(•)
47.	chloroethane *	( )	( )	(•)	( )
48.	2-chloroethylvinyl ether	( )	( )	(•)	( )
49.	chloroform *	( )	( )	( )	(•)
50.	chloromethane *	( )	( )	(•)	( )
51.	2-chloronaphthalene	(•)	( )	( )	( )
52.	2-chlorophenol *	( )	( )	(•)	( )
53.	4-chlorophenylphenyl ether	(•)	( )	( )	( )
54.	chrysene *	(•)	( )	( )	( )
55.	4, 4'-DDD *	(•)	( )	( )	( )
56.	4, 4'-DDE *	(•)	( )	( )	( )
57.	4, 4'-DDT *	(•)	( )	( )	( )
58.	dibenzo (a,h) anthracene *	(•)	( )	( )	( )
59.	dibromochloromethane	( )	( )	(•)	( )
60.	1, 2-dichlorobenzene *	( )	( )	( )	(•)
61.	1, 3-dichlorobenzene *	( )	( )	( )	(•)
62.	1, 4-dichlorobenzene *	( )	( )	( )	(•)
63.	3, 3'-dichlorobenzidine	( )	( )	( )	(•)
64.	Reserved				
65.	1, 1-dichloroethane *	( )	( )	( )	(•)
66.	1, 2-dichloroethane *	( )	( )	( )	(•)
67.	1, 1-dichloroethene *	( )	( )	( )	(•)
68.	trans-1, 2-dichloroethene *	( )	( )	( )	(•)
69.	2, 4-dichlorophenol	( )	( )	( )	(•)
70.	1, 2-dichloropropane *	( )	( )	( )	(•)

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Company Name: WASH. U. School of MEDICINE
Premise Address: 660 S. EUCLID

SECTION E - WASTEWATER INFORMATION (Continued)

Priority Pollutant Information (Continued)

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

Item No	PRIORITY POLLUTANT	SA	KA	SP	KP
71.	(cis and trans) 1, 3-dichloropropene *	○	○	○	●
72.	dieldrin	●	○	○	○
73.	diethylphthalate *	●	○	○	○
74.	2, 4-dimethylphenol *	○	○	●	○
75.	dimethyl phthalate	●	○	○	○
76.	di-n-butyl phthalate	●	○	○	○
77.	di-n-octyl phthalate *	●	○	○	○
78.	4, 6-dinitro-2-methylphenol *	●	○	○	○
79.	2, 4-dinitrophenol	○	○	●	○
80.	2, 4-dinitrotoluene	○	○	●	○
81.	2, 6-dinitrotoluene	○	○	●	○
82.	1, 2-diphenylhydrazine *	○	○	○	●
83.	endosulfan I *	●	○	○	○
84.	endosulfan II *	●	○	○	○
85.	endosulfan sulfate	●	○	○	○
86.	endrin	●	○	○	○
87.	endrin aldehyde	●	○	○	○
88.	ethylbenzene	○	○	●	○
89.	fluoranthene	●	○	○	○
90.	fluorene *	●	○	○	○
91.	heptachlor	●	○	○	○
92.	heptachlor epoxide	●	○	○	○
93.	hexachlorobenzene *	●	○	○	○
94.	hexachlorobutadiene	●	○	○	○
95.	hexachlorocyclopentadiene *	●	○	○	○
96.	hexachloroethane *	●	○	○	○
97.	indeno (1, 2, 3-cd) pyrene *	●	○	○	○
98.	isophorone *	●	○	○	○
99.	methylene chloride *	○	○	○	●

Item No	PRIORITY POLLUTANT	SA	KA	SP	KP
100.	naphthalene	○	○	●	○
101.	nitrobenzene	○	○	○	●
102.	2-nitrophenol	○	○	○	●
103.	4-nitrophenol *	○	○	○	●
104.	N-nitrosodimethylamine *	○	○	●	○
105.	N-nitrosodi-n-propylamine *	●	○	○	○
106.	N-nitrosodiphenylamine	●	○	○	○
107.	PCB-1016 *	●	○	○	○
108.	PCB-1221 *	●	○	○	○
109.	PCB-1232 *	●	○	○	○
110.	PCB-1242 *	●	○	○	○
111.	PCB-1248 *	●	○	○	○
112.	PCB-1254 *	●	○	○	○
113.	PCB-1260 *	●	○	○	○
114.	pentachlorophenol	●	○	○	○
115.	phenanthrene	●	○	○	○
116.	phenol	○	○	○	●
117.	pyrene	●	○	○	○
118.	2, 3, 7, 8-tetrachlorodibenzo-p-dioxin *	○	○	○	●
119.	1, 1, 2, 2-tetrachloroethane *	○	○	○	●
120.	tetrachloroethene *	○	○	○	●
121.	toluene *	○	○	○	●
122.	toxaphene	○	○	●	○
123.	1, 2, 4-trichlorobenzene	○	○	●	○
124.	1, 1, 1-trichloroethane *	○	○	●	○
125.	1, 1, 2-trichloroethane *	○	○	●	○
126.	trichloroethene *	○	○	○	●
127.	Reserved				
128.	2, 4, 6-trichlorophenol	○	○	●	○
129.	vinyl chloride *	●	○	○	○

9. For priority pollutants in E.8, which are indicated "Known Present" or "Suspected Present", list and provide the following information for each: (Attach additional sheets, if needed.)

Item No.	PRIORITY POLLUTANT	HOW USED (for KP) or WHY SUSPECTED (for SP)	ANNUAL USAGE for KP(lbs)	LOSS TO SEWER for KP(lbs)
121.	•toluene*	All Priority Pollutants Are Present in Small Amounts	<250	Trace
2.	•cyanide (total)	for Bio-medical Research Purposes	<5	Trace
4.	•arsenic (total)		<20	Trace
7.	•chromium (total)		<50	Trace
9.	•lead (total)		<200	Trace
10.	•mercury (total)		<50	Trace
13.	•silver (total)		<100	Trace
22.	•benzene		<10	Trace
43.	•carbon tetrachloride*		<10	Trace
49.	•chloroform*		<100	Trace
99.	•methylene chloride*		<500	Trace
100.	•naphthalene		<10	Trace
116.	•phenol		<250	Trace
1.	•asbestos (fibrous)		<1	Trace

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DIVISION OF ENVIRONMENTAL COMPLIANCE

MSD 043631

Company Name: Wash U. School of Medicine
Premise Address: 660 S. Euclid

SECTION F - NON-SEWERED WASTES

1. Do you generate any liquid wastes or sludges, as described in item 2 below, which are not disposed in the sewer system?

(●) Yes ( ) No

If "Yes" complete items 2 and 3 below. Note: Be sure to include wastewaters listed in Section C.7.c.
If "No" skip remainder of this section.

2. Information on non-sewered waste:

Type of Waste	Estimated Quantity Disposed/yr	Units	Store On-Site	Dispose On-Site	Dispose Off-Site
☒ Acids and/or Alkalies	800	Gallons	☒	☐	☒
☒ Equipment Oils and/or Grease	1,250	Gallons	☒	☐	☒
☒ Infectious Waste	398,000	Pounds	☒	☐	☒
☐ Inks/ Dyes			☐	☐	☐
☒ Kitchen/Food Service Grease	1,280	Pounds	☒	☐	☒
☒ Organic Compounds	3,520	Gallons	☒	☐	☒
☒ Paints or Paint Sludges	4,280	Pounds	☒	☐	☒
☐ Pesticides			☐	☐	☐
☐ Pretreatment Sludges			☐	☐	☐
☒ Radioactive Waste	1,500	Pounds	☒	☐	☒
☒ Solvents/Thinners	500	Pounds	☒	☐	☒
☒ Other Laboratory Chemicals / Reagents	127,000	Pounds	☒	☐	☒
☐ Other			☐	☐	☐
☐ Other			☐	☐	☐

3. List your USEPA and/or MDNR Hazardous Waste generator numbers:

USEPA MOT300010857 MDNR 001591

SECTION G - INDUSTRIAL WASTE SURCHARGE INFORMATION

1. Provide the following analytical information for each sampling point or each connection to the public sewer only if your water usage exceeds 80 Ccf per month (1,995 Gal per calendar day). Representative samples of the wastewater in each sewer must be collected and analyzed for the listed parameters. Report the daily average concentrations in mg/l for each point. Permit renewal applications, only, may skip Section G regardless of water usage volume.

Parameter	Sewer Reference Numbers (Refer to Section D.2) If more than 7, attach additional sheets						
	1	2	3	4	5	6	7
Date Sampled							
Sample Start Time (eg. HH:MM PM)							
Sample End Time (eg. HH:MM PM)							
Type of Sample							
Flow (GPD)							
Biochemical Oxygen Demand (5 day)							
Chemical Oxygen Demand							
Total Suspended Solids							

Collected By (Name of organization):

Analyzed By (Name of organization):

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DIVISION OF ENVIRONMENTAL COMPLIANCE

Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION H - CERTIFICATION AND SIGNATURE

1. The following individual may be contacted regarding the information contained in this questionnaire:

Name of Contact Person: Michael J. Koch, CHMM

Title: Environmental Manager Phone Number 362-6735

2. "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."

Name of Signing Official: Michael J. Koch, CHMM

Title: Environmental Manager Phone Number 362-6735

Signature: Date:

This certification, along with any other reporting documents, must be signed by an individual described as follows: a responsible corporate officer if the user is a corporation; a general partner if the user is a partnership; the proprietor if the user is a sole proprietorship; a duly authorized representative of the individual just described, if that individual submits a written authorization which specifies a person or position within the company, having responsibility for the overall operation of the facility from which the discharge originates, such as a plant manager, or overall responsibility for environmental matters at the company.

List attachments included with this questionnaire:

Water Usage (MSD IUQ) 6-2007.xls

1st QTR 2007 (MSD) test results

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

SR
7-7

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: ~~5112262-00~~ 5112-2162-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 6/24/2008 C: 6/24/2008		G: 6/24/2008 C: 6/24/2008		G: 6/24/2008 C: 6/24/2008			
Times at Which Samples Were Collected		G: 8:27a.m. C: 8:27am - 2:33pm		G: 8:11 a.m. C: 8:11am - 2:40 pm		G: 8:00am C: 8:00 am - 2:25 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	41	C	331	C	84		mg/L
Chemical Oxygen Demand	****	C	86	C	460	C	125		mg/L
Total Suspended Solids	****	C	56	C	28	C	53		mg/L
pH	5.5 - 11.5	G	8.68	G	7.87	G	8.13		pH
Oil & Grease	200	G	12	G	20	G	8		mg/L
Temperature	60	G	28	G	27	G	27		Celcius
Silver	0.5	C	ND	C	ND	C	ND		mg/L

You must complete and sign the certification statements on the reverse side.

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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: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 6/24/2008 C: 6/24/2008		G: 6/24/2008 C: 6/24/2008					
Times at Which Samples Were Collected		G: 7:45 AM C: 7:45 am - 2:20 pm		G: 8:23 AM C: 8:23 am - 2:30 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	950	E	23,500				Gal/Day
Biological Oxygen Demand	****	C	15	C	30				mg/L
Chemical Oxygen Demand	****	C	27	C	48				mg/L
Total Suspended Solids	****	C	31	C	24				mg/L
pH	5.5 - 11.5	G	8.88	G	8.77				pH
Oil & Grease	200	G	5	G	-- ND				mg/L
Temperature	60	G	24	G	27				Celcius
Silver	0.5	C	-- ND	C	-- ND				mg/L
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You must complete and sign the certification statements on the reverse side.

JUL 03 2008

DIVISION OF
ENVIRONMENTAL COMPLIANCE

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: M. Olivia Isringhausen

Title: Environmental Compliance Manager Telephone: 314-362-6735

Signature: [signature] Date: 7/2/08

St. Louis Testing Laboratories
INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

June 30, 2008
Lab No. 08E-0853
Invoice No. 95001
P.O. No. 2903591A
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Livi Isringhausen

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 06/24/08, 8:27 AM
WASTE WATER COMPOSITE, PT. 001, 06/24/08, 8:27 AM – 2:33 PM
WASTE WATER GRAB, PT. 003, 06/24/08, 8:11 AM
WASTE WATER COMPOSITE, PT. 003, 06/24/08, 8:11 AM – 2:40 PM
WASTE WATER GRAB, PT. 005, 06/24/08, 8:00 AM
WASTE WATER COMPOSITE, PT. 005, 06/24/08, 8:00 AM – 2:25 PM
WASTE WATER GRAB, PT. 006, 06/24/08, 7:45 AM
WASTE WATER COMPOSITE, PT. 006, 06/24/08, 7:45 AM – 2:20 PM
WASTE WATER GRAB, PT. 007, 06/24/08, 8:23 AM
WASTE WATER COMPOSITE, PT. 007, 06/24/08, 8:23 AM – 2:30 PM

Units: mg/L except as otherwise noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	41	331	84	15	30	10	405.1
Chemical Oxygen Demand (C)	86	460	125	27	48	10	410.4
Total Suspended Solids (C)	56	28	53	31	24	5	160.2
pH (Std. pH Units) (G)	8.68	7.87	8.13	8.88	8.77	-----	150.1
Oil & Grease (G)	12	20	8	5	ND	5	1664
Temperature, °C (G)	28	27	27	24	27	-----	170.1
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

G - Grab
C - Composite

Steve Root, Manager
Environmental Testing

SR/djl

MEMBER

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS

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 23, 2008

David Kershman
WASHINGTON UNIVERSITY IN ST. LOUIS
SCHOOL OF MEDICINE
724 S. Euclid
Campus Box 8053
St. Louis, MO 63110

Re: Request for variance from radioactive materials discharge increase notification amounts

Dear David,

For all your affected facilities, except the Washington University Medical School, MSD can justify allowing you to use the "old MSD annual limit" (or old approved amount) as the basis for the 20% notification requirement. That would be 1 mCi for Barnes-Jewish Hospital North campus and Barnes-Jewish Hospital South campus, and 3 mCi for St. Louis Children's Hospital and the Donald Danforth Plant Science Center.

For Washington University Medical School, the 20% notification requirement needs to remain relative to the current average discharge. For 2008, that would be 48 mCi. Note that notifications are not required for decreases.

We also understand that Washington University Medical School's 4400 Forest Park Blvd. bldg reports separately from the rest of the Medical School. The 4400 Forest Park Blvd. discharge will be addressed under separate correspondence.

Thank you for helping us to 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.
Manager of Industrial Pretreatment

file:
Washington University Medical School, 660 S. Euclid Ave.
Barnes-Jewish Hospital North campus
Barnes-Jewish Hospital South campus
St. Louis Children's Hospital
Donald Danforth Plant Science Center.

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

SR

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School

Permit No: 5112-2162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	3.7785
H-3	10.6481
I-125	0.1714
P-32	1.3762
P-33	0.0040
S-35	0.5616
TOTAL ACTIVITY DISCHARGED:	**16.5399**

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

DMK 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 4/21/2008

RE: rad-pt-doc 2/00

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APR 23 2008

DIVISION OF ENVIRONMENTAL COMPLIANCE

MSD 043639

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Main Campus (Hilltop)

Permit No: 1118-560-00

Premise Address: 1 Brookings Drive, St. Louis, MO 63130

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0017
H-3	0.0287
P-32	0.0090
S-35	0.0010
TOTAL ACTIVITY DISCHARGED:	**0.0404**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 4/21/2008

RE: radrpt.doc 2/00

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APR 23 2008

DIVISION OF ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

SR
4-22

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine 5112-2162-00
Permit No: ~~5112262-00~~
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 3/20/2008 C: 3/20/2008		G: 3/20/2008 C: 3/20/2008		G: 3/20/2008 C: 3/20/2008			
Times at Which Samples Were Collected		G: 8:35a.m. C: 8:35am - 2:45pm		G: 8:20 a.m. C: 8:20am - 4:20 pm		G: 8:45am C: 8:45 am - 2:37 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	14,500	E	64,500	E	340,000		Gal/Day
Biological Oxygen Demand	****	C	63	C	104	C	85		mg/L
Chemical Oxygen Demand	****	C	178	C	168	C	176		mg/L
Total Suspended Solids	****	C	46	C	23	C	76		mg/L
pH	5.5 - 11.5	G	8.54	G	8.8	G	8.71		pH
Oil & Grease	200	G	ND	G	ND	G	5		mg/L
Temperature	60	G	16	G	14	G	16		Celcius
Silver	0.5	C	ND	C	ND	C	ND		mg/L

You must complete and sign the certification statements on the reverse side.

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

MSD 043641

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2008 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 3/20/2008 C: 3/20/2008		G: 3/20/2008 C: 3/20/2008					
Times at Which Samples Were Collected		G: 8:10 AM C: 8:10 am - 4:10 pm		G: 8:30 AM C: 8:30 am - 2:41 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	950	E	23,500				Gal/Day
Biological Oxygen Demand	****	C	ND	C	47				mg/L
Chemical Oxygen Demand	****	C	ND	C	141				mg/L
Total Suspended Solids	****	C	ND	C	ND				mg/L
pH	5.5 - 11.5	G	8.16	G	8.64				pH
Oil & Grease	200	G	12	G	ND				mg/L
Temperature	60	G	10	G	17				Celcius
Silver	0.5	C	ND	C	ND				mg/L

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APR 15 2008
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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
APR 15 2008
DIVISION OF ENVIRONMENTAL COMPLIANCE

Print or type name of signing official: Donna S. Hall

Title: Environmental Manager

Telephone: (314) 935-4650 (314) 629-2000

Signature: Donna S. Hall

Date: 04/02/08

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

March 26, 2008
Lab No. 08E-0339
Invoice No. 91209
P.O. No. 2903591A
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 03/20/08, 8:35 AM
WASTE WATER COMPOSITE, PT. 001, 03/20/08, 8:35 AM – 2:45 PM
WASTE WATER GRAB, PT. 003, 03/20/08, 8:20 AM
WASTE WATER COMPOSITE, PT. 003, 03/20/08, 8:20 AM – 4:20 PM
WASTE WATER GRAB, PT. 005, 03/20/08, 8:45 AM
WASTE WATER COMPOSITE, PT. 005, 03/20/08, 8:45 AM – 2:37 PM
WASTE WATER GRAB, PT. 006, 03/20/08, 8:10 AM
WASTE WATER COMPOSITE, PT. 006, 03/20/08, 8:10 AM –4:10 PM
WASTE WATER GRAB, PT. 007, 03/20/08, 8:30 AM
WASTE WATER COMPOSITE, PT. 007, 03/20/08, 8:30 AM – 2:41 PM

Units: mg/L except as otherwise noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	63	104	85	ND	47	10	405.1
Chemical Oxygen Demand (C)	178	168	176	ND	141	10	410.4
Total Suspended Solids (C)	46	23	76	ND	ND	5	160.2
pH (Std. pH Units) (G)	8.54	8.80	8.71	8.16	8.64	-----	150.1
Oil & Grease (G)	ND	ND	5	12	ND	5	1664
Temperature, °C (G)	16	14	16	10	17	-----	170.1
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

G - Grab
C - Composite

SR/tlv

Steve Root
Steve Root, Manager
Environmental Testing

RECEIVED
APR 15 2008
DIVISION OF
ENVIRONMENTAL COMPLIANCE

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

2R

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No: 51122162200

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0143
Cr-51	0.0010
H-3	2.4158
I-125	0.1257
P-32	0.1435
S-35	0.2205
TOTAL ACTIVITY DISCHARGED:	**2.9208**

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

DWL

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature: [signature]

Date: 1/22/2008

RE: radrpt.doc 2/00

RECEIVED

JAN 23 2008

DIVISION OF ENVIRONMENTAL COMPLIANCE

LR

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No: 51:2216200

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	3.2555
H-3	18.1235
I-125	0.0159
P-32	0.1899
S-35	0.0122
TOTAL ACTIVITY DISCHARGED:	**21.5970**

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

DMK 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.

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 1/22/2008

RE: radrpt.doc 2/00

RECEIVED

JAN 2 3 2008

DIVISION OF ENVIRONMENTAL COMPLIANCE

MSD 043646

Metropolitan Saint Louis Sewer District
2350 Market Street
Saint Louis, Missouri 63103-2555

WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave.
St. Louis, MO 63110

Attn: Michael Koch
Environmental Manager

INDUSTRIAL WASTEWATER DISCHARGE PERMIT NUMBER 5112216200.

ANNUAL PERMIT FEE NOTICE

For permits in effect as of 10/01/2007.

Fee will be included in a separate bill from the Metropolitan St. Louis Sewer District.

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2007 through September 30, 2008 issued in accordance with the Metropolitan St. Louis District Ordinance #8660 for the location at 660 S. Euclid Ave.

Base charge @ $150.00 per permit			$150.00
Volume charge @$0.72 per average daily Ccf	594.42	Ccfs	$427.98
Sample Point Charge @$100.00 per sample point	5	points	$500.00
		Total Fee Due:	**$1,077.98**

For inquiries about the Annual Permit Fee, please call 314-436-8710. For inquiries about payment of the fee, please call 1-866-281-5737.

THIS IS NOT A BILL

DO NOT PAY NOW

FEE WILL BE INCLUDED IN A SEPARATE BILL

Scott M. Rehmer

From: Michael Koch [kochmi@msnotes.wustl.edu]
Sent: Friday, November 02, 2007 1:22 PM
To: Scott M. Rehmer
Subject: Toxaphene

WASH. U. MED. SCHOOL
5112-2162-00

Scott,

Another chemical that we should not run into at the medical center is Toxaphene. It is listed at an 'SP' but I do not think we have that on campus.

SA

Can we remove this from the list as well?

Thanks,

Michael Koch, CHMM
Environmental Manager
Washington University School of Medicine
Environmental Health and Safety
(314) 362-6735 - Phone
(314) 362-1095 - Fax
kochmi@.wustl.edu
www.ehs.wustl.edu

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

SR
10-31

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

5112-2162-00

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2007 (Jan-Mar) (Apr-June) √ (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 9/20/2007 C: 9/20/2007		G: 9/20/2007 C: 9/20/2007		G: 9/20/2007 C: 9/20/2007			
Times at Which Samples Were Collected		G: 9:50a.m. C: 9:50am - 3:15pm		G: 9:30 a.m. C: 9:30am - 5:30 pm		G: 10:05am C: 10:05 am - 3:20 pm			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	28,250	E	55,500	E	450,000		Gal/Day
Biological Oxygen Demand	****	C	42	C	30	C	47		mg/L
Chemical Oxygen Demand	****	C	106	C	107	C	171		mg/L
Total Suspended Solids	****	C	38	C	20	C	76		mg/L
pH	5.5 - 11.5	G	8.08	G	8.24	G	8.27		pH
~~Oil & Grease~~ TEMP	200	G	28	G	25	G	27		mg/L
~~Temperature~~ OG	60	G	ND	G	ND	G	6		Celcius
Silver <.05	0.5	C	ND	C	ND	C	ND		mg/L
Arsenic	***	C	ND	C	ND	C	ND		mg/L
Chromium	***	C	ND	C	ND	C	ND		mg/L
Mercury	***	C	ND	C	ND	C	ND		mg/L
Total Cyanide	***	G	ND	G	ND	G	ND		mg/L
Acrolein	***		ND		ND		ND		ug/L
Benzene	***		ND		ND		ND		ug/L
Carbon Tetrachloride	***		ND		ND		ND		ug/L
Chloroform	***		ND		ND		ND		ug/L
Methylene Chloride	***		ND		ND		ND		ug/L
Toluene	***		ND		ND		ND		ug/L
2,4 Dinitrophenol	***		ND		ND		ND		mg/L
Benzidine	***		ND		ND		ND		mg/L
Phenol	***		ND		ND		ND		mg/L

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You must complete and sign the certification statements on the reverse side.

DIVISION OF ENVIRONMENTAL MANAGEMENT

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael Kodl, CHMM

Title: Environmental Manager Telephone: 314-362-6735

Signature: [signature] Date: 10/15/2007

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2007 (Jan-Mar) (Apr-June) √ (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 9/20/2007 C: 9/20/2007		G: 9/20/2007 C: 9/20/2007					
Times at Which Samples Were Collected		G: 9:15 AM C: 9:15 am - 5:30 pm		G: 9:40 AM C: 9:40 am - 3:10 pm					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	8,900				Gal/Day
Biological Oxygen Demand	****	C	35	C	48				mg/L
Chemical Oxygen Demand	****	C	125	C	125				mg/L
Total Suspended Solids	****	C	52	C	38				mg/L
pH	5.5 - 11.5	G	8.32	G	8.57				pH
Oil & Grease 1	200	G	25	G	28				mg/L
Temperature 2	60	G	39	G	ND				Celcius
Silver	0.5	C	ND	C	ND				mg/L
Arsenic		C	ND	C	ND				mg/L
Chromium		C	ND	C	ND				mg/L
Mercury		C	ND	C	ND				mg/L
Total Cyanide		G	ND	G	ND				mg/L
Acrolein			ND		ND				ug/L
Benzene			ND		ND				ug/L
Carbon Tetrachloride			ND		ND				ug/L
Chloroform			ND		ND				ug/L
Methylene Chloride			ND		ND				ug/L
Toluene			ND		ND				ug/L
2,4 Dinitrophenol			ND		ND				mg/L
Benzidine			ND		ND				mg/L
Phenol			ND		ND				mg/L
13									
							RECEIVED		

You must complete and sign the certification statements on the reverse side.

DIVISION OF
ENVIRONMENTAL COMPLIANCE

PART III: SPECIAL CERTIFICATION STATEMENTS

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☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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☐ 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.

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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 property 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: Michael Koch Chairman

Title: Environmental Manager Telephone: 314-362-6735

Signature: [signature] Date: 10/15/2007

Founded 1929 St. Louis Testing Laboratories INCORPORATED

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

October 3, 2007
Lab No. 07E-1286
P.O. No 2903591A
Invoice No. 85265
Page 1 of 3

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 9/20/07, 9:50 A.M.
WASTEWATER COMPOSITE, PT. 001, 9/20/06, 9:50 A.M. – 3:15 P.M.
WASTEWATER GRAB, PT. 003, 9/20/07, 9:30 A.M.
WASTEWATER COMPOSITE, PT. 003, 9/20/07, 9:30 A.M. – 5:30 P.M.
WASTEWATER GRAB, PT. 005, 9/20/07, 10:05 A.M.
WASTEWATER COMPOSITE, PT. 005, 9/20/07, 10:05 A.M. – 3:20 P.M.
WASTEWATER GRAB, PT. 006, 9/20/07, 9:15 A.M.
WASTEWATER COMPOSITE, PT. 006, 9/20/07, 9:15 A.M. – 5:30 P.M.
WASTEWATER GRAB, PT. 007, 9/20/07, 9:40 A.M.
WASTEWATER COMPOSITE, PT. 007, 9/20/07, 9:40 A.M. – 3:10 P.M.

UNITS: mg/L Except As Noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	42	30	47	35	48	10	405.1
Chemical Oxygen Demand (C)	106	107	171	125	125	10	410.4
Total Suspended Solids (C)	38	20	76	52	38	5	160.2
pH (Std. pH Units) (G)	8.08	8.24	8.27	8.32	8.57	---	150.1
Temperature, °C (G)	28	25	27	25	28	5	170.1
Oil & Grease (G)	ND	ND	6	39	ND	----	1664
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7
Arsenic (C)	ND	ND	ND	ND	ND	0.05	200.7
Chromium (C)	ND	ND	ND	ND	ND	0.05	200.7
Mercury (C)	ND	ND	ND	ND	ND	0.0005	245.1
Total Cyanide (G)	ND	0.02	ND	ND	ND	0.02	335.2

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

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2007
DIVISION OF
ENVIRONMENTAL COMPLIANCE

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

October 3, 2007
Lab No. 07E-1286
P.O. No. 2903591A
Invoice No. 85265
Page 3 of 3

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 9/20/07, 9:50 A.M.
WASTEWATER GRAB, PT. 003, 9/20/07, 9:30 A.M.
WASTEWATER GRAB, PT. 005, 9/20/07, 10:05 A.M.
WASTEWATER GRAB, PT. 006, 9/20/07, 9:15 A.M.
WASTEWATER GRAB, PT. 007, 9/20/07, 9:40 A.M.

Units: **ASBESTOS ANALYSIS**

ANALYTE	001	003	005	006	007
Sample Volume, liters	852	950	930	850	925
Filter Type	PC	PC	PC	PC	PC
Total Sample Analyzed, ml	50	50	50	50	50
Effective Filter Area, mm^2	1075	1075	1075	1075	1075
Average Grid of Opening Area, mm_2	0.0092	0.0092	0.0092	0.0092	0.0092
No. of Grid Openings Analyzed	10	10	10	10	10
Asbestos conc., struct. ≥ 10 um/liter	NSD	NSD	NSD	NSD	NSD
Asbestos conc., struct. < 10 um/liter	NSD	NSD	NSD	NSD	NSD
Asbestos conc., total struct./liter	NSD	NSD	NSD	NSD	NSD
Analytical sensitivity, struct./liter	230000	230000	230000	230000	230000

NSD: No Structures Detected

Steve Root

Steve Root, Manager
Environmental Testing

SR/lv

MEMBER ACIL

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NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

RECEIVED
OCT 2 5 2007
DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

SR
10-24

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No: 51[illegible]16200

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0127
H-3	3.1961
I-125	0.2160
P-32	0.2389
S-35	0.2979
TOTAL ACTIVITY DISCHARGED:	**3.9616**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 10/19/2007

RE: radrpt.doc 2/00

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.1108
H-3	64.3262
I-125	0.0060
P-32	0.2293
S-35	0.0002
U-238	0.0020
Zn-65	0.0100
TOTAL ACTIVITY DISCHARGED:	**64.6845**

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

DMK

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: D K Date: 10/19/2007

RE: radrpt.doc 2/00

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SS
SR

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO. 63110
Monitoring Period: 2007 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005		
Dates on Which Samples Were Collected		G: 6/21/2007 C: 6/21/2007		G: 6/21/2007 C: 6/21/2007		G: 6/21/2007 C: 6/21/2007		
Times at Which Samples Were Collected		G: 8:45AM C: 8:45AM-3:20PM		G: 8:50AM C: 8:50AM-5:10PM		G: 8:30AM C: 8:30AM-3:10PM		
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow	***	E	28,000	E	55,525	E	450,500	Gal/Day
Biological Oxygen Demand	****	C	52	C	98	C	33	mg/L
Chemical Oxygen Demand	****	C	78	C	192	C	75	mg/L
Total Suspended Solids	****	C	24	C	52	C	24	mg/L
pH	5.5 - 11.5	G	8.03	G	8.01	G	8.84	pH
Oil & Grease	200	G	16	G	7	G	5	mg/L
Temperature	60	G	27	G	16	G	26	Celcius
Silver	0.5	C	N/D	C	0.07	C	N/D	mg/L

You must complete and sign the certification statements on the reverse side.

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ENVIRONMENTAL COMPLIANCE

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael J Koch, CHMM

Title: Environmental Manager Telephone: (314) 362-6735

Signature: [signature] Date: 7/16/2007

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
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Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 6/21/2007 C: 6/21/2007		G: 6/21/2007 C: 6/21/2007					
Times at Which Samples Were Collected		G: 9:05AM C: 9:05AM-5:05PM		G: 8:40AM C: 8:40AM-3:15PM					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	9,000				Gal/Day
Biological Oxygen Demand	****	C	20	C	26				mg/L
Chemical Oxygen Demand	****	C	59	C	63				mg/L
Total Suspended Solids	****	C	33	C	6				mg/L
pH	5.5 - 11.5	G	8.06	G	8.49				pH
Oil & Grease	200	G	13	G	N/D				mg/L
Temperature	60	G	21	G	28				Celcius
Silver	0.5	C	N/D	C	N/D				mg/L

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You must complete and sign the certification statements on the reverse side.

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☐ 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:

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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: Michael J. Koch, CHMM

Title: Environmental Manager Telephone: (314) 362-6735

Signature: [signature] Date: 7/16/2007

Founded 1929
St. Louis Testing Laboratories
INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

June 29, 2007
Lab No. 07E-0831
Invoice No 81941
P.O. No. 29399V

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 06/21/07. 8:45 AM
WASTE WATER COMPOSITE, PT. 001, 06/21/07, 8:45 AM – 3:20 PM
WASTE WATER GRAB, PT. 003, 06/21/07, 8:50 AM
WASTE WATER COMPOSITE, PT. 003, 06/21/07. 8:50 AM – 5:10 PM
WASTE WATER GRAB, PT. 005, 06/21/07, 8:30 AM
WASTE WATER COMPOSITE, PT. 005, 06/21/07, 8:30 AM – 3:10 PM
WASTE WATER GRAB, PT. 006, 06/21/07, 9:05 AM
WASTE WATER COMPOSITE, PT. 006, 06/21/07, 9:05 AM – 5:05 PM
WASTE WATER GRAB, PT. 007, 06/21/07, 8:40 AM
WASTE WATER COMPOSITE, PT. 007, 06/21/07, 8:40 AM – 3:15 PM

UNITS: mg/L except as otherwise noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	52	98	33	20	26	10	405.1
Chemical Oxygen Demand (C)	78	192	75	59	63	10	410.4
Total Suspended Solids (C)	24	52	24	33	6	5	160.2
pH (Std. pH Units) (G)	8.03	8.01	8.84	8.06	8.49	-----	150.1
Oil & Grease (G)	16	7	5	13	ND	5	1664
Temperature, °C (G)	27	26	26	21	28	-----	170.1
Silver (C)	ND	0.07	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

G - Grab
C - Composite

Identification of tested specimens provided by the client.

Steve Root, Manager
Environmental Testing

SR/ tlv

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MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 51122162-00
Premise Address: 660 S. Euclid Zip Code: 63110-
Last Inspection Date: 3/15/07
MSD Classes: SIU ☒ CIU ☐ Surcharge ☐ Potential Toxic Waste ☒ Non-Toxic Waste ☐
No Process Flow ☐ Multi-User ☐ IIU ☐ Special Handling/Billing ☐
Company Representative: Michael Koch
Title: Environmental Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 7/17/07 Time of Inspection: From 08:30 AM To 11:30 AM

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00, 51122176-01,90006372-01
   B. WERE ALL ACCT NUMBERS VERIFIED AS CORRECT & ACTIVE ON BILLING SYSTEM? Yes☒ No☐

2. PROCESS & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Batch		Yes	Daily	001,003,005, 007
Housing & care of research mice	Batch		Yes	Daily	003,005,007
Food preparation	Batch		Yes	Daily	005
Cleanup at hazardous materialsstorage area(Bldg 80)	Batch		Yes	Daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (other than grease traps) - describe:

	Sample pt.
pH neutralization for labs	003,005,006, 007
Silver recovery	001,003,005, 006

4. DOES COMPANY HAVE ANY GREASE TRAPS? Yes☒ No☐
   A. List sample points: 005
   B. What is the frequency for cleaning & maintaining the traps? Quarterly
   C. Are enzymes (not bacteria) used in traps? Yes☐ No☒
   D. If yes to C, was co. told to stop or switch to approved bacteria? NA☐ Yes☐ No☐
   E. Was co. informed that MSD also performs separate grease trap inspections? Yes☒ No☐

5. HAS COMPANY BEGUN DISCHARGING ANY NEW POLLUTANTS SINCE THE LAST INSP? Yes☐ No☒
   A. List pollutants & process: _____
   B. Will MSD STP exceed existing NPDES discharge limit(s)? Yes☐ No☐
   C. Will MSD STP's discharge exceed 0.1 mg/l for any new pollutant? Yes☐ No☐
   (MSD must notify MDNR if B or C is yes and discharge will continue.)
   D. Comments: _____

6. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes☐ No☒
   A. If yes, list reg. & describe (including any discharge):
   _____

7. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes☐ No☒
   A. At which points? _____
   B. Current applied factor: _____ Is it correct? Yes☐ No☐
   C. If no, what is the correct factor & explain change? _____

8. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes☐ No☒
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes☐ No☐
   C. If yes, explain: _____

9. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes☒ No☐
   A. Describe operations & disposal: Materials are collected from all buildings and brought to Bldg 80 for disposal. Solids are hauled, liquids are decayed & sewered.
   B. Does company have MSD authorization to disposal to sewer? Yes☒ No☐
   C. Date of Authorization: 7/8/94 Annual amt approved: 320 mCi
   D. Has company exceeded the approved quantity? Yes☐ No☒
   E. If yes, explain: _____

10. DOES PROCESS or P&E WASHDOWN WATER USE APPEAR EXCESSIVE? Yes☐ No☒
   A. Explain how verified & needed changes: High volume usage from water records is consistent with the type of activity. Labs account for a large volume of the usage.

11. DOES COMPANY APPEAR TO HAVE SOME WATER THAT IS NOT DISCHARGED TO SEWER? Yes☒ No☐
   A. Was "Return Factor Program" brochure given to company (regardless of whether some water is not discharged to sewer)? Yes☒ No☐

12. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes☐ No☒
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

13. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

14. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes☐ No☒
   A. Upsets? ☐ Bypasses of pretreatment facilities? ☐
      Spills? ☐ Slug discharges? ☐ Other? _____
   B. Explain any marked: _____

15. ARE ANY SOLVENTS USED? Yes☒ No☐
   A. If yes:

List solvents	Used for?	How disposed?	Priority Pollutant?	413/433/469 Process?
Phenol	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Meth. chloride	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Toluene	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Chloroform	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Alcohol	Lab	Hauled off	Yes☐ No☒	Yes☐ No☒
Mineral spirits	Parts washers	Hauled off	Yes☐ No☒	Yes☐ No☒

16. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒
   A. If yes, what needs to be done? _____
   B. If no, how are they controlled? Materials kept in drums have secondary containment. Waste management training is given for handling of chemicals in quantity.

17. ARE THERE ANY AREAS WHERE COMPANY ACTIVITIES IMPAIR STORMWATER RUNOFF? Yes☐ No☒
   A. If yes, describe: _____
   B. What needs to be done? _____
   C. Was "Illicit Stormwater Discharges" brochure given to company (regardless of whether there are any problem areas)? Yes☒ No☐

18. DOES COMPANY HAVE ANY SPILL, SLUG OR SOLVENT MANAGEMENT PLANS (SMP)? Yes☐ No☒
   A. If yes:

Title	SMP? 413/433		Last Update		Copy in File? (SMP only)	Update needed? Explain if yes
	N/A				N/A	N/A
	N/A				N/A	N/A
	N/A				N/A	N/A

   B. Are any Plans needed in addition to those listed in Part A? (write company and request) Yes☐ No☐

19. HAZARDOUS WASTES:
   A. Was the company informed/reminded that solid & hazardous waste management regulations (RCRA) exist and may potentially apply to industrial users? Yes☒ No☐
   B. Is there any discharge to the sewers of hazardous waste which has not been previously reported to MSD (under 40 CFR 403.12(p))? Yes☐ No☒
   C. If yes to B, list haz wastes: _____
   D. Was the company provided with a "Public Notice/Haz. Waste Discharge Notification" form for the above regulations (regardless of whether there are any discharges)? Yes☒ No☐
   E. Comments: _____

20. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes☒ No☐
   A. Are MSD contacts listed? Yes☒ No☐
   B. If no to either, describe how handled: _____

21. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐
   A. If yes, requirement is contained in permit ☒ or other document ☐.
   B. If other document, date & description: _____
   C. How frequently is sampling required? Quarterly
   D. How frequently are reports required? Quarterly
   E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐
   F. If no, explain: _____

22. DOES COMPANY SELF-MONITOR ITS WASTEWATER DISCHARGE? Yes☒ No☐
   A. Is the self-monitoring required by MSD? Yes☒ No☐
   B. Are representative grab/comp samples collected? Yes☒ No☐
   C. Does sample collection time period match company's production shifts (is it representative)? Yes☒ No☐
   D. Are EPA-approved 40 CFR 136 wastewater test methods used? Yes☒ No☐
   E. If no to B, C or D, explain needed changes: _____

23. DOES MSD SPLIT SAMPLES WITH THE COMPANY? Yes☐ No☒
   A. If yes, is company having the samples analyzed Yes☐ No☐
   B. How does company insure proper preservation, holding times & analytical methods? _____
   C. Has company submitted results of all split sample analyses since the last insp? Yes☐ No☐
   D. Have results been submitted within 28 days of the calendar quarter of collection? Yes☐ No☐
   E. If no to C or D, explain: _____
   F. Does company still want to split samples? Yes☐ No☐
   G. Comments: _____

24. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒
   A. If yes, type and date: _____
   B. Have the reports & actions been on-time & complete? Yes☐ No☐
   C. If no, explain: _____

25. IS COMPANY SUBJECT TO NESHAP REGS? Yes☐ No☒
   A. If yes, is company violating NESHAP regs? (ask company) Yes☐ No☐
   B. If yes to A, describe: _____
   C. If yes to A,was MDNR Air Pollution Control informed? (must be done) Yes☐ No☐

26. DO MSD CLASSIFICATIONS NEED TO BE REVISED? Yes☐ No☒
   A. Indicate correct classifications:
   SIU ☐ CIU ☐ Surcharge ☐ Potential Toxic Waste ☐ Non-Toxic Waste ☐
   No Process Flow ☐ Multi-User ☐ IIU ☐ Special Handling/Billing ☐
   B. Explain changes: _____

27. SAMPLE POINTS

						DJ(y/n)
SP #	001	Fed.Reg.	N/A	Components:	Sanitary + NCCW + p&e washdown + research & teaching labs + softener regeneration	No
SP #	003	Fed.Reg.	N/A	Components:	Sanitary + NCCW + research & teaching labs + p&e washdown	No
SP #	005	Fed.Reg.	N/A	Components:	Sanitary + NCCW + kitchen waste + animal care + teaching labs + p&e washdown + softener regen + boiler blowdown	No
SP #	006	Fed.Reg.	N/A	Components:	Sanitary + cleanup at waste storage facility	No
SP #	007	Fed.Reg.	N/A	Components:	Sanitary + NCCW + teaching labs + animal care + p&e washdown	No

28. ARE DISCHARGES AT ANY SPs SMALL/IRREGULAR ENOUGH TO ALLOW GRAB SAMPLES? Yes☒ No☐
   A. List SPs and reasons: SP006 has low intermittent flow

29. ANY UNSAMPLED DISCHARGES? (list each lateral separately) Yes☐ No☒

Dummy SP #		Components:	
Dummy SP #		Components:	

30. DO ANY SAMPLE POINTS (including Unsampled/Dummy SPs) RECEIVE STORMWATER? Yes☒ No☐
   A. List SPs: 001,003,005,006,007

31. 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: _____

C. Was ANY grease or other problem/debris observed in any SP? Yes☐ No☒

D. If yes to C, list SPs & describe: _____

E. If yes to C, was company directed to take corrective actions? Yes☐ No☐

32. REVIEW THE SAMPLE POINT MAP! Last map revision date: 7/6/05

A. Is the map correct and accurate in all its details? Yes☒ No☐

B. If no, what changes are needed? _____

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.

_____

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

INDUSTRIAL USER CLASSIFICATIONS

01/12/1999	SIU
06/09/1998	PTW

WUNNENBERG INFO.

Base Map 19G3
Wun: St. Louis City & Co.
Grid: J 20 Page 26

SIU CRITERIA

PR25 Process Disch => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO. 63110

Billing Address
660 S. Euclid Ave.
St Louis, MO. 63110

INSPECTION INFORMATION

Next Due
Insp Rslt
07/17/2007 RIN James Goodall

PERMIT INFORMATION

Issue Date: 01/01/2003
Expire Date: 12/31/2007
Extended Date: 07/31/2005
Writer Fabian Grabsk
Issue Date: 01/01/2003
Expire Date: 12/31/2007
Extended Date:
Writer Fabian Grabsk

IUQ INFORMATION

IUQ Recvd Date: 08/19/2002
Reviewer: Fabian Grabski
IUQ Recvd Date: 06/28/2007
Reviewer: James Goodall

CONTACTS

BILL	Michael Koch	Environmental Manager	OFF	(314) 362-6735 Ext.
FLD1	Michael Koch	Environmental Manager	FAX	(314) 362-1995 Ext.
	Michael Koch	Environmental Manager	OFF	(314) 362-6735 Ext.
FLD2	Bruce Backus	Dir Environmental Health & Safety	OFF	(314) 362-6816 Ext.
OFF1	Michael Koch	Environmental Manager	FAX	(314) 362-1095 Ext.
	Michael Koch	Environmental Manager	OFF	(314) 362-6735 Ext.

OPERATIONAL INFORMATION

Work Days: 7

				S	M	T	W	T	F	S
1	6,000	09:00AM	8.0	Y	Y	Y	Y	Y	Y	Y
2	400	06:00PM	8.0	Y	Y	Y	Y	Y	Y	Y

Total Emp: 6,400 **Hrs:** 16.0

OTHER AGENCIES INFORMATION

01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/04/1997	MDNR - Hazardous Waste Program	01591
01/04/1997	MDNR - Hazardous Waste Program	01591
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00377308
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00377308
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498

NON-SEWERED WASTE

On-Site Storage Y **On-Site Disposal** N **Off-Site Disposal** Y

06/28/2007	Acids and/or Alkalies		800	GAL
06/28/2007	Equipment oils and/or		1250	GAL
06/28/2007	Infectious Waste		398000	LBS
06/28/2007	Kitchen/Food Service		1280	LBS
06/28/2007	Organic Compounds		3520	GAL
06/28/2007	Paints or Paint Sludge		4280	LBS
06/28/2007	Radioactive Waste		1500	LBS
06/28/2007	Solvents/Thinners		500	LBS
06/28/2007	Other	Lab chemicals/reagents	127000	LBS

COMMENTS

RAW MATERIALS

EFF DATE	MATERIAL_DESCRIPTION	QUANTITY	UNIT
05/07/2004	Laboratory chemicals & reagents		

SIC INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

PRODUCTS

EFF	DESCRIPTION	UNIT	AVG_PROD	MAX_PROD
05/07/2004	Medical school			
05/07/2004	Research institution			
05/07/2004	Research animal care & housing			

Report No. PIMS012A 08/02/2007 12:52:57 pm
Data Date & Time: 08/02/2007 12:52:57 pm

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SEWER ACCOUNTS

Sewer Accounts
5112216200
5112216100
5112216700
5112216800
5112217601
9000637201

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Start Date = 06/01/2006 **End Date =** 08/02/2007 **Wdays** **Cdays**

Acct. No.			Consumption					Discharge	
5112216100			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216100	05/04/2006	08/01/2006	1,990	1,990	A	90	90	90	
5112216100	08/02/2006	11/02/2006	2,100	4,090		93	93	183	
5112216100	11/03/2006	02/09/2007	1,370	5,460		99	99	282	
5112216100	02/10/2007	05/02/2007	1,170	6,630		82	82	364	
RF 1.00	**Acct. Total**		6,630	4,959,585		364	364	13,625	13,625
5112216200			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216200	05/05/2006	08/03/2006	24,581	24,581	A	91	91	91	
5112216200	08/04/2006	11/15/2006	19,726	44,307		104	104	195	
5112216200	11/16/2006	02/02/2007	16,382	60,689		79	79	274	
5112216200	02/03/2007	05/03/2007	15,745	76,434		90	90	364	
RF 0.91	**Acct. Total**		76,434	57,176,607		364	364	142,942	142,942
5112216700			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216700	05/16/2006	08/17/2006	30,660	30,660	A	94	94	94	
5112216700	08/18/2006	11/13/2006	32,281	62,941		88	88	182	
5112216700	11/14/2006	02/09/2007	27,600	90,541		88	88	270	
5112216700	02/10/2007	05/09/2007	24,900	115,441		89	89	359	
RF 0.73	**Acct. Total**		115,441	86,355,871		359	359	175,598	175,598
5112216800			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216800	05/04/2006	08/01/2006	3,400	3,400	A	90	90	90	
5112216800	08/02/2006	11/02/2006	3,200	6,600		93	93	183	
5112216800	11/03/2006	02/02/2007	1,100	7,700		92	92	275	
5112216800	02/03/2007	05/02/2007	1,000	8,700		89	89	364	
RF 1.00	**Acct. Total**		8,700	6,508,052		364	364	17,879	17,879
5112217601			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112217601	05/04/2006	08/01/2006	1	1	A	90	90	90	
5112217601	08/02/2006	11/02/2006	3	4		93	93	183	
5112217601	11/03/2006	02/02/2007	0	4		92	92	275	
5112217601	02/03/2007	05/02/2007	0	4		89	89	364	
RF 1.00	**Acct. Total**		4	2,992		364	364	8	8
9000637201			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
9000637201	05/04/2006	08/01/2006	22,299	22,299	A	90	90	90	
9000637201	08/02/2006	11/15/2006	24,170	46,469		106	106	196	
9000637201	11/16/2006	02/09/2007	20,231	66,700		86	86	282	
9000637201	02/10/2007	05/02/2007	15,719	82,419		82	82	364	
RF 0.58	**Acct. Total**		82,419	61,653,698		364	364	98,239	98,239
	Facility Total		289,628						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
01	Sanitary Or Combined	20G2	232C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings located S of McKin

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 001 Ordinance **NPDES Outfall No.**

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		2,019	GPD		GPD	D	7/18/07
Non Contact Coolir		3,250	GPD		GPD	D	7/18/07
Plant & Equipment		468	GPD		GPD	D	7/18/07
Regeneration/Rejec	Water softener regeneration	3,518	GPD		GPD	D	7/18/07
Process Waste	Photographic & teaching labs	3,851	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	1,733	GPD		GPD	D	7/18/07
	Total Flow Avg =	**14,839**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
02	Sanitary Or Combined	19G3	229C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings N&S of Scott Av &

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 005 Ordinance **NPDES Outfall No.**

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		64,878	GPD		GPD	D	7/18/07
Kitchen Waste		9,176	GPD		GPD	D	7/18/07
Process Waste	Photographic & teaching labs, animal care.	82,658	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Regeneration/Rejec	Water softener regeneration	32,761	GPD		GPD	D	7/18/07
Boiler Blowdown		39,666	GPD		GPD	D	7/18/07
Plant & Equipment		1,996	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	22,155	GPD		GPD	D	7/18/07
Non Contact Coolir		88,038	GPD		GPD	D	7/18/07
	Total Flow Avg =	**341,328**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Lemay
03	Sanitary Or Combined	19G3	543C	Trunk Sewer	River des Peres (County Section)

Description Lateral N from Building 14 W of Euclid A

Sewer Route W across S Kingshighway Blvd into Fores

SAMPLE POINT NO. 003 Ordinance **NPDES Outfall No.**

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		26,187	GPD		GPD	D	7/18/07
Non Contact Coolir		6,120	GPD		GPD	D	7/18/07
Plant & Equipment		2,179	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	18,128	GPD		GPD	D	7/18/07
Process Waste	Photographic & teachng labs, animal care	11,489	GPD		GPD	D	7/18/07
	Total Flow Avg =	**64,103**		**Max =**			

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO, 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH	Treatment Area	Bissell Point
04	Sanitary Or Combined	19G3 259C	Trunk Sewer	Old Mill Creek

Description 8" lateral E from Building 80 at Taylor anc

Sewer Route N to Parkview to Duncan, E to trunk to tre

SAMPLE POINT NO. 006 Ordinance **NPDES Outfall No.**

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		549	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Plant & Equipment	Waste storage facility	485	GPD		GPD	D	7/18/07
	Total Flow Avg =	**1,034**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH	Treatment Area	Bissell Point
05	Sanitary Or Combined	20G2 235C	Trunk Sewer	Old Mill Creek

Description Multiple lines from Bldg 63 N to McKinle

Sewer Route E on McKinley to Taylor, S to Clayton, E t

SAMPLE POINT NO. 007 Ordinance **NPDES Outfall No.**

Description Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		4,798	GPD		GPD	D	7/18/07
Non Contact Coolir		413	GPD		GPD	D	7/18/07
Process Waste		5,997	GPD		GPD	D	7/18/07
Laboratory Waste	Research labs	4,780	GPD		GPD	D	7/18/07
Storm Water		0	GPD		GPD	D	7/18/07
Plant & Equipment		7,462	GPD		GPD	D	7/18/07
	Total Flow Avg =	**23,450**		**Max =**			

PRETREATMENT TYPES

SP	EFF_DATE	TYPE	DESCRIPTION
001	09/02/1998	DC32	Metallic Replacement
003	09/02/1998	DC37	pH Adjustment / Neutralization
003	09/02/1998	DC32	Metallic Replacement
005	06/16/1999	DC28	Grease Trap
005	07/17/2007	DC37	pH Adjustment / Neutralization
005	07/17/2007	DC32	Metallic Replacement
006	06/19/2000	DC32	Metallic Replacement
006	05/08/2001	DC37	pH Adjustment / Neutralization
007	07/17/2007	DC37	pH Adjustment / Neutralization

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
Acenaphthylene	SP	Acenaphthene	SP	4-Chloro-3-Methylphenol	SP
2,4,6-Trichlorophenol	SP	2,4-Dimethylphenol	SP	2,3,7,8-Tetrachlorodibenzo-p-dioxin	KP
2,4-Dinitrotoluene	SP	1,2-Diphenylhydrazine	KP	3,3-Dichlorobenzidine	KP
Bis (2-Chloroethoxy) Methane	SP	Anthracene	SP	2,6-Dinitrotoluene	SP
2,4-Dichlorophenol	KP	2-Nitrophenol	KP	Naphthalene	SP
N-Nitrosodimethylamine	SP	Bis (2-Chloroisopropyl) Ether	SP	Bis (2-Chloroethyl) Ether	KP
1,2-Dichloropropane	KP	Trans-1,2-Dichloroethene	KP	Dibromochloromethane	SP
Bromodichloromethane	SP	1,2-Dichlorobenzene	KP	1,1-Dichloroethane	KP
Trichloroethene	KP	Ethylbenzene	SP	Chloroethane	SP
Acrylonitrile	SP	1,4-Dichlorobenzene	KP	1,1,2,2-Tetrachloroethane	KP
1,1-Dichloroethene	KP	Cyanide (Total)	KP	Asbestos (Fibrous)	KP
Silver (Total)	KP	Selenium (Total)	KP	Copper (Total)	KP
Cadmium (Total)	SP	Zinc (Total)	KP	Thallium (Total)	KP
Nickel (Total)	KP	Mercury (Total)	KP	Lead (Total)	KP
Chromium (Total)	KP	Arsenic (Total)	KP	1,2,4-Trichlorobenzene	SP
Phenol	KP	4-Nitrophenol	KP	2,4-Dinitrophenol	SP
2-Chlorophenol	SP	Toxaphene	SP	Nitrobenzene	KP
Benzo (A) Pyrene	KP	Benzidine	KP	Acrolein	KP
Toluene	KP	Methylene Chloride	KP	Chloromethane	SP
Chlorobenzene	KP	1,3-Dichlorobenzene	KP	1,1,1-Trichloroethane	SP
Tetrachloroethene	KP	Chloroform	KP	Carbon Tetrachloride	KP
Bromomethane	SP	Benzene	KP	2-Chloroethyl vinyl ether	SP
1,2-Dichloroethane	KP	1,1,2-Trichloroethane	SP	(cis & trans) 1,3-Dichloropropene	KP

EXTRA STRENGTH SURCHARGE INFORMATION

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
Acenaphthylene	SP	Acenaphthene	SP	4-Chloro-3-Methylphenol	SP
2,4,6-Trichlorophenol	SP	2,4-Dimethylphenol	SP	2,3,7,8-Tetrachlorodibenzo-p-dioxin	KP
2,4-Dinitrotoluene	SP	1,2-Diphenylhydrazine	KP	3,3-Dichlorobenzidine	KP
Bis (2-Chloroethoxy) Methane	SP	Anthracene	SP	2,6-Dinitrotoluene	SP
2,4-Dichlorophenol	KP	2-Nitrophenol	KP	Naphthalene	SP
N-Nitrosodimethylamine	SP	Bis (2-Chloroisopropyl) Ether	SP	Bis (2-Chloroethyl) Ether	KP
1,2-Dichloropropane	KP	Trans-1,2-Dichloroethene	KP	Dibromochloromethane	SP
Bromodichloromethane	SP	1,2-Dichlorobenzene	KP	1,1-Dichloroethane	KP
Trichloroethene	KP	Ethylbenzene	SP	Chloroethane	SP
Acrylonitrile	SP	1,4-Dichlorobenzene	KP	1,1,2,2-Tetrachloroethane	KP
1,1-Dichloroethene	KP	Cyanide (Total)	KP	Asbestos (Fibrous)	KP
Silver (Total)	KP	Selenium (Total)	KP	Copper (Total)	KP
Cadmium (Total)	SP	Zinc (Total)	KP	Thallium (Total)	KP
Nickel (Total)	KP	Mercury (Total)	KP	Lead (Total)	KP
Chromium (Total)	KP	Arsenic (Total)	KP	1,2,4-Trichlorobenzene	SP
Phenol	KP	4-Nitrophenol	KP	2,4-Dinitrophenol	SP
2-Chlorophenol	SP	Toxaphene	SP	Nitrobenzene	KP
Benzo (A) Pyrene	KP	Benzidine	KP	Acrolein	KP
Toluene	KP	Methylene Chloride	KP	Chloromethane	SP
Chlorobenzene	KP	1,3-Dichlorobenzene	KP	1,1,1-Trichloroethane	SP
Tetrachloroethene	KP	Chloroform	KP	Carbon Tetrachloride	KP
Bromomethane	SP	Benzene	KP	2-Chloroethyl vinyl ether	SP
1,2-Dichloroethane	KP	1,1,2-Trichloroethane	SP	(cis & trans) 1,3-Dichloropropene	KP

EXTRA STRENGTH SURCHARGE INFORMATION

Report No. PIMS012A 08/02/2007 10:47:13 am
Data Date & Time: 08/02/2007 10:47:13 am

PIMS FACILITY CONTACTS

For Account Number **5112216200** **WASHINGTON UNIVERSITY MEDICAL**

Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type / Contact Type	Contact Name		Contact Title	Phone	Number	Ext.
Billing Address						
Billing Contact	Michael	Koch	Environmental Manager	OFF	(314)362-6735	
Office Mailing Address						
Office Contact - Primary	Michael	Koch	Environmental Manager	FAX	(314)362-1095	
Office Contact - Primary	Michael	Koch	Environmental Manager	OFF	(314)362-6735	
Premise Address						
Field Contact - Primary	Michael	Koch	Environmental Manager	FAX	(314)362-1995	
Field Contact - Primary	Michael	Koch	Environmental Manager	OFF	(314)362-6735	
Field Contact 1st Alt	Bruce	Backus	Dir Environmental Health & Safety	OFF	(314)362-6816	

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2008
	T237000	pH	Once/year	Grab	06/30/2008
	T247000	Temperature	Once/year	Grab	06/30/2008
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2008
	T309000	Benzene	Once/year	Grab	06/30/2008
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2008
	T332000	Chloroform	Once/year	Grab	06/30/2008
	T371000	Methylene Chloride	Once/year	Grab	06/30/2008
	T375000	Naphthalene	Once/year	Grab	06/30/2008
	T388000	Phenol	Once/year	Grab	06/30/2008
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T397000	Toluene	Once/year	Grab	06/30/2008
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2008

003 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2008
	T237000	pH	Once/year	Grab	06/30/2008
	T247000	Temperature	Once/year	Grab	06/30/2008
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2008
	T309000	Benzene	Once/year	Grab	06/30/2008
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2008
	T332000	Chloroform	Once/year	Grab	06/30/2008
	T371000	Methylene Chloride	Once/year	Grab	06/30/2008
	T375000	Naphthalene	Once/year	Grab	06/30/2008
	T388000	Phenol	Once/year	Grab	06/30/2008
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T397000	Toluene	Once/year	Grab	06/30/2008
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2008

005 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2008
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2008
	T237000	pH	Once/year	Grab	06/30/2008
	T247000	Temperature	Once/year	Grab	06/30/2008
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2008
	T309000	Benzene	Once/year	Grab	06/30/2008
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2008
	T332000	Chloroform	Once/year	Grab	06/30/2008
	T371000	Methylene Chloride	Once/year	Grab	06/30/2008
	T375000	Naphthalene	Once/year	Grab	06/30/2008
	T388000	Phenol	Once/year	Grab	06/30/2008
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T397000	Toluene	Once/year	Grab	06/30/2008
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2008

006 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date

Account No Entered **5112216200**

SPN	PREMISE ADDRESS		CITY	ST	ZIP	
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs		06/30/2008
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs		06/30/2008
	T234000	Oil and Grease (Total)	Once/year	Grab		06/30/2008
	T237000	pH	Once/year	Grab		06/30/2008
	T247000	Temperature	Once/year	Grab		06/30/2008
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs		06/30/2008
	T309000	Benzene	Once/year	Grab		06/30/2008
	T328000	Carbon Tetrachloride	Once/year	Grab		06/30/2008
	T332000	Chloroform	Once/year	Grab		06/30/2008
	T371000	Methylene Chloride	Once/year	Grab		06/30/2008
	T375000	Naphthalene	Once/year	Grab		06/30/2008
	T388000	Phenol	Once/year	Grab		06/30/2008
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs		06/30/2008
	T397000	Toluene	Once/year	Grab		06/30/2008
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab		06/30/2008

007 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2008
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2008
	T237000	pH	Once/year	Grab	06/30/2008
	T247000	Temperature	Once/year	Grab	06/30/2008
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2008
	T309000	Benzene	Once/year	Grab	06/30/2008
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2008
	T332000	Chloroform	Once/year	Grab	06/30/2008
	T371000	Methylene Chloride	Once/year	Grab	06/30/2008
	T375000	Naphthalene	Once/year	Comp-Time 04 Hrs	06/30/2008
	T388000	Phenol	Once/year	Comp-Time 04 Hrs	06/30/2008
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2008
	T397000	Toluene	Once/year	Grab	06/30/2008
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2008

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave. ✓ 5112216200

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	1.3476
Ca-45	0.1860
H-3	70.9895
I-125	0.0010
P-32	0.1019
S-35	0.0503
Tc-99m	0.4000
U-238	0.0070
TOTAL ACTIVITY DISCHARGED:	**73.0832**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature: DK

Date: 7/20/2007

RE: radrpt.doc 2/00

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JUL 23 2007

DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave. ✓ 5112216200

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0069
H-3	3.2198
I-125	0.1635
P-32	0.2993
S-35	0.3194
TOTAL ACTIVITY DISCHARGED:	**4.0089**

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

DMK 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.

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 7/20/2007

RE: radrpt.doc 2/00

RECEIVED

JUL 23 2007

DIVISION OF ENVIRONMENTAL COMPLIANCE

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

May 24, 2007

Michael Koch
Hazardous Materials Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

Re: Discharge Permit No: 51122162-00
For premise at: 660 S. Euclid Ave.
St. Louis, MO 63110

Dear Michael Koch:

The Metropolitan St. Louis Sewer District Wastewater Discharge permit for the above premise expires on December 31, 2007. Under the terms of the permit, you are required 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. You also may download an electronic version from the District's website at www.stlmsd.com. This questionnaire serves as your permit application. We request that you return the questionnaire by July 1, 2007. Please retain a copy for your files.

After a review of the questionnaire and our records on your facility, we will prepare a draft permit and send it to you for comment.

Thank you for your cooperation. If you have any questions or need assistance completing the questionnaire, please contact us at 314-436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

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

Enclosures - IUQ & instructions

pc Suspense file

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2007 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 3/27/2007 C: 3/27/2007		G: 3/26/2007 C: 3/26-27/2007		G: 3/27/2007 C: 3/27/2007			
Times at Which Samples Were Collected		G: 8:05AM C: 8:05AM-3:15PM		G: 9:25AM C: 9:30AM-9:30AM		G: 7:50AM C: 7:50AM-3:05PM			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	28,000	E	55,525	E	450,500		Gal/Day
Biological Oxygen Demand	****	C	32	C	81	C	83		mg/L
Chemical Oxygen Demand	****	C	82	C	198	C	196		mg/L
Total Suspended Solids	****	C	56	C	135	C	100		mg/L
pH	5.5 - 11.5	G	7.7	G	7.94	G	7.77		pH
Oil & Grease	200	G	6	G	7	G	6		mg/L
Temperature	60	G	24	G	20	G	18		Celcius
Silver	0.5	C	N/D	C	N/D	C	N/D		mg/L

You must complete and sign the certification statements on the reverse side.

RECEIVED
APR 1 / 2007
DIVISION OF
ENVIRONMENTAL COMPLIANCE

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael Koch, CHMM

Title: Environmental Manager Telephone: 314-362-6735

Signature: [signature] Date: 4/11/2007

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2007 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 3/26/2007 C: 3/26-27/2007		G: 3/27/2007 C: 3/27/2007					
Times at Which Samples Were Collected		G: 9:50AM C: 10:00AM-10:00AM		G: 8:00AM C: 8:00AM-3:10PM					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	9,000				Gal/Day
Biological Oxygen Demand	****	C	N/D	C	32				mg/L
Chemical Oxygen Demand	****	C	20	C	66				mg/L
Total Suspended Solids	****	C	17	C	50				mg/L
pH	5.5 - 11.5	G	8.91	G	7.99				pH
Oil & Grease	200	G	11	G	N/D				mg/L
Temperature	60	G	16	G	23				Celcius
Silver	0.5	C	N/D	C	N/D				mg/L

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ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael Koch, CHMM

Title: Environmental Manager Telephone: 362-6735

Signature: [signature] Date: 4/11/2007

Founded 1929 St Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

April 4, 2007
Lab No. 07E-0414
Invoice No. 79007
P.O. No.29399V
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 03/27/07, 8:05 AM
WASTE WATER COMPOSITE, PT. 001, 03/27/07, 8:05 AM – 3:15 PM
WASTE WATER GRAB, PT. 003, 03/26/07, 9:25 AM
WASTE WATER COMPOSITE, PT. 003, 03/26-27/07, 9:30 AM – 9:30 AM
WASTE WATER GRAB, PT. 005, 03/27/07, 7:50 AM
WASTE WATER COMPOSITE, PT. 005, 03/27/07, 7:50 AM – 3:05 PM
WASTE WATER GRAB, PT. 006, 03/26/07, 9:50 AM
WASTE WATER COMPOSITE, PT. 006, 03/26-27/07, 10:00 AM –10:00 AM
WASTE WATER GRAB, PT. 007, 03/27/07, 8:00 AM
WASTE WATER COMPOSITE, PT. 007, 03/27/07, 8:00 AM – 3:10 PM

UNITS: mg/L except as otherwise noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	32	81	83	ND	32	10	405.1
Chemical Oxygen Demand (C)	82	198	196	20	66	10	410.4
Total Suspended Solids (C)	56	135	100	17	50	5	160.2
pH (Std. pH Units) (G)	7.70	7.94	7.77	8.91	7.99	-----	150.1
Oil & Grease (G)	6	7	6	11	ND	5	1664
Temperature, °C (G)	24	20	18	16	23	-----	170.1
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

G - Grab
C - Composite

Identification of tested specimens provided by the client.

SR/ tlv

Steve Root, Manager
Environmental Testing

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

TK 04/27/07 Rad SSV

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.7650
H-3	64.5731
P-32	0.1936
P-33	0.0010
S-35	0.0522
TOTAL ACTIVITY DISCHARGED:	**65.5849**

PART III: CERTIFICATION STATEMENTS

Place your initials in the box under Item A.

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A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

[DMK] I certify that to the best of my knowledge & belief, all requirements of10 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

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 4/19/2007

RE: radrpt.doc 2/00

RECEIVED

APR 23 2007

DIVISION OF ENVIRONMENTAL COMPLIANCE

YEK
04/25/07
Rad SS ✓

METROPOLITAN SEWER DISTRICT

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Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0534
H-3	2.1259
I-125	0.1357
I-125v	0.0020
P-32	0.3457
P-33	0.0100
S-35	0.3670
TOTAL ACTIVITY DISCHARGED:	**3.0396**

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

DMK

I certify that to the best of my knowledge & belief, all requirements of10 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 4/19/2007

RE: radrpt.doc 2/00

RECEIVED
APR 2 3 2007
DIVISION OF
ENVIRONMENTAL COMPLIANCE

MSD 043685

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 51122162-00
Premise Address: 660 S. Euclid Zip Code: 63110-
Last Inspection Date: 4/24/06
MSD Classes: SIU ☒ CIU ☐ Surcharge ☐ Potential Toxic Waste ☒ Non-Toxic Waste ☐
No Process Flow ☐ Multi-User ☐ IIU ☐ Special Handling/Billing ☐
Company Representative: Michael Koch
Title: Environmental Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 3/15/07 Time of Inspection: From 08:30 AM To 10:30 AM

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00,51122176-01,90006372-01
   B. WERE ALL ACCT NUMBERS VERIFIED AS CORRECT & ACTIVE ON BILLING SYSTEM? Yes☒ No☐

2. PROCESS & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont		Yes	Daily	001,003,005, 007
Housing & care of research mice	Cont		Yes	Daily	005,007
Food preparation	Batch		Yes	Daily	005
Cleanup at hazardous materials storage area(Bldg 80)	Batch		Yes	Daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (other than grease traps) - describe:

	Sample pt.
pH neutralization for labs	001,003,004, 006
Silver recovery	001,003,004, 006

4. DOES COMPANY HAVE ANY GREASE TRAPS? Yes☒ No☐
   A. List sample points: 005
   B. What is the frequency for cleaning & maintaining the traps? Quarterly
   C. Are enzymes (not bacteria) used in traps? Yes☐ No☒
   D. If yes to C, was co. told to stop or switch to approved bacteria? NA☐ Yes☐ No☐
   E. Was co. informed that MSD also performs separate grease trap inspections? Yes☒ No☐

5. HAS COMPANY BEGUN DISCHARGING ANY NEW POLLUTANTS SINCE THE LAST INSP? Yes☐ No☒
   A. List pollutants & process: _____
   B. Will MSD STP exceed existing NPDES discharge limit(s)? Yes☐ No☐
   C. Will MSD STP's discharge exceed 0.1 mg/l for any new pollutant? Yes☐ No☐
   (MSD must notify MDNR if B or C is yes and discharge will continue.)
   D. Comments: _____

6. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes☐ No☒
   A. If yes, list reg. & describe (including any discharge):
   _____

7. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes☐ No☒
   A. At which points? _____
   B. Current applied factor: _____ Is it correct? Yes☐ No☐
   C. If no, what is the correct factor & explain change? _____

8. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes☐ No☒
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes☐ No☐
   C. If yes, explain: _____

9. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes☒ No☐
   A. Describe operations & disposal: Materials are collected from all buildings and brought to Bldg 80 for disposal. Solids are hauled, liquids are decayed & sewered.
   B. Does company have MSD authorization to disposal to sewer? Yes☒ No☐
   C. Date of Authorization: 7/8/94 Annual amt approved: 320 mCi
   D. Has company exceeded the approved quantity? Yes☐ No☒
   E. If yes, explain: _____

10. DOES PROCESS or P&E WASHDOWN WATER USE APPEAR EXCESSIVE? Yes☐ No☒
   A. Explain how verified & needed changes: High volume usage from water records is consistent with the type of activity. Labs account for a large volume of the usage.

11. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes☒ No☐
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
Mercury	9/14/06	003	Yes	Additional sampling
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: Unable to identify the source of the problem.

12. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

13. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes☐ No☒
   A. Upsets? ☐ Bypasses of pretreatment facilities? ☐
   Spills? ☐ Slug discharges? ☐ Other? _____
   B. Explain any marked: _____

14. ARE ANY SOLVENTS USED? Yes☒ No☐

A. If yes:

List solvents	Used for?	How disposed?	Priority Pollutant?	413/433/469 Process?
Phenol	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Meth. chloride	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Toluene	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Chloroform	Lab	Hauled off	Yes☒ No☐	Yes☐ No☒
Alcohol	Lab	Hauled off	Yes☐ No☒	Yes☐ No☒
Mineral spirits	Parts washer	Hauled off	Yes☐ No☒	Yes☐ No☒

15. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒

A. If yes, what needs to be done? _____

B. If no, how are they controlled? Materials kept in drums have secondary containment. Waste management training is given for handling of chemicals in quantity.

16. ARE THERE ANY AREAS WHERE COMPANY ACTIVITIES IMPAIR STORMWATER RUNOFF? Yes☐ No☒

A. If yes, describe: _____

B. What needs to be done? _____

C. Was "Illicit Stormwater Discharges" brochure given to company (regardless of whether there are any problem areas)? Yes☒ No☐

17. DOES COMPANY HAVE ANY SPILL, SLUG OR SOLVENT MANAGEMENT PLANS (SMP)? Yes☐ No☒

A. If yes:

Title	SMP? 413/433	Last Update	Copy in File? (SMP only)	Update needed? Explain if yes
	N/A		N/A	N/A
	N/A		N/A	N/A
	N/A		N/A	N/A

B. Are any Plans needed in addition to those listed in Part A? (write company and request) Yes☐ No☒

18. HAZARDOUS WASTES:

A. Was the company informed/reminded that solid & hazardous waste management regulations (RCRA) exist and may potentially apply to industrial users? Yes☒ No☐

B. Is there any discharge to the sewers of hazardous waste which has not been previously reported to MSD (under 40 CFR 403.12(p))? Yes☐ No☒

C. If yes to B, list haz wastes: _____

D. Was the company provided with a "Public Notice/Haz. Waste Discharge Notification" form for the above regulations (regardless of whether there are any discharges)? Yes☒ No☐

E. Comments: _____

19. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes☒ No☐

A. Are MSD contacts listed? Yes☒ No☐

B. If no to either, describe how handled: _____

20. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐

A. If yes, requirement is contained in permit ☒ or other document ☐.

B. If other document, date & description: _____

C. How frequently is sampling required? Quarterly

D. How frequently are reports required? Quarterly

E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐

F. If no, explain: _____

21. DOES COMPANY SELF-MONITOR ITS WASTEWATER DISCHARGE? Yes☒ No☐
   A. Is the self-monitoring required by MSD? Yes☒ No☐
   B. Are representative grab/comp samples collected? Yes☒ No☐
   C. Does sample collection time period match company's production shifts (is it representative)? Yes☒ No☐
   D. Are EPA-approved 40 CFR 136 wastewater test methods used? Yes☒ No☐
   E. If no to B, C or D, explain needed changes: _____

22. DOES MSD SPLIT SAMPLES WITH THE COMPANY? Yes☐ No☒
   A. If yes, is company having the samples analyzed Yes☐ No☐
   B. How does company insure proper preservation, holding times & analytical methods? _____
   C. Has company submitted results of all split sample analyses since the last insp? Yes☐ No☐
   D. Have results been submitted within 28 days of the calendar quarter of collection? Yes☐ No☐
   E. If no to C or D, explain: _____
   F. Does company still want to split samples? Yes☐ No☐
   G. Comments: _____

23. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒
   A. If yes, type and date: _____
   B. Have the reports & actions been on-time & complete? Yes☐ No☐
   C. If no, explain: _____

24. IS COMPANY SUBJECT TO NESHAP REGS? Yes☐ No☒
   A. If yes, is company violating NESHAP regs? (ask company) Yes☐ No☐
   B. If yes to A, describe: _____
   C. If yes to A, was MDNR Air Pollution Control informed? (must be done) Yes☐ No☐

25. DO MSD CLASSIFICATIONS NEED TO BE REVISED? Yes☐ No☒
   A. Indicate correct classifications:
   SIU ☐ CIU ☐ Surcharge ☐ Potential Toxic Waste ☐ Non-Toxic Waste ☐
   No Process Flow ☐ Multi-User ☐ IIU ☐ Special Handling/Billing ☐
   B. Explain changes: _____

26. SAMPLE POINTS DJ(y/n)

SP #	001	Fed.Reg.	N/A	Components:	Sanitary + NCCW + p&e washdown + research teaching labs + + softener regeneration	No
SP #	003	Fed.Reg.	N/A	Components:	Sanitary + research teaching labs + p&e washdown	No
SP #	005	Fed.Reg.	N/A	Components:	Sanitary + NCCW + kitchen waste + animal care + teaching labs + p&e washdown + softener regen + boiler blowdown	No
SP #	006	Fed.Reg.	N/A	Components:	Sanitary + cleanup at waste storage facility	No
SP #	007	Fed.Reg.	N/A	Components:	Sanitary + teaching labs + animal care + p&e washdown	No

27. ANY UNSAMPLED DISCHARGES? (list each lateral separately) Yes☐ No☒

Dummy SP #		Components:	
Dummy SP #		Components:	

28. 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: _____
   C. Was ANY grease or other problem/debris observed in any SP? Yes☐ No☒
   D. If yes to C, list SPs & describe: _____
   E. If yes to C, was company directed to take corrective actions? Yes☐ No☐

29. REVIEW THE SAMPLE POINT MAP! Last map revision date: 7/6/05

A. Is the map correct and accurate in all its details? Yes☒ No☐

B. If no, what changes are needed? _____

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.
The contact requestd a copy of the inspection report.

MSD 043690

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

INDUSTRIAL USER CLASSIFICATIONS

01/12/1999	SIU
06/09/1998	PTW

WUNNENBERG INFO.

Base Map 19G3
Wun: St. Louis City & Co.
Grid: J 20 Page 26

SIU CRITERIA

PR25 Process Disch => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO. 63110

Billing Address
660 S. Euclid Ave.
St Louis, MO. 63110

INSPECTION INFORMATION

Next Due	Insp Rslt	
03/15/2007	RIN	James Goodall

PERMIT INFORMATION

Issue Date:	01/01/2003
Expire Date:	12/31/2007
Extended Date:	07/31/2005
Writer	Fabian Grabsk
Issue Date:	01/01/2003
Expire Date:	12/31/2007
Extended Date:	
Writer	Fabian Grabsk

IUQ INFORMATION

IUQ Recvd Date: 08/19/2002
Reviewer: Fabian Grabski
IUQ Recvd Date:
Reviewer:

CONTACTS

BILL	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
FLD1	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1995 Ext.
	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
FLD2	Bruce Backus	Dir Environmental Health & Safety	OFF	(314) 362-6816 Ext.
OFF1	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1095 Ext.
	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.

OPERATIONAL INFORMATION

Work Days: 7

				S	M	T	W	T	F	S
1	6,650	08:00AM	8.0	Y	Y	Y	Y	Y	Y	Y
2	240	04:30PM	8.0	Y	Y	Y	Y	Y	Y	Y
3	255	11:30PM	8.0	Y	Y	Y	Y	Y	Y	Y

Total Emp: 7,145 **Hrs:** 24.0

NON-SEWERED WASTE

On-Site Storage	On-Site Disposal	Off-Site Disposal

OTHER AGENCIES INFORMATION

01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/04/1997	MDNR - Hazardous Waste Program	01591
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00377308

COMMENTS

RAW MATERIALS

EFF DATE	MATERIAL_DESCRIPTION	QUANTITY	UNIT
05/07/2004	Laboratory chemicals & reagents		

SIC INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

PRODUCTS

EFF	DESCRIPTION	UNIT	AVG_PROD	MAX_PROD
05/07/2004	Medical school			
05/07/2004	Research institution			

Report No. PIMS012A 04/09/2007 1:06:31 pm
Data Date & Time: 04/09/2007 1:06:31 pm

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SEWER ACCOUNTS

Sewer Accounts
5112216200
5112216100
5112216700
5112216800
5112217601
9000637201

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Start Date = 01/01/2006 **End Date =** 04/09/2007 **Wdays Cdays**

Acct. No.			Consumption					Discharge	
5112216100			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216100	11/02/2005	02/02/2006	370	370	A	93	93	93	
5112216100	02/03/2006	05/03/2006	610	980		90	90	183	
5112216100	05/04/2006	08/01/2006	1,990	2,970		90	90	273	
5112216100	08/02/2006	11/02/2006	2,100	5,070		93	93	366	
RF 1.00	**Acct. Total**		5,070	3,792,624		366	366	10,362	10,362
5112216200			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216200	11/09/2005	02/02/2006	62,748	62,748	A	86	86	86	
5112216200	02/03/2006	05/04/2006	16,821	79,569		91	91	177	
5112216200	05/05/2006	08/03/2006	24,581	104,150		91	91	268	
5112216200	08/04/2006	11/15/2006	19,726	123,876		104	104	372	
RF 0.91	**Acct. Total**		123,876	92,665,690		372	372	226,682	226,682
5112216700			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216700	11/19/2005	02/14/2006	32,200	32,200	A	88	88	88	
5112216700	02/15/2006	05/15/2006	26,390	58,590		90	90	178	
5112216700	05/16/2006	08/17/2006	30,660	89,250		94	94	272	
5112216700	08/18/2006	11/13/2006	32,281	121,531		88	88	360	
RF 0.73	**Acct. Total**		121,531	90,911,508		360	360	184,348	184,348
5112216800			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216800	11/02/2005	02/02/2006	1,800	1,800	A	93	93	93	
5112216800	02/03/2006	05/03/2006	1,600	3,400		90	90	183	
5112216800	05/04/2006	08/01/2006	3,400	6,800		90	90	273	
5112216800	08/02/2006	11/02/2006	3,200	10,000		93	93	366	
RF 1.00	**Acct. Total**		10,000	7,480,520		366	366	20,439	20,439
5112217601			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112217601	11/02/2005	02/02/2006	0	0	A	93	93	93	
5112217601	02/03/2006	05/03/2006	0	0		90	90	183	
5112217601	05/04/2006	08/01/2006	1	1		90	90	273	
5112217601	08/02/2006	11/02/2006	3	4		93	93	366	
RF 1.00	**Acct. Total**		4	2,992		366	366	8	8
9000637201			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
9000637201	11/03/2005	02/03/2006	13,085	13,085	A	93	93	93	
9000637201	02/04/2006	05/03/2006	11,586	24,671		89	89	182	
9000637201	05/04/2006	08/01/2006	22,299	46,970		90	90	272	
9000637201	08/02/2006	11/15/2006	24,170	71,140		106	106	378	
RF 0.58	**Acct. Total**		71,140	53,216,419		378	378	81,655	81,655
	Facility Total		331,621						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
01	Sanitary Or Combined	20G2	232C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings located S of McKin

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 001 Ordinance **NPDES Outfall No.**

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		650	GPD		GPD	D	8/19/02
Sanitary		13,650	GPD		GPD	D	8/19/02
Regeneration/Rejec	Water softner regen waste	6,045	GPD		GPD	D	8/19/02
Non Contact Coolir		3,710	GPD		GPD	D	5/12/04
Laboratory Waste	R&D	2,200	GPD		GPD	D	5/12/04
	Total Flow Avg =	**26,255**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
02	Sanitary Or Combined	19G3	229C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings N&S of Scott Av &

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 005 Ordinance **NPDES Outfall No.**

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		4,938	GPD		GPD	D	8/19/02
Kitchen Waste		4,778	GPD		GPD	D	8/19/02
Regeneration/Rejec		36,270	GPD		GPD	D	8/19/02
Sanitary		120,266	GPD		GPD	D	8/19/02
Laboratory Waste	Teaching labs	53,365	GPD		GPD	D	8/19/02
Boiler Blowdown		12,400	GPD		GPD	D	5/12/04
Non Contact Coolir		119,519	GPD		GPD	D	5/12/04
Process Waste	Research animal care	135,800	GPD		GPD	D	5/12/04
	Total Flow Avg =	**487,336**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Lemay
03	Sanitary Or Combined	19G3	543C	Trunk Sewer	River des Peres (County Section)

Description Lateral N from Building 14 W of Euclid A

Sewer Route W across S Kingshighway Blvd into Fores

SAMPLE POINT NO. 003 Ordinance **NPDES Outfall No.**

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		23,570	GPD		GPD	D	8/19/02
Laboratory Waste	R&D	20,180	GPD		GPD	D	5/12/04
Plant & Equipment		1,500	GPD		GPD	D	5/12/04
	Total Flow Avg =	**45,250**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
04	Sanitary Or Combined	19G3	259C	Trunk Sewer	Old Mill Creek

Description 8" lateral E from Building 80 at Taylor an

Sewer Route N to Parkview to Duncan, E to trunk to tre

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave. St. Louis MO. 63110

SAMPLE POINT NO. 006 Ordinance **NPDES Outfall No.**

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment	Waste Storage Facility	19,050	GPD		GPD	D	8/19/02
Sanitary		500	GPD		GPD	D	8/19/02
	Total Flow Avg =	**19,550**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
05	Sanitary Or Combined	20G2	235C	Trunk Sewer	Old Mill Creek

Description Multiple lines from Bldg 63 N to McKinle

Sewer Route E on McKinley to Taylor, S to Clayton, E

SAMPLE POINT NO. 007 Ordinance **NPDES Outfall No.**

Description Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		800	GPD		GPD	D	6/21/05
Plant & Equipment	Janitorial cleaning	50	GPD		GPD	D	6/21/05
Laboratory Waste	R&D	1	GPD		GPD	D	6/21/05
Process Waste	Research animal care	5,575	GPD		GPD	D	6/21/05
	Total Flow Avg =	**6,426**		**Max =**			

PRETREATMENT TYPES

SP	EFF_DATE	TYPE	DESCRIPTION
001	09/02/1998	DC37	pH Adjustment / Neutralization
001	09/02/1998	DC32	Metallic Replacement
003	09/02/1998	DC37	pH Adjustment / Neutralization
003	09/02/1998	DC32	Metallic Replacement
004	09/02/1998	DC37	pH Adjustment / Neutralization
004	09/02/1998	DC32	Metallic Replacement
005	06/16/1999	DC28	Grease Trap
006	06/19/2000	DC32	Metallic Replacement
006	05/08/2001	DC37	pH Adjustment / Neutralization

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
2,4-Dinitrotoluene	SP	2,6-Dinitrotoluene	SP	Naphthalene	KP
Cyanide (Total)	KP	Asbestos (Fibrous)	KP	Silver (Total)	KP
Mercury (Total)	KP	Chromium (Total)	KP	Arsenic (Total)	KP
Phenol	KP	2,4-Dinitrophenol	SP	Toluene	KP
Methylene Chloride	KP	Chloroform	KP	Carbon Tetrachloride	KP
Benzene	KP				

EXTRA STRENGTH SURCHARGE INFORMATION

Report No. PIMS012A 04/09/2007 1:06:31 pm
Data Date & Time: 04/09/2007 1:06:31 pm

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2007
	T237000	pH	Once/year	Grab	06/30/2007
	T247000	Temperature	Once/year	Grab	06/30/2007
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2007
	T309000	Benzene	Once/year	Grab	06/30/2007
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2007
	T332000	Chloroform	Once/year	Grab	06/30/2007
	T371000	Methylene Chloride	Once/year	Grab	06/30/2007
	T375000	Naphthalene	Once/year	Grab	06/30/2007
	T388000	Phenol	Once/year	Grab	06/30/2007
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T397000	Toluene	Once/year	Grab	06/30/2007
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2007

003 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2007
	T237000	pH	Once/year	Grab	06/30/2007
	T247000	Temperature	Once/year	Grab	06/30/2007
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2007
	T309000	Benzene	Once/year	Grab	06/30/2007
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2007
	T332000	Chloroform	Once/year	Grab	06/30/2007
	T371000	Methylene Chloride	Once/year	Grab	06/30/2007
	T375000	Naphthalene	Once/year	Grab	06/30/2007
	T388000	Phenol	Once/year	Grab	06/30/2007
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T397000	Toluene	Once/year	Grab	06/30/2007
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2007

005 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2007
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2007
	T237000	pH	Once/year	Grab	06/30/2007
	T247000	Temperature	Once/year	Grab	06/30/2007
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2007
	T309000	Benzene	Once/year	Grab	06/30/2007
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2007
	T332000	Chloroform	Once/year	Grab	06/30/2007
	T371000	Methylene Chloride	Once/year	Grab	06/30/2007
	T375000	Naphthalene	Once/year	Grab	06/30/2007
	T388000	Phenol	Once/year	Grab	06/30/2007
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T397000	Toluene	Once/year	Grab	06/30/2007
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2007

006 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date

Account No Entered **5112216200**

SPN	PREMISE ADDRESS		CITY	ST	ZIP	
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs		06/30/2007
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs		06/30/2007
	T234000	Oil and Grease (Total)	Once/year	Grab		06/30/2007
	T237000	pH	Once/year	Grab		06/30/2007
	T247000	Temperature	Once/year	Grab		06/30/2007
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs		06/30/2007
	T309000	Benzene	Once/year	Grab		06/30/2007
	T328000	Carbon Tetrachloride	Once/year	Grab		06/30/2007
	T332000	Chloroform	Once/year	Grab		06/30/2007
	T371000	Methylene Chloride	Once/year	Grab		06/30/2007
	T375000	Naphthalene	Once/year	Grab		06/30/2007
	T388000	Phenol	Once/year	Grab		06/30/2007
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs		06/30/2007
	T397000	Toluene	Once/year	Grab		06/30/2007
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab		06/30/2007

007 Project Code: IM= IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2007
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2007
	T237000	pH	Once/year	Grab	06/30/2007
	T247000	Temperature	Once/year	Grab	06/30/2007
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2007
	T309000	Benzene	Once/year	Grab	06/30/2007
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2007
	T332000	Chloroform	Once/year	Grab	06/30/2007
	T371000	Methylene Chloride	Once/year	Grab	06/30/2007
	T375000	Naphthalene	Once/year	Comp-Time 04 Hrs	06/30/2007
	T388000	Phenol	Once/year	Comp-Time 04 Hrs	06/30/2007
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2007
	T397000	Toluene	Once/year	Grab	06/30/2007
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2007

PIMS FACILITY CONTACTS

For Account Number **5112216200** **WASHINGTON UNIVERSITY MEDICAL**

Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type

Contact Type	Contact Name		Contact Title	Phone	Number	Ext.
Billing Address						
Billing Contact	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Office Mailing Address						
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1095	
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Premise Address						
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1995	
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Field Contact 1st Alt	Bruce	Backus	Dir Environmental Health & Safety	OFF	(314)362-6816	

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 9, 2007

Michael Koch
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 South Euclid Ave.
St. Louis, MO 63110

Dear Mr. Koch:

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 Washington University Medical School facility at 660 South Euclid Ave., St. Louis, MO 63110 has been found to be in SNC for the six month period July 1, 2006 through December 31, 2006.

> At sample point 003, the Technical Review Criteria (TRC) limitation for mercury has been exceeded for one of two samples 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 no specific source was identified, but all associated business managers were written noting the discharge restrictions and limitations. Subsequent samples by Washington University Medical School have indicated mercury 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.
Manager of Industrial Pretreatment

pc Jim Goodall

MSD

TCB 02/09/07 SS ✓ cuts ✓ DF ✓ pr ✓

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2006 (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 12/28/2006 C: 12/28/2006		G: 12/18/2006 C: 12/18-12/19/06		G: 12/28/2006 C: 12/28/2006			
Times at Which Samples Were Collected		G: 8:15a.m. C: 8:15a.m.-3:10p.m.		G: 9:25a.m. C: 9:30a.m.-9:30a.m.		G: 8:00a.m. C: 8:00a.m.-3:00p.m.			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	28,250	E	55,500	E	450,000		Gal/Day
Biological Oxygen Demand	****	C	63	C	72	C	50		mg/L
Chemical Oxygen Demand	****	C	124	C	143	C	83		mg/L
Total Suspended Solids	****	C	115	C	77	C	52		mg/L
pH	5.5 - 11.5	G	8.92	G	8.62	G	9.78		pH
Oil & Grease	200	G	<5	G	8	G	<5		mg/L
Temperature	60	G	15	G	12	G	19		Celcius
Silver	0.5	C	<0.05	C	<0.05	C	<0.05		mg/L

RECEIVED
JAN 16 2007
DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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 property 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: Michael J. Koch, CHMM

Title: Environmental Compliance Manager Telephone: (314) 362-6735

Signature: [signature] Date: 1/18/2007

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2006 (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 12/19/2006 C: 12/19-112/20/06		G: 12/28/2006 C: 12/28/2006					
Times at Which Samples Were Collected		G: 9:55a.m. C: 10:00a.m.-10:00a.m		G: 8:10a.m. C: 8:10a.m.-3:05p.m.					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	9,000				Gal/Day
Biological Oxygen Demand	****	C	10	C	42				mg/L
Chemical Oxygen Demand	****	C	25	C	51				mg/L
Total Suspended Solids	****	C	16	C	52				mg/L
pH	5.5 - 11.5	G	9.11	G	9				pH
Oil & Grease	200	G	<5	G	<5				mg/L
Temperature	60	G	9	G	16				Celcius
Silver	0.5	C	<0.05	C	<0.05				mg/L

RECEIVED
JAN 18 2007
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael J. Koch, CHMM

Title: Environmental Compliance Manager Telephone: (314) 362-6735

Signature: [signature] Date: 1/18/2007

JAN 1 2 2007

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

January 8, 2007
Lab No. 06E-1641
Invoice No. 76171
P.O. No. 29399V
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 12/28/06, 8:15 AM
WASTE WATER COMPOSITE, PT. 001, 12/28/06, 8:15 AM – 3:10 PM
WASTE WATER GRAB, PT. 003, 12/18/06, 9:25 AM
WASTE WATER COMPOSITE, PT. 003, 12/18-19/06, 9:30 AM – 9:30 AM
WASTE WATER GRAB, PT. 005, 12/28/06, 8:00 AM
WASTE WATER COMPOSITE, PT. 005, 12/28/06, 8:00 AM – 3:00 PM
WASTE WATER GRAB, PT. 006, 12/19/06, 9:55 AM
WASTE WATER COMPOSITE, PT. 006, 12/19-20/06, 10:00 AM –10:00 AM
WASTE WATER GRAB, PT. 007, 12/28/06, 8:10 AM
WASTE WATER COMPOSITE, PT. 007, 12/28/06, 8:10 AM – 3:05 PM

UNITS: mg/L except as otherwise noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	63	72	50	10	42	10	405.1
Chemical Oxygen Demand (C)	124	143	83	25	51	10	410.4
Total Suspended Solids (C)	115	77	52	16	52	5	160.2
pH (Std. pH Units) (G)	8.92	8.62	9.78	9.11	9.00	-----	150.1
Oil & Grease (G)	< 5	8	< 5	< 5	< 5	5	1664
Temperature, °C (G)	15	12	19	9	16	-----	170.1
Silver (C)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	200.7

MQL: Minimum Quantitative Limit

G - Grab
C - Composite

Identification of tested specimens provided by the client.

RECEIVED
JAN 18 2007
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Steve Root

Steve Root, Manager
Environmental Testing

SR/lrh

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

4CB
01/23/07
SS

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No: 5112 2162

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.9312
H-3	25.0290
I-125	0.0037
Ni-63	0.5900
P-32	0.0689
S-35	0.0161
Zn-65	0.0750
TOTAL ACTIVITY DISCHARGED:	**26.7139**

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

DMK I certify that to the best of my knowledge & belief, all requirements of10 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 1/22/2007

RE: radrpt.doc 2/00

RECEIVED

JAN 23 2007

DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

YCB 01/23/07 SS ✓

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No: 5712 2162

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0507
H-3	4.2856
I-125	0.1080
I-125v	0.0050
P-32	0.1267
P-33	0.0155
S-35	0.1628
TOTAL ACTIVITY DISCHARGED:	**4.7543**

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

DMK

I certify that to the best of my knowledge & belief, all requirements of10 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

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 1/22/2007

RECEIVED

JAN 23 2007

DIVISION OF ENVIRONMENTAL COMPLIANCE

RE: radrpt.doc 2/00

Metropolitan Saint Louis Sewer District
2350 Market Street
Saint Louis, Missouri 63103-2555

WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

Attn: Michael Koch
Hazardous Materials Manager

INDUSTRIAL WASTEWATER DISCHARGE PERMIT NUMBER 5112216200

ANNUAL PERMIT FEE NOTICE

For permits in effect as of 10/01/2006.

Fee will be included in a separate bill from the Metropolitan St. Louis Sewer District.

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2006 through September 30, 2007 issued in accordance with the Metropolitan St. Louis District Ordinance #8660 for the location at **660 S. Euclid Ave.**

Base charge @ $150.00 per permit			$150.00
Volume charge @$0.72 per average daily Ccf	930.99	Ccfs	$670.31
Sample Point Charge @$100.00 per sample point	5	points	$500.00
		Total Fee Due:	**$1,320.31**

For inquiries about the Annual Permit Fee, please call 314-436-8710. For inquiries about payment of the fee, which will appear on your upcoming monthly bill, please call 1-866-281-5737.

THIS IS NOT A BILL

DO NOT PAY NOW

FEE WILL BE INCLUDED IN A SEPARATE BILL

Washington University in St. Louis

/46

Environmental Health & Safety

December 11, 2006

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

RE: NOTICE OF PERMIT VIOLATIONS
Discharge Permit No: 51122162-00
For premise at: 660 South Euclid Avenue

Dear Mr. Grabski,

With regard to the following reporting requirements for our MSD permit, Washington University has certain discharge limitations we must comply with in order to stay in compliance. Per our permit, our regulatory limit for Mercury (Hg) is 0.01mg/l. The third quarter self-monitoring report for 2006 reported 0.043mg/l of Hg at sample point three (SP003).

Corrective action:
Washington University has re-sampled SP003 for Hg and has found the levels of mercury to be within compliance with our discharge limitations. A letter will also be sent out to all the business managers in the effected area noting the restrictions and limitations.

Please do not hesitate to call me if you have any questions. (314) 362-6735

Sincerely,

Michael Koch, CHMM
Environmental Compliance Manager
Washington University School of Medicine

Enclosure

file

RECEIVED
DEC 12 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis, Campus Box 8229
660 South Euclid Avenue, St. Louis, Missouri 63110-1093, (314) 362-6816, Fax (314) 362-1995
esafety@msnotes.wustl.edu, www.ehs.wustl.edu

December 8, 2006
Lab No. 06E-1554
Invoice No. 75349
P.O. No. 29399V
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTEWATER COMPOSITE, SP 003, 12/04-05/06, 10:30 AM – 9:30 AM

Units: mg/L

ANALYTE	SP 003	MQL	METHOD NUMBER	DATE OF ANALYSIS
Mercury	ND	0.0005	245.1	12/07/06

Identification of tested specimen provided by the client.

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

Steve Root, Manager
Environmental Testing

SR/lrh

RECEIVED
DEC 12 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis

Environmental Health & Safety

December 11, 2006

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

RE: NOTICE OF PERMIT VIOLATIONS
Discharge Permit No: 51122162-00
For premise at: 660 South Euclid Avenue

Dear Mr. Grabski,

With regard to the following reporting requirements for our MSD permit, our self-monitoring report should be submitted to the office of compliance on a quarterly basis. Washington University failed to submit the third quarter self-monitoring report by the required date of October 28, 2006.

Corrective action:
Washington University submitted the third quarter self-monitoring report on November 8, 2006. To ensure compliance in the future, a spreadsheet has been made to show yearly reporting requirements. I have also met with all employees who have the potential to submit the reports and reiterated the importance of submitting the reports on time.

Please do not hesitate to call me if you have any questions. (314) 362-6735

Sincerely,

Michael Koch, CHMM
Environmental Compliance Manager
Washington University School of Medicine

file

RECEIVED
DEC 12 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Washington University in St. Louis, Campus Box 8229
660 South Euclid Avenue, St. Louis, Missouri 63110-1093, (314) 362-6816, Fax (314) 362-1995
esafety@msnotes.wustl.edu, www.ehs.wustl.edu

#S1122162-00

FG 12/11/6

Washington University in St. Louis

Environmental Health & Safety

Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110-1093
Phone: (314) 362-6816
Fax: (314) 362-1995
www.ehs.wustl.edu

EH&S Fax Cover Sheet

Date: 12/11/2006

To: Fabian Grabski

Fax #: 314-436-8753

From: Michael Koch 314-362-6735

Pages (incl. cover sheet): 2

Comments: Fabian,

Per our phone conversation, here are the results of the re-testing for SP003. A follow up letter will be in the mail today.

Please call me with questions,

Thanks,
Michael Koch

December 8, 2006
Lab No. 06E-1554
Invoice No. 75349
P.O. No. 29399V
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTEWATER COMPOSITE, SP 003, 12/04-05/06, 10:30 AM – 9:30 AM

Units: mg/L

ANALYTE	SP 003	MQL	METHOD NUMBER	DATE OF ANALYSIS
Mercury	ND	0.0005	245.1	12/07/06

Identification of tested specimen provided by the client.

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

Steve Root, Manager
Environmental Testing

SR/lrh

Doug Mendoza

From: Fabian Grabski
Sent: Thursday, November 30, 2006 11:20 AM
To: Doug Mendoza
Subject: Washington University Medical School (51122162-00) SNC call; INDUSTRY FILE

51122162-00
Hg; DA; TRC-Yes
SP 003
Hg is not in their permit. They typically provide additional metal data than that required in their permit. My 11/14/06 requests a resampling event by 12/11/06. With a good resample, they will need 2 additional samples prior to 1/1/07 to avoid SNC. On 11/30/06, I talked to Don Krunye from the above premise. I informed him they will need 3 total good resamples to avoid SNC. He stated they will collect the samples prior to 1/1/07.

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 14, 2006

Don Kruyne
Senior Environmental Compliance Prof.
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 South Euclid Avenue
St. Louis, MO 63110

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 51122162-00
For premise at: 660 South Euclid Avenue

Dear Mr. Kruyne:

We have reviewed the third quarter 2006 self-monitoring report you recently submitted to the District 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
09-14-06	0900	003	24-hr comp	Mercury (T)	0.01 mg/l	DA	0.043 mg/l**

(T) = Total substance mg/l = milligrams per liter DA = Daily Average

REQUIRED ACTION/RESPONSE:

Pursuant to 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. Resampling must be performed at sampling point 003 for Mercury.

Submit a report of corrective actions, which you have initiated, to ensure compliance with the permitted discharge limitation for Mercury.

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 11, 2006.

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: Industry file
Douglas Mendoza

T/O
FG
11/14/6

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: ☐ (Jan-Mar) ☐ (Apr-June) ☑ (July-Sept) ☐ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005		
Dates on Which Samples Were Collected		G: 9/13/2006 C: 9-12-13/06		G: 9/14/2006 C: 9/13-14/06		G: 9/15/2006 C: 9/14-15/06		
Times at Which Samples Were Collected		G: 10:15 a.m. C: 10:00 a.m.		G: 9:15 a.m. C: 9:00 a.m.		G: 9:30 a.m. C: 9:15 a.m.		
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow		E	27,500	E	54,000	E	454,000	Gal/Day
Biological Oxygen Demand		C	13	C	56	C	283	mg/L
Chemical Oxygen Demand		C	68	C	100	C	339	mg/L
Total Suspended Solids		C	82	C	201	C	250	mg/L
pH		G	7.41	G	8.62	G	7.44	pH
Oil & Grease		G	ND	G	ND	G	6	mg/L
Temperature		G	26	G	29	G	25	Celcius
Silver		C	ND	C	0.08	C	ND	mg/L
Arsenic		C	ND	C	ND	C	ND	mg/L
Chromium		C	ND	C	0.08	C	ND	mg/L
Mercury		C	ND	C	[redacted]	C	ND	mg/L
Total Cyanide N/A FG		~~G~~	~~ND~~	~~G~~	~~ND~~	~~G~~	~~ND~~	~~mg/L~~
Acrolein			ND		ND		ND	ug/L
Benzene			ND		ND		ND	ug/L
Carbon Tetrachloride			ND		ND		ND	ug/L
Chloroform			ND		5.4		ND	ug/L
Methylene Chloride			ND		ND		34.4	ug/L
Toluene			ND		ND		ND	ug/L
2,4 Dinitrophenol			<0.021		<0.021		<0.104	mg/L
Benzidine			<0.041		<0.041		<0.208	mg/L
Phenol			<00.5		<00.5		<0.026	mg/L
T/O → FG			<0.021		<0.021		<0.1644	

RECEIVED
NOV 13 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Don Kruyne

Title: Sr Env. Compliance Prof. Telephone: 314 747 1533

Signature: _____ Date: 11-8-06

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: ☐ (Jan-Mar) ☐ (Apr-June) ☑ (July-Sept) ☐ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007				
Dates on Which Samples Were Collected		G: 9/12/2006 C: 9/11-12/06		G: 9/13/2006 C: 9/12-13/06				
Times at Which Samples Were Collected		G: 9:45 a.m. C: 9:45 a.m.		G: 9:15 a.m. C: 9:00 a.m.				
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow		E	23,000	E	7,500			Gal/Day
Biological Oxygen Demand		C	ND	C	79			mg/L
Chemical Oxygen Demand		C	ND	C	396			mg/L
Total Suspended Solids		C	9	C	151			mg/L
pH		G	8.27	G	8.39			pH
Oil & Grease		G	ND	G	ND			mg/L
Temperature		G	25	G	30			Celcius
Silver		C	ND	C	ND			mg/L
Arsenic		C	ND	C	ND			mg/L
Chromium		C	ND	C	ND			mg/L
Mercury		C	ND	C	ND			mg/L
Total Cyanide		G	ND	G	ND			mg/L
Acrolein			ND		ND			ug/L
Benzene			ND		ND			ug/L
Carbon Tetrachloride			ND		ND			ug/L
Chloroform			5.6		6.8			ug/L
Methylene Chloride			ND		ND			ug/L
Toluene			ND		ND			ug/L
2,4 Dinitrophenol			<0.021		<0.020			mg/L
Benzidine			<0.041		<0.040			mg/L
Phenol			<0.005		<0.005			mg/L
TTO →			<0.021		<0.02			

You must complete and sign the certification statements on the reverse side.

RECEIVED
NOV 13 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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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:

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B. DISCHARGE MONITORING REPORT CERTIFICATION

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Print or type name of signing official: Don Kruyne

Title: Sr. Env. Compl. Prof. Telephone: 314 747-1533

Signature: _____ Date: 11-8-06

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

October 24, 2006
Lab No. 05E-1199
P.O. No 8933V
Invoice No. 74000
Page 1 of 3

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 9/13/06, 10:15 A.M.
WASTE WATER COMPOSITE, PT. 001, 9/12-13/06, 10:00 A.M.
WASTE WATER GRAB, PT. 003, 9/14/06, 9:15 A.M.
WASTEWATER COMPOSITE, PT. 003, 9/13-14/06, 9:00 A.M.
WASTE WATER GRAB, PT. 005, 9/15/06, 9:30 A.M.
WASTEWATER COMPOSITE, PT. 005, 9/14-15/06, 9:15 A.M.
WASTE WATER GRAB, PT. 006, 9/12/06, 9:45 A.M.
WASTEWATER COMPOSITE, PT. 006, 9/11-12/06, 9:45 A.M.
WASTE WATER GRAB, PT. 007, 9/13/06, 9:15A.M.
WASTEWATER COMPOSITE, PT. 007, 9/12-13/06, 9:00 A.M.

RESULTS: mg/L Except As Noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	13	56	283	ND	79	10	405.1
Chemical Oxygen Demand (C)	68	100	339	ND	396	10	410.4
Total Suspended Solids (C)	82	201	250	9	151	5	160.2
pH (Std. pH Units) (G)	7.41	8.62	7.44	8.27	8.39	---	150.1
Temperature, °C (G)	26	29	25	25	30	5	170.1
Oil & Grease (G)	ND	ND	6	ND	ND	----	1664
Silver (C)	ND	0.08	ND	ND	ND	0.05	200.7
Arsenic (C)	ND	ND	ND	ND	ND	0.05	200.7
Chromium (C)	ND	0.08	ND	ND	ND	0.05	200.7
Mercury (C)	ND	0.043	ND	ND	ND	0.0005	245.1
Total Cyanide (G) N/A	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~0.02~~	~~335.2~~

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

(C)-Composite
(G)-Grab

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

RECEIVED
NOV 13 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

October 24, 2006
Lab No. 05E-1199
P.O. No 8933V
Invoice No. 74000
Page 2 of 3

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTEWATER GRAB, PT. 001, 9/13/06, 10:15 A.M.
WASTEWATER COMPOSITE, PT. 001, 9/12-13/06, 10:00 A.M.
WASTE WATER GRAB, PT. 003, 9/14/06, 9:15 A.M.
WASTEWATER COMPOSITE, PT. 003, 9/13-14/06, 9:00 A.M.
WASTE WATER GRAB, PT. 005, 9/15/06, 9:30 A.M.
WASTEWATER COMPOSITE, PT. 005, 9/14-15/06, 9:15 A.M.
WASTE WATER GRAB, PT. 006, 9/12/06, 9:45 A.M.
WASTEWATER COMPOSITE, PT. 006, 9/11-12/06, 9:45 A.M.
WASTE WATER GRAB, PT. 007, 9/13/06, 9:15A.M.
WASTEWATER COMPOSITE, PT. 007, 9/12-13/06, 9:00 A.M.

RESULTS: µg/L **VOLATILE ORGANIC COMPOUNDS**

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Arcolein	ND	ND	ND	ND	ND	100	EPA 600/624
Benzene	ND	ND	ND	ND	ND	2.0	EPA 600/624
Carbon Tetrachloride	ND	ND	ND	ND	ND	5.0	EPA 600/624
Chloroform	ND	5.4	ND	5.6	6.8	5.0	EPA 600/624
Methylene Chloride	ND	ND	34.4	ND	ND	5.0	EPA 600/624
Toluene	ND	ND	ND	ND	ND	5.0	EPA 600/624

RESULTS: mg/L **SEMI-VOLATILE ORGANIC COMPOUNDS**

ANALYTE	001	003	005	006	007	METHOD NUMBER
2,4 Dinitrophenol	< 0.021	< 0.021	< 0.104	< 0.021	< 0.020	EPA 600/625
Benzidine	< 0.041	< 0.041	< 0.208	< 0.041	< 0.040	EPA 600/625
Phenol	< 0.005	< 0.005	< 0.026	< 0.005	< 0.005	EPA 600/625

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

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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 7, 2006

Michael Koch
Hazardous Materials Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 South Euclid Avenue
St. Louis, MO 63110

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 51122162-00
For premise at: 660 South Euclid Avenue

Dear Mr. Koch:

Under the terms and conditions of the above referenced permit, you are required to self-monitor the discharge at the identified sampling points. Monitoring is to be performed for the parameters listed and at the frequency specified in the permit. The results are to be reported quarterly. Your report for third quarter was due by October 28, 2006.

VIOLATIONS OF PERMIT TERMS/CONDITIONS:

The third quarter self-monitoring report has not been received by the District. This is in violation of permit standard condition I.A.1 which requires sampling and analyses for all regulated substances at the frequencies specified at your sampling points. Since no report was submitted, you did not satisfy the third quarter's reporting requirements.

The reporting requirements of your permit also includes completing certain certifications for each quarter. Even if sampling and analytical requirements can not be met, the report should still be submitted with the applicable certifications completed. The violation will then be recorded as an incomplete report rather than "no report".

REQUIRED ACTION/RESPONSE:

Submit the third quarter 2006 report, any available third quarter self-monitoring data, and a report of corrective actions, which you have initiated, to ensure that the reporting requirements will be met in future reporting quarters.

Failure to perform the monitoring and reporting requirements of your permit places your company in Significant Noncompliance (SNC), as defined in District ordinance 8472 and federal pretreatment regulations 40 CFR 403. SNC companies are subject to enforcement action by the District. At a minimum, the District is required to list SNC companies in an annual newspaper publication.

Please submit your third quarter report and corrective action response by November 17, 2006.

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
Industry file

1/6

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION #5112216J-00

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	3.6745
Cu-64	0.1050
H-3	101.8671
I-125	0.0142
Ni-63	0.2680
P-32	0.3137
S-35	0.1402
Zn-65	0.0498
TOTAL ACTIVITY DISCHARGED:	**106.4325**

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

DMK I certify that to the best of my knowledge & belief, all requirements of10 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 10/20/2006

RExradmt.doc 2/00

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OCT 24 2006

DIVISION OF ENVIRONMENTAL COMPLIANCE

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0811
H-3	5.7671
I-125	0.0782
P-32	0.1969
P-33	0.0200
S-35	0.2559
TOTAL ACTIVITY DISCHARGED:	**6.3992**

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

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 10/20/2006

RE: radrpt.doc 2/00

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OCT 24 2006

DIVISION OF
ENVIRONMENTAL COMPLIANCE

1/6

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No: # 5112216200

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.2045
Ca-45	0.0010
H-3	22.2810
I-125	0.0140
P-32	0.3388
S-35	0.0323
TOTAL ACTIVITY DISCHARGED:	**22.8716**

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

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 07/20/2006

RE: radrpt.doc 2/00

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JUL 26 2006

DIVISION OF ENVIRONMENTAL COMPLIANCE

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0510
H-3	7.0044
I-125	0.1179
P-32	0.3173
P-33	0.1150
S-35	0.1861
TOTAL ACTIVITY DISCHARGED:	**7.7916**

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

DMK

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.

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III

Telephone: (314) 362-2996

Signature:

Date: 07/20/2006

RE: radrpt.doc 2/00

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JUL 26 2006

DIVISION OF
ENVIRONMENTAL COMPLIANCE

√FG 7/11/6

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2006 (Jan-Mar) √ (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005		
Dates on Which Samples Were Collected		G: 6/14/2006 C: 6/13-6/14/06		G: 6/15/2006 C: 6/14-6/15/06		G: 6/13/2006 C: 6/12-6/13/06		
Times at Which Samples Were Collected		G: 10:15a.m. C: 9:00 a.m. - 9:00a.m.		G: 10:30 a.m. C: 11:15a.m.-11:15a.m		G: 9:30 a.m. C: 9:30 a.m. - 9:30a.m.		
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow	***	E	28,250	E	55,500	E	450,000	Gal/Day
Biological Oxygen Demand	****	C	17	C	18	C	22	mg/L
Chemical Oxygen Demand	****	C	51	C	56	C	129	mg/L
Total Suspended Solids	****	C	33	C	34	C	64	mg/L
pH	5.5 - 11.5	G	7.62	G	7.72	G	7.21	pH
Oil & Grease	200	G	<5	G	<5	G	6	mg/L
Temperature	60	G	25	G	28	G	28	Celcius
Silver	0.5	C	<0.05	C	0.18	C	<0.05	mg/L

You must complete and sign the certification statements on the reverse side.

RECEIVED
JUL 11 2006
DIVISION OF ENVIRONMENTAL COMPLIANCE

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael T. Koch, CHMM

Title: Hazardous Materials manager Telephone: (314) 362-6735

Signature: [signature] Date: 7/6/2006

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
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Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 6/13/2006 C: 6/12-6/13/06		G: 6/14/2006 C: 6/13-6/14/06					
Times at Which Samples Were Collected		G: 10:00 a.m. C: 10:15 a.m.-10:15 a.m.		G: 10:00 a.m. C: 9:45 a.m.- 9:45a.m.					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	9,000				Gal/Day
Biological Oxygen Demand	****	C	<10	C	36				mg/L
Chemical Oxygen Demand	****	C	37	C	134				mg/L
Total Suspended Solids	****	C	25	C	46				mg/L
pH	5.5 - 11.5	G	8.93	G	9.17				pH
Oil & Grease	200	G	<5	G	<5				mg/L
Temperature	60	G	30	G	30				Celcius
Silver	0.5	C	<0.05	C	<0.05				mg/L

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

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☐ 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: Michael J. Koch, CHMM

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 7/6/2006

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 51122162-00
Premise Address: 660 S. Euclid Zip Code: 63110-
Last Inspection Date: 6/21/05
MSD Categories: SIU ☒ CIU ☐ Surcharge ☐ Potential Toxic Waste ☒
Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐
Company Representative: Michael Koch
Title: Hazardous Materials Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 4/24/06 Time of Inspection: From 12:10 PM To 01:40 PM

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00, 51122176-01,90006372-01
   B. WERE ALL ACCT NUMBERS VERIFIED AS CORRECT & ACTIVE ON BILLING SYSTEM? Yes☒ No☐

2. PROCESS & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont		Yes	daily	001,003,005, 007
Housing & care of research mice	Cont		Yes	daily	005,007
Food preparation	Batch		Yes	daily	005
Cleanup at hazardous materials storage area(Bldg 80)	Batch		Yes	daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (describe):

	Sample pt.
pH neutralization for labs, silver recovery units	001,003,006
Kitchen grease trap	005

4. HAS COMPANY BEGUN DISCHARGING ANY NEW POLLUTANTS SINCE THE LAST INSP? Yes☐ No☒
   A. List pollutants & process: ____
   B. Will MSD STP exceed existing NPDES discharge limit(s)? Yes☐ No☐
   C. Will MSD STP's discharge exceed 0.1 mg/l for any new pollutant? Yes☐ No☐
   (MSD must notify MDNR if B or C is yes and discharge will continue.)
   D. Comments: ____

5. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes☐ No☒
   A. If yes, list reg. & describe (including any discharge):
   ____

6. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes☐ No☒
   A. At which points? ____
   B. Current applied factor: ____ Is it correct? Yes☐ No☐
   C. If no, what is the correct factor & explain change? ____

7. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes☐ No☒
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes☐ No☐
   C. If yes, explain: _____

8. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes☒ No☐
   A. Describe operations & disposal: Materials are collected from buildings and brought to Bldg 80 for disposal. Solids are hauled, liquids are decayed & sewered.
   B. Does company have MSD authorization to disposal to sewer? Yes☒ No☐
   C. Date of Authorization: 7/8/94 Annual amt approved: 320 mCi
   D. Has company exceeded the approved quantity? Yes☐ No☒
   E. If yes, explain: _____

9. DOES WATER USE APPEAR EXCESSIVE? Yes☐ No☒
   A. Explain how verified & needed changes: High volume usage from water records is consistent with the number of people on site and the size of the facility.

10. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes☐ No☒
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

11. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

12. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes☐ No☒
   A. Upsets? ☐ Bypasses of pretreatment facilities? ☐
   Spills? ☐ Slug discharges? ☐ Other? _____
   B. Explain any marked: _____

13. ARE ANY SOLVENTS USED? Yes☒ No☐
   A. If yes:

List solvents	Used for?	How disposed?	413/433/469 Process?
Xylene, toluene, methanol	lab reagents	hauled off	Yes☐ No☒
Mineral spirits	parts washer	hauled off	Yes☐ No☒
			Yes☐ No☐
			Yes☐ No☐

14. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒

A. If yes, what needs to be done? ____

B. If no, how are they controlled? Materials in drums have secondary containment. Waste management training is given for handling of chemicals in quantity.

15. DOES COMPANY HAVE ANY SPILL, SLUG OR SOLVENT MANAGEMENT PLANS (SMP)? Yes☒ No☐

A. If yes:

Title	SMP? 413/433/469		Last Update		Copy in File? (SMP only)	Update needed? Explain if yes
Contingency Plan	N/A		2/4/04		Yes	No
	N/A				N/A	N/A
	N/A				N/A	N/A

B. Are any Plans needed in addition to those listed in Part A? (write company and request) Yes☐ No☒

16. HAZARDOUS WASTES:

A. Was the company informed/reminded that solid & hazardous waste management regulations (RCRA) exist and may potentially apply to industrial users? Yes☒ No☐

B. Is there any discharge to the sewers of hazardous waste which has not been previously reported to MSD (under 40 CFR 403.12(p))? Yes☐ No☒

C. If yes to B, list haz wastes: ____

D. Was the company provided with a "Public Notice/Haz. Waste Discharge Notification" form for the above regulations (regardless of whether there are any discharges)? Yes☒ No☐

F. Comments: ____

17. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes☒ No☐

A. Are MSD contacts listed? Yes☒ No☐

B. If no to either, describe how handled: ____

18. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐

A. If yes, requirement is contained in permit ☒ or other document ☐.

B. If other document, date & description: ____

C. How frequently is sampling required? Quarterly

D. How frequently are reports required? Quarterly

E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐

F. If no, explain: ____

19. DOES COMPANY SELF-MONITOR ITS WASTEWATER DISCHARGE? Yes☒ No☐

A. Is the self-monitoring required by MSD? Yes☒ No☐

B. Are representative grab/comp samples collected? Yes☒ No☐

C. Does sample collection time period match company's production shifts (is it representative)? Yes☒ No☐

D. Are EPA-approved 40 CFR 136 wastewater test methods used? Yes☒ No☐

E. If no to B, C or D, explain needed changes: ____

20. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒

A. If yes, type and date: ____

B. Have the reports & actions been on-time & complete? Yes☐ No☐

C. If no, explain: ____

21. DOES MSD CATEGORY NEED TO BE REVISED? Yes☐ No☒

A. Indicate correct categories:

SIU ☐ CIU ☐ Surcharge ☐ Potential Toxic Waste ☐

Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐

B. Explain changes: ____

22. SAMPLE POINTS

						DJ(y/n)
SP #	001	Fed.Reg.	N/A	Components:	Sanitary + NCCW + research teaching labs + p&e washdown + softener regeneration	No
SP #	003	Fed.Reg.	N/A	Components:	Sanitary + research teaching labs + p&e washdown	No
SP #	005	Fed.Reg.	N/A	Components:	Sanitary + NCCW + kitchen waste + animal care + teaching labs + p&e washdown + softener regen + boiler blowdown	No
SP #	006	Fed.Reg.	N/A	Components:	Sanitary + cleanup at waste storage facility	No
SP #	007	Fed.Reg.	N/A	Components:	Sanitary + teaching labs + animal care + p&e washdown	No

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: 7/6/05
A. Is the map correct and accurate in all its details? Yes☒ No☐
B. If no, what changes are needed? _____

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.
Washington University is beginning to purchase additional properties adjacent to the school. As these properties become part of the School of Medicine activities they will be added to the comlex.

Naphthalene is a chemical identified by the company as being used for bio-medical research teaching.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

INDUSTRIAL USER CLASSIFICATIONS

01/12/1999	SIU
06/09/1998	PTW

WUNNENBERG INFO.

Base Map 19G3
Wun: St. Louis City & Co.
Grid: J 20 Page 26

SIU CRITERIA

PR25 Process Disch => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO. 63110

Billing Address
660 S. Euclid Ave.
St Louis, MO. 63110

INSPECTION INFORMATION

Next Due	Insp Rslt	
04/24/2006	RIN	James Goodall

PERMIT INFORMATION

Issue Date: 01/01/2003
Expire Date: 12/31/2007
Extended Date: 07/31/2005
Writer Fabian Grabsk
Issue Date: 01/01/2003
Expire Date: 12/31/2007
Extended Date:
Writer Fabian Grabsk

IUQ INFORMATION

IUQ Recvd Date: 08/19/2002
Reviewer: Fabian Grabski

CONTACTS

BILL	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
FLD1	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1995 Ext.
	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
FLD2	Bruce Backus	Dir Environmental Health & Safety	OFF	(314) 362-6816 Ext.
OFF1	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1095 Ext.
	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.

OPERATIONAL INFORMATION

Work Days: 7

				S	M	T	W	T	F	S
1	6,650	08:00AM	8.0	Y	Y	Y	Y	Y	Y	Y
2	240	04:30PM	8.0	Y	Y	Y	Y	Y	Y	Y
3	255	11:30PM	8.0	Y	Y	Y	Y	Y	Y	Y

Total Emp: 7,145 **Hrs:** 24.0

OTHER AGENCIES INFORMATION

01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/04/1997	MDNR - Hazardous Waste Program	01591
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857
09/28/2005	MSD - Billing Account Number	00246495
09/28/2005	MSD - Billing Account Number	00246498
09/28/2005	MSD - Billing Account Number	00246496
09/28/2005	MSD - Billing Account Number	00246499
09/28/2005	MSD - Billing Account Number	00246504
09/28/2005	MSD - Billing Account Number	00377308

NON-SEWERED WASTE

On-Site Storage **On-Site Disposal** **Off-Site Disposal**

COMMENTS

RAW MATERIALS

EFF DATE	MATERIAL_DESCRIPTION	QUANTITY	UNIT
05/07/2004	Laboratory chemicals & reagents		

SIC INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

PRODUCTS

EFF	DESCRIPTION	UNIT	AVG_PROD	MAX_PROD
05/07/2004	Medical school			
05/07/2004	Research institution			

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SEWER ACCOUNTS

Sewer Accounts
5112216200
5112216100
5112216700
5112216800
5112217601
9000637201

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Start Date = 10/01/2004 **End Date =** 05/15/2006 **Wdays** **Cdays**

Acct. No.			Consumption					Discharge	
5112216100			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216100	08/03/2004	11/03/2004	790	790	A	93	93	93	
5112216100	11/04/2004	02/01/2005	200	990		90	90	183	
5112216100	02/02/2005	05/05/2005	250	1,240		93	93	276	
5112216100	05/06/2005	08/02/2005	1,060	2,300		89	89	365	
RF 1.00	**Acct. Total**		2,300	1,720,520		365	365	4,714	4,714
5112216200			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216200	08/04/2004	11/02/2004	37,928	37,928	A	91	91	91	
5112216200	11/03/2004	02/03/2005	31,143	69,071		93	93	184	
5112216200	02/04/2005	05/12/2005	29,613	98,684		98	98	282	
5112216200	05/13/2005	08/17/2005	29,022	127,706		97	97	379	
RF 0.91	**Acct. Total**		127,706	95,530,729		379	379	229,375	229,375
5112216700			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216700	08/06/2004	11/04/2004	23,590	23,590	A	91	91	91	
5112216700	11/05/2004	02/16/2005	43,797	67,387		104	104	195	
5112216700	02/17/2005	05/11/2005	29,343	96,730		84	84	279	
5112216700	05/12/2005	08/15/2005	50,440	147,170		96	96	375	
RF 0.73	**Acct. Total**		147,170	#########		375	375	214,310	214,310
5112216800			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112216800	08/03/2004	11/02/2004	3,700	3,700	A	92	92	92	
5112216800	11/03/2004	02/01/2005	2,400	6,100		91	91	183	
5112216800	02/02/2005	05/04/2005	1,800	7,900		92	92	275	
5112216800	05/05/2005	08/02/2005	3,600	11,500		90	90	365	
RF 1.00	**Acct. Total**		11,500	8,602,598		365	365	23,569	23,569
5112217601			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
5112217601	08/03/2004	11/02/2004	710	710	A	92	92	92	
5112217601	11/03/2004	02/01/2005	140	850		91	91	183	
5112217601	02/02/2005	08/02/2005	11	861		182	182	365	
RF 1.00	**Acct. Total**		861	644,073		365	365	1,765	1,765
9000637201			**CCF's**	**Gallons**				**Gal/ Wday**	**Gal/ Cday**
9000637201	08/10/2004	11/04/2004	17,902	17,902	A	87	87	87	
9000637201	11/05/2004	02/01/2005	15,699	33,601		89	89	176	
9000637201	02/02/2005	05/03/2005	11,865	45,466		91	91	267	
9000637201	05/04/2005	08/02/2005	62,830	108,296		91	91	358	
RF 0.58	**Acct. Total**		108,296	81,011,039		358	358	131,247	131,247
	Facility Total		397,833						

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
01	Sanitary Or Combined	20G2	232C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings located S of McKin

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 001 Ordinance **NPDES Outfall No.**

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		650	GPD		GPD	D	8/19/02
Sanitary		13,650	GPD		GPD	D	8/19/02
Regeneration/Rejec	Water softner regen waste	6,045	GPD		GPD	D	8/19/02
Non Contact Coolir		3,710	GPD		GPD	D	5/12/04
Laboratory Waste	R&D	2,200	GPD		GPD	D	5/12/04
	Total Flow Avg =	**26,255**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
02	Sanitary Or Combined	19G3	229C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings N&S of Scott Av &

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 005 Ordinance **NPDES Outfall No.**

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		4,938	GPD		GPD	D	8/19/02
Kitchen Waste		4,778	GPD		GPD	D	8/19/02
Regeneration/Rejec		36,270	GPD		GPD	D	8/19/02
Sanitary		120,266	GPD		GPD	D	8/19/02
Laboratory Waste	Teaching labs	53,365	GPD		GPD	D	8/19/02
Boiler Blowdown		12,400	GPD		GPD	D	5/12/04
Non Contact Coolir		119,519	GPD		GPD	D	5/12/04
Process Waste	Research animal care	135,800	GPD		GPD	D	5/12/04
	Total Flow Avg =	**487,336**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Lemay
03	Sanitary Or Combined	19G3	543C	Trunk Sewer	River des Peres (County Section)

Description Lateral N from Building 14 W of Euclid A

Sewer Route W across S Kingshighway Blvd into Fores

SAMPLE POINT NO. 003 Ordinance **NPDES Outfall No.**

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		23,570	GPD		GPD	D	8/19/02
Laboratory Waste	R&D	20,180	GPD		GPD	D	5/12/04
Plant & Equipment		1,500	GPD		GPD	D	5/12/04
	Total Flow Avg =	**45,250**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
04	Sanitary Or Combined	19G3	259C	Trunk Sewer	Old Mill Creek

Description 8" lateral E from Building 80 at Taylor an

Sewer Route N to Parkview to Duncan, E to trunk to tre

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SAMPLE POINT NO. 006 Ordinance **NPDES Outfall No.**

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment	Waste Storage Facility	19,050	GPD		GPD	D	8/19/02
Sanitary		500	GPD		GPD	D	8/19/02
	Total Flow Avg =	**19,550**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
05	Sanitary Or Combined	20G2	235C	Trunk Sewer	Old Mill Creek

Description Multiple lines from Bldg 63 N to McKinle

Sewer Route E on McKinley to Taylor, S to Clayton, E

SAMPLE POINT NO. 007 Ordinance **NPDES Outfall No.**

Description Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		800	GPD		GPD	D	6/21/05
Plant & Equipment	Janitorial cleaning	50	GPD		GPD	D	6/21/05
Laboratory Waste	R&D	1	GPD		GPD	D	6/21/05
Process Waste	Research animal care	5,575	GPD		GPD	D	6/21/05
	Total Flow Avg =	**6,426**		**Max =**			

PRETREATMENT TYPES

SP	EFF DATE	TYPE	DESCRIPTION
001	09/02/1998	DC37	pH Adjustment / Neutralization
001	09/02/1998	DC32	Metallic Replacement
002	09/02/1998	DC37	pH Adjustment / Neutralization
002	09/02/1998	DC32	Metallic Replacement
002	09/02/1998	DC28	Grease Trap
003	09/02/1998	DC37	pH Adjustment / Neutralization
003	09/02/1998	DC32	Metallic Replacement
004	09/02/1998	DC37	pH Adjustment / Neutralization
004	09/02/1998	DC32	Metallic Replacement
005	06/16/1995	DC28	Grease Trap
006	06/19/2000	DC32	Metallic Replacement
006	05/08/2001	DC37	pH Adjustment / Neutralization

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
2,4-Dinitrotoluene	SP	2,6-Dinitrotoluene	SP	Naphthalene	KP
Cyanide (Total)	KP	Asbestos (Fibrous)	KP	Silver (Total)	KP
Mercury (Total)	KP	Chromium (Total)	KP	Arsenic (Total)	KP
Phenol	KP	2,4-Dinitrophenol	SP	Toluene	KP
Methylene Chloride	KP	Chloroform	KP	Carbon Tetrachloride	KP
Benzene	KP				

EXTRA STRENGTH SURCHARGE INFORMATION

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Data Date & Time: 05/15/2006 9:33:37 am

PIMS FACILITY CONTACTS

For Account Number **5112216200** **WASHINGTON UNIVERSITY MEDICAL**

Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type / Contact Type	Contact Name		Contact Title	Phone	Number	Ext.
Billing Address						
Billing Contact	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Office Mailing Address						
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1095	
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Premise Address						
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1995	
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Field Contact 1st Alt	Bruce	Backus	Dir Environmental Health & Safety	OFF	(314)362-6816	

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Grab	06/30/2006
	T388000	Phenol	Once/year	Grab	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

003 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Grab	06/30/2006
	T388000	Phenol	Once/year	Grab	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

005 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Grab	06/30/2006
	T388000	Phenol	Once/year	Grab	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

006 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date

Account No Entered **5112216200**

SPN	PREMISE ADDRESS		CITY	ST	ZIP	
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs		06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs		06/30/2006
	T234000	Oil and Grease (Total)	Once/year	Grab		06/30/2006
	T237000	pH	Once/year	Grab		06/30/2006
	T247000	Temperature	Once/year	Grab		06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs		06/30/2006
	T309000	Benzene	Once/year	Grab		06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab		06/30/2006
	T332000	Chloroform	Once/year	Grab		06/30/2006
	T371000	Methylene Chloride	Once/year	Grab		06/30/2006
	T375000	Naphthalene	Once/year	Grab		06/30/2006
	T388000	Phenol	Once/year	Grab		06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs		06/30/2006
	T397000	Toluene	Once/year	Grab		06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab		06/30/2006

007 Project Code: IM= IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Comp-Time 04 Hrs	06/30/2006
	T388000	Phenol	Once/year	Comp-Time 04 Hrs	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS
WASHINGTON UNIVERSITY MEDICAL SCHOOL

Account No Entered **5112216200**

SPN	PREMISE ADDRESS	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Grab	06/30/2006
	T388000	Phenol	Once/year	Grab	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

003 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Grab	06/30/2006
	T388000	Phenol	Once/year	Grab	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

005 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Grab	06/30/2006
	T388000	Phenol	Once/year	Grab	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

006 Project Code: IM = IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date

Account No Entered **5112216200**

SPN	PREMISE ADDRESS		CITY	ST	ZIP
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Grab	06/30/2006
	T388000	Phenol	Once/year	Grab	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

007 Project Code: IM= IPD - Company - MSD

Pollutant Group	Poll Code	Pollutant Description	Frequency	Sample Type	End Date
	T208000	Biochemical Oxygen Demand (5 Day)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs	06/30/2006
	T234000	Oil and Grease (Total)	Once/year	Grab	06/30/2006
	T237000	pH	Once/year	Grab	06/30/2006
	T247000	Temperature	Once/year	Grab	06/30/2006
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs	06/30/2006
	T309000	Benzene	Once/year	Grab	06/30/2006
	T328000	Carbon Tetrachloride	Once/year	Grab	06/30/2006
	T332000	Chloroform	Once/year	Grab	06/30/2006
	T371000	Methylene Chloride	Once/year	Grab	06/30/2006
	T375000	Naphthalene	Once/year	Comp-Time 04 Hrs	06/30/2006
	T388000	Phenol	Once/year	Comp-Time 04 Hrs	06/30/2006
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	06/30/2006
	T397000	Toluene	Once/year	Grab	06/30/2006
LGRIV (Starts - 08/14/199	T999000	Total Toxic Organics	Once/year	Grab	06/30/2006

#S1122162-00

√FG

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	2.2894
H-3	95.6335
I-125	0.0010
P-32	0.2430
S-35	0.1192
Zn-65	0.0500
TOTAL ACTIVITY DISCHARGED:	**98.3361**

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

[ ] DNK 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 04/20/2006

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APR 24 2006

DIVISION OF ENVIRONMENTAL COMPLIANCE

RE: radrpt.doc 2/00

#51122162-00 1FG

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.1214
H-3	6.5011
I-125	0.1751
I-125v	0.0100
P-32	0.3735
P-33	0.0200
S-35	0.0833
TOTAL ACTIVITY DISCHARGED:	**7.2843**

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 04/21/2006

RE: radrpt.doc 2/00

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DIVISION OF ENVIRONMENTAL COMPLIANCE

MSD 043743

FG 4/3/06

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: 2006 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005		
Dates on Which Samples Were Collected		G: 3/14/2006 C: 3/13-14/06		G: 3/9/2006 C: 3/8-9/06		G: 3/8/2006 C: 3/7-8/06		
Times at Which Samples Were Collected		G: 9:45a.m. C: 9:30 a.m.- 9:30a.m.		G: 9:00 a.m. C: 9:15 a.m.- 9:15a.m.		G: 9:15a.m. C: 9:00 a.m.- 9:00a.m.		
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow	***	E	28,250	E	55,500	E	450,000	Gal/Day
Biological Oxygen Demand	****	C	18	C	211	C	66	mg/L
Chemical Oxygen Demand	****	C	44	C	416	C	166	mg/L
Total Suspended Solids	****	C	27	C	327	C	16	mg/L
pH	5.5 - 11.5	G	7.6	G	7.88	G	7.83	pH
Oil & Grease	200	G	<5	G	<5	G	<5	mg/L
Temperature	60	G	28	G	30	G	25	Celcius
Silver	0.5	C	<0.05	C	0.46	C	<0.05	mg/L

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael J. Koch, CHMM

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 3/31/2006

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO. 63110
Monitoring Period: 2006 √ (Jan-Mar) (Apr-June) (July-Sept) (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 3/8/2006 C: 3/7-8/06		G: 3/10/2006 C: 3/9-10/06					
Times at Which Samples Were Collected		G: 9:30 a.m. C: 9:45 a.m.- 9:45a.m.		G: 9:15 a.m. C: 9:05 a.m.- 8:05a.m.					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	9,000				Gal/Day
Biological Oxygen Demand	****	C	<10	C	<10				mg/L
Chemical Oxygen Demand	****	C	43	C	15				mg/L
Total Suspended Solids	****	C	45	C	13				mg/L
pH	5.5 - 11.5	G	7.34	G	7.31				pH
Oil & Grease	200	G	16	G	<5				mg/L
Temperature	60	G	21	G	32				Celcius
Silver	0.5	C	<0.05	C	<0.05				mg/L

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ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael J. Koch, CHMM

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 3/31/2006

Metropolitan Saint Louis Sewer District
2350 Market Street
Saint Louis, Missouri 63103-2555

WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

Attn: Michael Koch

INDUSTRIAL WASTEWATER DISCHARGE PERMIT NUMBER 5112216200

ANNUAL PERMIT FEE NOTICE

For permits in effect as of 10/01/2005.

Fee will be included on the next regular monthly bill from the Metropolitan St. Louis Sewer District.

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2005 through September 30, 2006 issued in accordance with the Metropolitan St. Louis District Ordinance #8660 for the location at **660 S. Euclid Ave.**.

Base charge @ $150.00 per permit			$150.00
Volume charge @$0.72 per average daily Ccf	728.67	Ccfs	$524.64
Sample Point Charge @$100.00 per sample point	5	points	$500.00
		Total Fee Due:	**$1,174.64**

For inquiries about the Annual Permit Fee, please call 314-436-8710. For inquiries about payment of the fee, which will appear on your upcoming monthly bill, please call 1-866-281-5737.

THIS IS NOT A BILL

DO NOT PAY NOW

FEE WILL BE INCLUDED ON MONTHLY BILL

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No: 6112262-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.3290
H-3	93.6081
I-125	0.0820
P-32	1.1487
S-35	0.0513
Zn-65	0.0240
TOTAL ACTIVITY DISCHARGED:	**95.2431**

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

DMK 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 01/20/2006

RE: radrpt.doc 2/00

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JAN 24 2006

DIVISION OF ENVIRONMENTAL COMPLIANCE

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No: #S\\22162-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0210
H-3	6.2926
H-3B	0.0060
I-125	0.2123
I-125v	0.0100
P-32	0.2171
S-35	0.1716
TOTAL ACTIVITY DISCHARGED:	**6.9305**

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

DAK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 01/20/2006

RE: radrpt.doc 2/00

RECEIVED

JAN 24 2006

DIVISION OF
ENVIRONMENTAL COMPLIANCE

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FG 1/5/6

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005			
Dates on Which Samples Were Collected		G: 12/14/2005 C: 12/13-14/05		G: 12/15/2005 C: 12/14-15/05		G: 12/13/2005 C: 12/12-13/05			
Times at Which Samples Were Collected		G: 9:00a.m. C: 9:00 a.m.- 8:00a.m.		G: 9:30 a.m. C: 9:15 a.m.- 8:15a.m.		G: 9:15a.m. C: 9:00 a.m.- 8:00a.m.			
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	28,250	E	55,500	E	450,000		Gal/Day
Biological Oxygen Demand	****	C	59	C	153	C	27		mg/L
Chemical Oxygen Demand	****	C	152	C	263	C	107		mg/L
Total Suspended Solids	****	C	69	C	53	C	20		mg/L
pH	5.5 - 11.5	G	8.62	G	8.76	G	8.80		pH
Oil & Grease	200	G	6	G	17	G	5		mg/L
Temperature	60	G	15	G	21	G	15		Celcius
Silver	0.5	C	<0.05	C	0.06	C	<0.05		mg/L

You must complete and sign the certification statements on the reverse side.

RECEIVED
JAN 05 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael J. Koch, CHMM

Title: Hazardous Materials Manager Telephone: 314-362-6735

Signature: [signature] Date: 1/3/06

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Monitoring Period: (Jan-Mar) (Apr-June) (July-Sept) √ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007					
Dates on Which Samples Were Collected		G: 12/15/2005 C: 12/15-16/05		G: 12/15/2005 C: 12/15-12/16/05					
Times at Which Samples Were Collected		G: 9:30 a.m. C: 9:30 a.m.- 8:30a.m.		G: 9:45 a.m. C: 9:15 a.m.- 8:15a.m.					
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow							Units
Flow	***	E	24,000	E	9,000				Gal/Day
Biological Oxygen Demand	****	C	38	C	244				mg/L
Chemical Oxygen Demand	****	C	91	C	589				mg/L
Total Suspended Solids	****	C	45	C	223				mg/L
pH	5.5 - 11.5	G	8.71	G	8.89				pH
Oil & Grease	200	G	6	G	<5				mg/L
Temperature	60	G	21	G	25				Celcius
Silver	0.5	C	<0.05	C	<0.05				mg/L

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JAN 05 2006
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

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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: Michael J. Koch, CHMM

Title: Hazardous Materials Manager Telephone: 314-362-6735

Signature: [signature] Date: 1/3/06

St. Louis Testing Laboratories
INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085
Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

December 21, 2005
Lab No. 05E-1536
Invoice No.64343
P.O. No. 29737M
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 12/14/05, 9:00 A.M.
WASTE WATER COMPOSITE, PT. 001, 12/13-14/05, 9:00 A.M.-8:00 A.M.
WASTE WATER GRAB, PT. 003, 12/15/05, 9:30 A.M.
WASTE WATER COMPOSITE, PT. 003, 12/14-15/05, 9:15 A.M.-8:15 A.M.
WASTE WATER GRAB, PT. 005, 12/13/05, 9:15 A.M.
WASTE WATER COMPOSITE, PT. 005, 12/12-13/05, 9:00 A.M.-8:00 A.M.
WASTE WATER GRAB, PT. 006, 12/15/05, 9:30 A.M.
WASTE WATER COMPOSITE, PT. 006, 12/15-16/05, 9:30 A.M.-8:30 A.M.
WASTE WATER GRAB, PT. 007, 12/15/05, 9:45 A.M.
WASTE WATER COMPOSITE, PT. 007, 12/15-16/05, 9:15 A.M.-8:15 A.M.

RESULTS: mg/L Except As Noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	59	153	27	38	244	10	405.1
Chemical Oxygen Demand (C)	152	263	107	91	589	10	410.4
Total Suspended Solids (C)	69	53	20	45	223	5	160.2
pH (Std. pH Units) (G)	8.62	8.76	8.80	8.71	8.89	---	150.1
Oil & Grease (C)	6	17	5	6	< 5	5	1664
Temperature, °C (G)	15.0	21.0	15.0	21.0	25.0	---	170.1
Silver (C)	< 0.05	0.06	< 0.05	< 0.05	< 0.05	0.05	200.7

MQL: Minimum Quantitative Limit

G-Grab
C-Composite

Steve Root, Manager
Environmental Testing

SR/nmb

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ENVIRONMENTAL COMPLIANCE

MEMBER

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

IND
5112210-00

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	1.4740
H-3	31.5061
I-125	0.0010
P-32	0.0865
S-35	0.0263
Zn-65	0.0585
TOTAL ACTIVITY DISCHARGED:	**33.1524**

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

DMK

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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 10/19/2005

RE: radrpt.doc 2/00

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☒ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0566
H-3	4.4125
I-125	0.0584
I-125v	0.0100
P-32	0.2624
P-33	0.0700
S-35	0.2993
TOTAL ACTIVITY DISCHARGED:	**5.1692**

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

DMK

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.

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 10/19/2005

RE/radrpt.doc 2/00

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OCT 21 2005

DIVISION OF
ENVIRONMENTAL COMPLIANCE

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TO FG 10/21/5

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO. 63110
Mor☐ (Apr-June) ☐ (Jan-Mar) ☑ (July-Sept) ☐ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		001		003		005		
Dates on Which Samples Were Collected		G: 9/21/2005 C: 9/20-21/2005		G: 9/22/2005 C: 9/21-22/2005		G: 9/20/2005 C: 9/19-20/2005		
Times at Which Samples Were Collected		G: 9:30 a.m. C: 9:50 a.m.		G: 9:45 a.m. C: 9:30 a.m.		G: 9:45 C: 10:00		
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow		E	27,500	E	54,000	E	454,000	Gal/Day
Biological Oxygen Demand		C	10	C	37	C	23	mg/L
Chemical Oxygen Demand		C	43	C	101	C	62	mg/L
Total Suspended Solids		C	21	C	69	C	19	mg/L
pH		G	7.77	G	8.21	G	8.70	pH
Oil & Grease		G	<5	G	17	G	5	mg/L
Temperature		G	28	G	30	G	28	Celcius
Silver		C	<0.05	C	<0.05	C	<0.05	mg/L
Arsenic		C	<0.05	C	<0.05	C	<0.05	mg/L
Chromium		C	<0.05	C	<0.05	C	<0.05	mg/L
Mercury		C	<0.0005	C	0.001	C	<0.0005	mg/L
Total Cyanide		G	N/A ~~<0.02~~	G	N/A ~~<0.02~~	G	N/A ~~<0.02~~	mg/L
Acrolein KA		~~G~~	~~<100~~	~~G~~	~~<100~~	~~G~~	~~<100~~	~~ug/L~~
Benzene KP		G	<2.0	G	<2.0	G	<2.0	ug/L
Carbon Tetrachloride KP		G	<5.0	G	<5.0	G	<5.0	ug/L
Chloroform KP		G	<5.0	G	<5.0	G	<5.0	ug/L
Methylene Chloride KP		G	<5.0	G	<5.0	G	<5.0	ug/L
Toluene KP		G	<5.0	G	<5.0	G	<5.0	ug/L
2,4 Dinitrophenol KP		G	<0.021	G	<0.100	G	<0.021	mg/L
Benzidine KA		~~G~~	~~<0.041~~	~~G~~	~~<0.200~~	~~G~~	~~<0.043~~	~~mg/L~~
Phenol KP		G	<00.5	G	<0.025	G	<0.005	mg/L
TO →			<0.521		<0.125		<0.021	

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OCT 21 2005
DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side. FG

MSD 043758

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____.

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael Koch, CHMM

Title: Hazardous Materials Manager Telephone: 314-362-6735

Signature: [signature] Date: 10/18/05

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine
Permit No: 5112262-00
Premise Address: 660 South Euclid Ave., St. Louis, MO, 63110
Mor☐ (Apr-June) ☐ (Jan-Mar) ☑ (July-Sept) ☐ (Oct-Dec)
Samples Collected By: St. Louis Testing Laboratories
Analysis Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD Sample Point Reference Number		006		007				
Dates on Which Samples Were Collected		G: 9/20/2005 C: 9/19-20/2005		G: 9/22/2005 C: 9/21-22/2005				
Times at Which Samples Were Collected		G: 9:15 a.m. C: 9:00 a.m.		G: 9:00 a.m. C: 10:15 a.m.				
PARAMETER	LIMIT	Record Sample Types (G,C,M, or E) And Results Below G=grab, C-composite, M=measured flow, E=estimated flow						Units
Flow		E	23,000	E	7,500			Gal/Day
Biological Oxygen Demand		C	<10	C	243			mg/L
Chemical Oxygen Demand		C	<10	C	461			mg/L
Total Suspended Solids		C	5	C	176			mg/L
pH		G	9.3	G	7.79			pH
Oil & Grease		G	<5	G	<5			mg/L
Temperature		G	25	G	32			Celcius
Silver		C	<0.05	C	<0.05			mg/L
Arsenic		C	<0.05	C	<0.05			mg/L
Chromium		C	<0.05	C	<0.05			mg/L
Mercury		C	<0.0005	C	<0.0005			mg/L
Total Cyanide		G	~~<0.02~~ NA	G	~~<0.02~~ NA			mg/L
Acrolein KA		~~G~~	~~<100~~	~~G~~	~~<100~~			ug/L
Benzene		G	<2.0	G	<2.0			ug/L
Carbon Tetrachloride		G	<5.0	G	<5.0			ug/L
Chloroform		G	<5.0	G	<5.0			ug/L
Methylene Chloride KP		G	<5.0	G	<5.0			ug/L
Toluene		G	<5.0	G	<5.0			ug/L
2,4 Dinitrophenol		G	<0.020	G	<0.020			mg/L
Benzidine KA		~~G~~	~~<0.041~~	~~G~~	~~<0.040~~			mg/L
Phenol KP		G	<0.005	G	<0.005			mg/L
TD: →			<0.02		<0.02			

FG

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OCT 21 2005
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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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:

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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: Michael Kah, CHMM

Title: Hazardous Materials Manager Telephone: 314-362-6735

Signature: [signature] Date: 10/18/05

IND √f6

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No: 5112142-00

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0148
H-3	6.3347
I-125	0.1125
P-32	0.3321
P-33	0.0400
S-35	0.2623
TOTAL ACTIVITY DISCHARGED:	**7.0964**

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

ZMK 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 07/22/2005

RE: radrpt.doc 2/00

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JUL 25 2005

DIVISION OF
ENVIRONMENTAL COMPLIANCE

IND √FG

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☒ (APR-JUN) ☐ (JUL-SEP) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	1.9700
H-3	44.7175
I-125	0.0041
P-32	0.3127
P-33	0.0060
S-35	0.0957
Zn-65	0.0620
TOTAL ACTIVITY DISCHARGED:	**47.1680**

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

☐ DMK 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.

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 07/22/2005

RE: radrpt.doc 2/00

RECEIVED

JUL 25 2005

DIVISION OF ENVIRONMENTAL COMPLIANCE

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✓ FG 7/18/05

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine

Permit No: 51122162-00

Premise Address: 660 South Euclid Ave St. Louis, MO 63110

Monitoring Period: ☐(JAN-MAR) ☒(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

Samples Collected By: St. Louis Testing Laboratories

Analyses Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ——>		001		003		005		
DATES ON WHICH SAMPLES WERE COLLECTED ——>		G: 6/22/05 C: 6/22/05 - 6/23/05		G: 6/23/05 C: 6/22/05 - 6/23/05		G: 6/21/05 C: 6/20/05 - 6/21/05		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:15 AM C: 10:20 AM		G: 9:40 AM C: 9:45 AM		G: 9:30 AM C: 10:00 AM		
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW G=grab, C=composite, M=measured flow, E=estimated flow						UNITS
FLOW		E	28,000	E	53,000	E	445,000	gal/day
Biological Oxygen Demand		C	<10	C	36	C	50	mg/L
Chemical Oxygen Demand		C	28	C	80	C	137	mg/L
Total Suspended Solids		C	16	C	57	C	69	mg/L
pH		G	7.80	G	8.40	G	7.59	pH
Oil + Grease		G	<5	G	5	G	<5	mg/L
Temperature		G	31	G	28	G	26	°C
Silver		C	<0.05	C	<0.05	C	<0.05	mg/L

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JUL 12 2005
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

MSD 043764

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

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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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

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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:

☐ 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.

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:

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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:

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B. DISCHARGE MONITORING REPORT CERTIFICATION

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Print or type name of signing official: Michael Koch CHMM

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: MKoch CHMM Date: 7/6/05

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine

Permit No: 5112262-00

Premise Address: 660 South Euclid Ave St. Louis, MO 63110

Monitoring Period: ☐(JAN-MAR) ☒(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

Samples Collected By: St. Louis Testing Laboratories

Analyses Performed By: St. Louis Testing Laboratories

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ——>		006						
DATES ON WHICH SAMPLES WERE COLLECTED ——>		G: 6/21/05 C: 6/20/05-6/21/05						
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 9:05 Am C: 9:30 Am						
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW G=grab, C=composite, M=measured flow, E=estimated flow						UNITS
FLOW		E	23,000					gal/day
Biological Oxygen Demand		C	<10					mg/L
Chemical Oxygen Demand		C	<10					mg/L
Total Suspended Solids		C	<5					mg/L
pH		G	9.06					pH
Oil & Grease		G	<5					mg/L
Temperature		G	26					°C
Silver		C	<0.05					mg/L

RECEIVED
JUL 12 2005
DIVISION OF
ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your permit contains no Special Conditions, then none of the certifications in PART III apply to you. GO ON TO PART IV.

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PART IV: GENERAL CERTIFICATION STATEMENTS

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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: Michael Koch, CHMM

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: MKoch, CHMM Date: 7/6/05

SMF 10/03

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 51122162-00
Premise Address: 660 S. Euclid Zip Code: 63110-
Last Inspection Date: 5/12/04
MSD Categories: SIU ☒ CIU ☐ Surcharge ☐ Potential Toxic Waste ☒
Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐
Company Representative: Michael Koch
Title: Hazardous Materials Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 6/21/05 Time of Inspection: From 09:00 AM To 11:30 AM

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00, 51122176-01,90006372-01
   B. WERE ALL ACCT NUMBERS VERIFIED AS CORRECT & ACTIVE ON BILLING SYSTEM? Yes☒ No☐

2. PROCESS & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont		Yes	Daily	001,003,005, 007
Research animal care	Cont		Yes	Daily	005,007
Food preparation	Batch		Yes	Daily	005
Cleanup at hazardous storage area (Bldg 80)	Batch		Yes	Daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (describe):

	Sample pt.
pH neutralization for labs, silver recovery units	001,003,006
Kitchen grease trap	005

4. HAS COMPANY BEGUN DISCHARGING ANY NEW POLLUTANTS SINCE THE LAST INSP? Yes☐ No☒
   A. List pollutants & process: _____
   B. Will MSD STP exceed existing NPDES discharge limit(s)? Yes☐ No☐
   C. Will MSD STP's discharge exceed 0.1 mg/l for any new pollutant? Yes☐ No☐
   (MSD must notify MDNR if B or C is yes and discharge will continue.)
   D. Comments: _____

5. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes☐ No☒
   A. If yes, list reg. & describe (including any discharge):
   _____

6. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes☐ No☒
   A. At which points? _____
   B. Current applied factor: _____ Is it correct? Yes☐ No☐
   C. If no, what is the correct factor & explain change? _____

7. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes☐ No☒
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes☐ No☐
   C. If yes, explain: _____

8. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes☒ No☐
   A. Describe operations & disposal: Materials are collected from buildings and brought to Bldg 80 for disposal. Solids are hauled, liquids are decayed & sewered.
   B. Does company have MSD authorization to disposal to sewer? Yes☒ No☐
   C. Date of Authorization: 7/8/94 Annual amt approved: 320 mCi
   D. Has company exceeded the approved quantity? Yes☐ No☒
   E. If yes, explain: _____

9. DOES WATER USE APPEAR EXCESSIVE? Yes☐ No☒
   A. Explain how verified & needed changes: The institution is very large and spread out. The high volume usage from water records appears normal to maintain clean conditions at the facilities.

10. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes☐ No☒
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

11. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

12. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes☐ No☒
   A. Upsets? ☐ Bypasses of pretreatment facilities? ☐
   Spills? ☐ Slug discharges? ☐ Other? _____
   B. Explain any marked: _____

13. ARE ANY SOLVENTS USED? Yes☒ No☐
   A. Which solvents? Xylene, toluene, methanol Mineral spirits
   B. What used for? Lab reagents Maintenance parts cleaning
   C. How disposed? Collected & hauled Hauled off

14. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒

A. If yes, what needs to be done? _____

B. If no, how are they controlled? Secondary containment for drums. Procedures are in place for handling of chemicals in quantity.

15. DOES COMPANY HAVE ANY SPILL,SLUG OR SOLVENT MANAGEMENT PLANS(SMP)? Yes☒ No☐

A. If yes:

Title	SMP? 413/433		Last Update		Copy in File? (SMP only)	Update needed? Explain if yes
Contingency Plan	N/A		2/4/04		Yes	No
	N/A				N/A	N/A
	N/A				N/A	N/A

B. Are any Plans needed in addition to those listed in Part A? (write company and request) Yes☐ No☒

16. HAZARDOUS WASTES:

A. Was the company informed/reminded that solid & hazardous waste management regulations (RCRA) exist and may potentially apply to industrial users? Yes☒ No☐

B. Is there any discharge to the sewers of hazardous waste which has not been previously reported to MSD (under 40 CFR 403.12(p))? Yes☐ No☒

C. If yes to B, list haz wastes: _____

D. Was the company provided with a "Public Notice/Haz. Waste Discharge Notification" form for the above regulations (regardless of whether there are any discharges)? Yes☒ No☐

F. Comments: _____

17. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes☒ No☐

A. Are MSD contacts listed? Yes☒ No☐

B. If no to either, describe how handled: _____

18. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐

A. If yes, requirement is contained in permit ☒ or other document ☐.

B. If other document, date & description: _____

C. How frequently is sampling required? Quarterly

D. How frequently are reports required? Quarterly

E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐

F. If no, explain: _____

19. IF COMPANY SELF-MONITORS (REQ'D OR NOT), DOES IT COLLECT REPRESENTATIVE GRAB/COMP SAMPLES & USE EPA-APPROVED 40CFR136 WASTEWATER TEST METHODS? N/A☐ Yes☒ No☐

A. If no, explain needed changes: _____

20. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒

A. If yes, type and date: _____

B. Have the reports & actions been on-time & complete? Yes☐ No☐

C. If no, explain: _____

21. DOES MSD CATEGORY NEED TO BE REVISED? Yes☐ No☒

A. Indicate correct categories:

SIU ☐ CIU ☐ Surcharge ☐ Potential Toxic Waste ☐

Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐

B. Explain changes: _____

22. SAMPLE POINTS

						DJ(y/n)
SP #	001	Fed.Reg.	N/A	Components:	Sanitary + NCCW + research teaching labs + p&e washdown + softener regeneration	No
SP #	003	Fed.Reg.	N/A	Components:	Sanitary + research teaching labs + p&e washdown	No
SP #	005	Fed.Reg.	N/A	Components:	Sanitary + NCCW + kitchen waste + animal care + teaching labs + p&e washdown + softener regen + boiler blowdown	No
SP #	006	Fed.Reg.	N/A	Components:	Sanitary + waste storage facility cleanup	No
SP #	007	Fed.Reg.	N/A	Components:	Sanitary + animal care + p&e washdown + R&D labs	No

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: 6/1/04
A. Is the map correct and accurate in all its details? Yes☐ No☒
B. If no, what changes are needed? Add SP007 for new building(63)

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.
Building 63(Special Research Facility) was erected at the south side of the complex and was connected to the Mouse House (Bldg 41/42). The sewer lines have been connected and route from the east side of the building to McKinley. SP007 was added for the discharge from Bldg 63. The building should be totally operational later in the fall 2005. The current discharge thru the new sample point is from the former mouse house.

The manhole at SP003 appeared to be surcharged and I contacted a maintenance crew to check the downstream lines for a blockage. The lines were checked and are clear. The manhole in question I was told by maintenance is a trapped manhole and should always be surcharged. I informed the contact so that he can share the information for future additions to the site.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

INDUSTRIAL USER CLASSIFICATIONS

01/12/1999	SIU
06/09/1998	PTW

WUNNENBERG INFO.

Base Map 19G3
Wun: St. Louis City & Co.
Grid: J 20 Page 26

SIU CRITERIA

PR25 Process Disch => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO. 63110

INSPECTION INFORMATION

Next Due
Insp Rslt
06/21/2005 RIN James Goodall

PERMIT INFORMATION

Issue Date: 01/01/2003
Expire Date: 12/31/2007
Extended Date:
Writer Fabian Grabsk

IUQ INFORMATION

IUQ Recvd Date: 08/19/2002
Reviewer: Fabian Grabski

CONTACTS

FLD1	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1995 Ext.
FLD2	Bruce Backus	Dir Environmental Health & Safety	OFF	(314) 362-6816 Ext.
OFF1	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1095 Ext.

OPERATIONAL INFORMATION

Work Days: 7

				S	M	T	W	T	F	S
1	6,650	08:00AM	8.0	Y	Y	Y	Y	Y	Y	Y
2	240	04:30PM	8.0	Y	Y	Y	Y	Y	Y	Y
3	255	11:30PM	8.0	Y	Y	Y	Y	Y	Y	Y

Total Emp: 7,145 **Hrs:** 24.0

OTHER AGENCIES INFORMATION

01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/04/1997	MDNR - Hazardous Waste Program	01591
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857

NON-SEWERED WASTE

On-Site Storage **On-Site Disposal** **Off-Site Disposal**

COMMENTS

RAW MATERIALS

EFF DATE	MATERIAL_DESCRIPTION	QUANTITY	UNIT
05/07/2004	Laboratory chemicals & reagents		

SIC INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

PRODUCTS

EFF	DESCRIPTION	UNIT	AVG_PROD	MAX_PROD
05/07/2004	Research			
05/07/2004	Animal care and education			

Report No. PIMS012A 07/06/2005 9:39:00 am
Data Date & Time: 07/06/2005 9:39:00 am

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SEWER ACCOUNTS

Sewer Accounts
5112216200
5112216100
5112216700
5112216800
5112217601
9000637201

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Start Date = 07/06/2003 **End Date =** 07/06/2005

Acct. No.			Consumption		Wdays	Cdays	Discharge	
5112216100			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216100	05/02/2003	08/07/2003	1,510		98	98	98	
5112216100	08/08/2003	11/03/2003	940		88	88	186	
5112216100	11/04/2003	02/03/2004	180		92	92	278	
RF 1.00	**Acct. Total**		2,630	1,967,377	278	278	7,077	7,077
5112216200			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216200	05/22/2003	08/13/2003	44,096		84	84	84	
5112216200	08/14/2003	11/13/2003	22,525		92	92	176	
5112216200	11/14/2003	02/04/2004	40,791		83	83	259	
RF 0.91	**Acct. Total**		107,412	80,349,761	259	259	282,310	282,310
5112216700			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216700	05/07/2003	08/06/2003	44,285		92	92	92	
5112216700	08/07/2003	11/06/2003	48,592		92	92	184	
5112216700	11/07/2003	02/04/2004	41,083		90	90	274	
RF 0.73	**Acct. Total**		133,960	100,209,046	274	274	266,980	266,980
5112216800			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216800	05/02/2003	08/07/2003	4,100		98	98	98	
5112216800	08/08/2003	11/03/2003	3,900		88	88	186	
5112216800	11/04/2003	02/02/2004	2,300		91	91	277	
RF 1.00	**Acct. Total**		10,300	7,704,936	277	277	27,816	27,816
5112217601			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112217601	05/02/2003	08/07/2003	930		98	98	98	
5112217601	08/08/2003	11/03/2003	740		88	88	186	
5112217601	11/04/2003	02/02/2004	300		91	91	277	
RF 1.00	**Acct. Total**		1,970	1,473,662	277	277	5,320	5,320
9000637201			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
9000637201	05/09/2003	11/05/2003	15,714		181	181	181	
9000637201	11/06/2003	02/13/2004	10,520		100	100	281	
RF 0.58	**Acct. Total**		26,234	19,624,396	281	281	40,506	40,506
	Facility Total		282,506					

Report No. PIMS012A 07/06/2005 9:39:00 am
Data Date & Time: 07/06/2005 9:39:00 am

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
01	Sanitary Or Combined	20G2	232C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings located S of McKin

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 001 Ordinance **NPDES Outfall No.**

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		650	GPD		GPD	D	8/19/02
Sanitary		13,650	GPD		GPD	D	8/19/02
Regeneration/Rejec	Water softner regen waste	6,045	GPD		GPD	D	8/19/02
Non Contact Coolir		3,710	GPD		GPD	D	5/12/04
Laboratory Waste	R&D	2,200	GPD		GPD	D	5/12/04
	Total Flow Avg =	**26,255**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
02	Sanitary Or Combined	19G3	229C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings N&S of Scott Av &

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 005 Ordinance **NPDES Outfall No.**

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		4,938	GPD		GPD	D	8/19/02
Kitchen Waste		4,778	GPD		GPD	D	8/19/02
Regeneration/Rejec		36,270	GPD		GPD	D	8/19/02
Sanitary		120,266	GPD		GPD	D	8/19/02
Laboratory Waste	Teaching labs	53,365	GPD		GPD	D	8/19/02
Boiler Blowdown		12,400	GPD		GPD	D	5/12/04
Non Contact Coolir		119,519	GPD		GPD	D	5/12/04
Process Waste	Research animal care	135,800	GPD		GPD	D	5/12/04
	Total Flow Avg =	**487,336**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Lemay
03	Sanitary Or Combined	19G3	543C	Trunk Sewer	River des Peres (County Section)

Description Lateral N from Building 14 W of Euclid A

Sewer Route W across S Kingshighway Blvd into Fores

SAMPLE POINT NO. 003 Ordinance **NPDES Outfall No.**

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		23,570	GPD		GPD	D	8/19/02
Laboratory Waste	R&D	20,180	GPD		GPD	D	5/12/04
Plant & Equipment		1,500	GPD		GPD	D	5/12/04
	Total Flow Avg =	**45,250**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
04	Sanitary Or Combined	19G3	259C	Trunk Sewer	Old Mill Creek

Description 8" lateral E from Building 80 at Taylor an

Sewer Route N to Parkview to Duncan, E to trunk to tre

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave. St. Louis MO. 63110

SAMPLE POINT NO. 006 Ordinance **NPDES Outfall No.**

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment	Waste Storage Facility	19,050	GPD		GPD	D	8/19/02
Sanitary		500	GPD		GPD	D	8/19/02
	Total Flow Avg =	**19,550**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
05	Sanitary Or Combined	20G2	235C	Trunk Sewer	Old Mill Creek

Description Multiple lines from Bldg 63 N to McKinle

Sewer Route E on McKinley to Taylor, S to Clayton, E t

SAMPLE POINT NO. 007 Ordinance **NPDES Outfall No.**

Description Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		800	GPD		GPD	D	6/21/05
Plant & Equipment	Janitorial cleaning	50	GPD		GPD	D	6/21/05
Laboratory Waste	R&D	1	GPD		GPD	D	6/21/05
Process Waste	Research animal care	5,575	GPD		GPD	D	6/21/05
	Total Flow Avg =	**6,426**		**Max =**			

PRETREATMENT TYPES

SP	EFF_DATE	TYPE	DESCRIPTION
001	09/02/1998	DC37	pH Adjustment / Neutralization
001	09/02/1998	DC32	Metallic Replacement
002	09/02/1998	DC37	pH Adjustment / Neutralization
002	09/02/1998	DC32	Metallic Replacement
002	09/02/1998	DC28	Grease Trap
003	09/02/1998	DC37	pH Adjustment / Neutralization
003	09/02/1998	DC32	Metallic Replacement
004	09/02/1998	DC37	pH Adjustment / Neutralization
004	09/02/1998	DC32	Metallic Replacement
005	06/16/1999	DC28	Grease Trap
006	06/19/2000	DC32	Metallic Replacement
006	05/08/2001	DC37	pH Adjustment / Neutralization

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
2,4-Dinitrotoluene	SP	2,6-Dinitrotoluene	SP	Naphthalene	KP
Cyanide (Total)	KP	Asbestos (Fibrous)	KP	Silver (Total)	KP
Mercury (Total)	KP	Chromium (Total)	KP	Arsenic (Total)	KP
Phenol	KP	2,4-Dinitrophenol	SP	Toluene	KP
Methylene Chloride	KP	Chloroform	KP	Carbon Tetrachloride	KP
Benzene	KP				

EXTRA STRENGTH SURCHARGE INFORMATION

Report No. PIMS012A 07/06/2005 9:39:00 am
Data Date & Time: 07/06/2005 9:39:00 am

PIMS
REPORT OF FIELD SAMPLING REQUIREMENTS

Account No Entered **5112216200** **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

SPN	Premise Address	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date	06/30/2006
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs				
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs				
	T237000	pH	Once/year	Grab				
	T247000	Temperature	Once/year	Grab				
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs				
	T309000	Benzene	Once/year	Grab				
	T328000	Carbon Tetrachloride	Once/year	Grab				
	T332000	Chloroform	Once/year	Grab				
	T371000	Methylene Chloride	Once/year	Grab				
	T375000	Naphthalene	Once/year	Grab				
	T388000	Phenol	Once/year	Grab				
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs				
	T397000	Toluene	Once/year	Grab				
	T999000	Total Toxic Organics	Once/year	Grab				

003	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date	06/30/2006
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs				
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs				
	T237000	pH	Once/year	Grab				
	T247000	Temperature	Once/year	Grab				
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs				
	T309000	Benzene	Once/year	Grab				
	T328000	Carbon Tetrachloride	Once/year	Grab				
	T332000	Chloroform	Once/year	Grab				
	T371000	Methylene Chloride	Once/year	Grab				
	T375000	Naphthalene	Once/year	Grab				
	T388000	Phenol	Once/year	Grab				
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs				
	T397000	Toluene	Once/year	Grab				
	T999000	Total Toxic Organics	Once/year	Grab				

005	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date	06/30/2006
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs				
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs				
	T234000	Oil and Grease (Total)	Once/year	Grab				
	T237000	pH	Once/year	Grab				
	T247000	Temperature	Once/year	Grab				
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs				
	T309000	Benzene	Once/year	Grab				
	T328000	Carbon Tetrachloride	Once/year	Grab				
	T332000	Chloroform	Once/year	Grab				
	T371000	Methylene Chloride	Once/year	Grab				
	T375000	Naphthalene	Once/year	Grab				
	T388000	Phenol	Once/year	Grab				
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs				
	T397000	Toluene	Once/year	Grab				
	T999000	Total Toxic Organics	Once/year	Grab				

006	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date	06/30/2006
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs				
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs				
	T234000	Oil and Grease (Total)	Once/year	Grab				
	T237000	pH	Once/year	Grab				
	T247000	Temperature	Once/year	Grab				
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs				

SPN	Premise Address	CITY	ST	ZIP

T309000	Benzene	Once/year	Grab	
T328000	Carbon Tetrachloride	Once/year	Grab	
T332000	Chloroform	Once/year	Grab	
T371000	Methylene Chloride	Once/year	Grab	
T375000	Naphthalene	Once/year	Grab	
T388000	Phenol	Once/year	Grab	
T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	
T397000	Toluene	Once/year	Grab	
T999000	Total Toxic Organics	Once/year	Grab	

007 **Poll Code** **Pollutant Description** **Frequency** **Sample Type** IM = IPD - Company - MSD **End Date** 06/30/2006

T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs
T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs
T234000	Oil and Grease (Total)	Once/year	Grab
T237000	pH	Once/year	Grab
T247000	Temperature	Once/year	Grab
T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs
T309000	Benzene	Once/year	Grab
T328000	Carbon Tetrachloride	Once/year	Grab
T332000	Chloroform	Once/year	Grab
T371000	Methylene Chloride	Once/year	Grab
T375000	Naphthalene	Once/year	Comp-Time 04 Hrs
T388000	Phenol	Once/year	Comp-Time 04 Hrs
T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs
T397000	Toluene	Once/year	Grab
T999000	Total Toxic Organics	Once/year	Grab

PIMS FACILITY CONTACTS

For Account Number **5112216200** **WASHINGTON UNIVERSITY MEDICAL**

Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type

Contact Type	Contact Name		Contact Title	Phone	Number	Ext.
Office Mailing Address						
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1095	
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Premise Address						
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1995	
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Field Contact 1st Alt	Bruce	Backus	Dir Environmental Health & Safety	OFF	(314)362-6816	

Washington University in St. Louis

Environmental Health & Safety — Radiation Safety Office

To: Department of Environmental Compliance, Kathy Thornburg, Douglas Mendoza
Fax (314) 436-8753

Date: 29 April 2005 — Time: 13:27
Number of pages including Cover: 4

From: David M. Kershman
Radiation Safety Specialist III
Phone Number: (314) 362-2994
Pager Number: (314) 294-8392

Message: I regret that the Quarterly Industrial User Radioactive Materials Discharge Report did not get in the mail until today. I am faxing this copy for the interim. Please contact me if you have any questions.

If you did not receive all the pages as indicated above call (314) 362-347

Department (314) 362-3476
Facsimile (314) 362-4776

Washington University in St. Louis, Campus Box 8053, 660 S. Euclid Avenue, St. Louis, Missouri 63110-1093
(314) 362-374, *Fax* (314) 362-4776, e-mail: radsafety@wustl.edu

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Main Campus (Hilltop)

Permit No:

Premise Address: 1 Brookings Drive, St. Louis, MO 63130

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0046
H-3	0.0040
I-131V	0.2000
P-32	0.0359
TOTAL ACTIVITY DISCHARGED:	**0.2446**

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

[DMK] 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 direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 04/25/2005

RE: radrpt.doc 2/00

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	26.4580
H-3	47.5374
I-125	0.0250
P-32	0.4091
S-35	0.5014
Tc-99m	0.0080
Zn-65	0.0153
TOTAL ACTIVITY DISCHARGED:	74.9541

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

DAK

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

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Print/Type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 04/25/2005

RE: radrpt doc 2/00

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: [X] (JAN-MAR) [ ] (APR-JUN) [ ] (JUL-SEP) [ ] (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0489
H-3	6.0025
I-125	0.0269
P-32	0.3748
P-33	0.0100
S-35	0.2996
TOTAL ACTIVITY DISCHARGED:	6.7627

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

DMK

I certify that to the best of my knowledge & belief, all requirements of10 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 04/25/2005

RE: radrpt.doc 2/00

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

April 11, 2005

Michael Koch
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

RE: COMPOSITE COMPLIANCE MONITORING
Discharge Permit No: 5112216200
For premise at: 660 S. Euclid Ave.
St. Louis, MO 63110

Dear Mr. Koch:

A recent review of submitted self-monitoring reports from permitted Significant Industrial Users has identified that several have initiated using composite sampling methodology that encompasses less than a representative composite time period. Consequently, the following guidance is offered as a reminder as to what compositing periods are acceptable to the District.

Unless specified within the permit special conditions, all pollutants requiring composite samples must "be 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," per Permit General Condition A.3.c. For process operations that cover more than one shift, all shifts with wastewater discharges should be represented. For single shift operations, the sampler should, at a minimum, incorporate a 4-hour compositing period. The District 4-hour compositing guidance is prescribed to ensure that all collected composite samples are representative of the average discharge at each sampling point. As an example, a 4-hour composite sample comprised from grab samples taken at 08:00 AM, 09:00 AM, 10:00 AM, and 11:00 AM is a District acceptable 4-hour composite sample.

Accordingly, as of the date of this letter, the District will no longer accept analytical data from permitted Significant Industrial Users that is derived from composite samples taken over a compositing period of less than 4-hours, unless the permittee specifically demonstrates that a shorter composite period is representative of the wastewater discharge.

Thank you for your cooperation. If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

File 4APS

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine

Permit No: 5112262-00

Premise Address: 660 S. Euclid St. Louis, MO 63110

Monitoring Period: ☒(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

Samples Collected By: St. Louis Testing Labs

Analyses Performed By: St. Louis Testing Labs

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ——>		001		003		005		
DATES ON WHICH SAMPLES WERE COLLECTED ——>		G: 3/16/05 C: 3/15-16/05		G: 3/16/05 C: 3/15-16/05		G: 3/15/05 C: 3/14-15/05		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:15 C: 10:30 AM		G: 9:30 C: 9:30 AM		G: 9:45 C: 10:00 AM		
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW G=grab, C=composite, M=measured flow, E=estimated flow						UNITS
FLOW		E	29,000	E	51,000	E	450,000	gal/day
Biological Oxygen Demand		C	102	C	183	C	26	mg/L
Chemical Oxygen Demand		C	181	C	403	C	65	mg/L
Total Suspended Solids		C	67	C	171	C	15	mg/L
pH		G	8.01	G	8.23	G	8.15	pH
Oil + Grease		G	6	G	11	G	11	mg/L
Temperature		G	18.7	G	21.6	G	21.6	°C
Silver		C	<0.05	C	<0.05	C	<0.05	mg/L

RECEIVED
APR 04 2005
DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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.

ART IV: GENERAL CERTIFICATION STATEMENTS

itial the box for statement A if it applies to you. **Everyone must complete the information under statement B and sign this report.**

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.

DISCHARGE MONITORING REPORT CERTIFICATION

certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system signed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons no manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge id belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine id imprisonment for knowing violations.

int or type name of signing official: Michael Koch

le: Hazardous Materials Manager Telephone: (314) 362-6735

gnature: [signature] Date: 4/1/05

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University school of Medicine

Permit No: 5212262-00

Premise Address: 660 South Euclid Avenue St. Louis, MO 63110

Monitoring Period: ☒(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☐(OCT-DEC)

Samples Collected By: St. Louis Testing labs.

Analyses Performed By: St. Louis Testing labs.

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ——>		006					
DATES ON WHICH SAMPLES WERE COLLECTED ——>		G: 3/15/05 C: 3/14/05 - 3/15/05					
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 9:15 am C: 9:30 am					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW G=grab, C=composite, M=measured flow, E=estimated flow					UNITS
FLOW		E	21,000				gal/day
Biological Oxygen Demand		C	29				mg/L
Chemical Oxygen demand		C	76				mg/L
Total suspended solids		C	36				mg/L
pH		G	8.25				pH
Oil & Grease		G	13				mg/L
Temperature		G	15.1				°C
Silver		C	<0.05				mg/L

RECEIVED
APR 04 2005
DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

PART III: SPECIAL CERTIFICATION STATEMENTS

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☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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 .

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☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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☐ 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: [signature], CHMM Michael Koch

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 4/1/05

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 4, 2005

Scott George
MACTEC
3199 Riverport Tech Center Drive
St. Louis, MO 63043

Dear Mr. George:

We have reviewed your letter dated March 31, 2005 requesting a volume and time extension of a special discharge originally approved on February 25, 2005. The original approval was for wastewater from soil borings at the Metro Garage located at 4526 Children's Place, St. Louis, Missouri.

Based on the wastewater sample collected on March 28, 2005 your request to discharge an additional 200,000 gallons is granted. This extension expires on May 29, 2005. All other conditions of the original approval remain in effect.

If you have any questions, please call me at (314)436-8742.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Roland A. Biehl
Environmental Assistant Engineer

File: IU, Washington University, 51122162-00

March 31, 2005

Mr. Ronald A. Biehl
Environmental Assistant Engineer
Metropolitan St. Louis Sewer District
Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

RE: Wastewater Discharge (File: IU, Washington University, 51122162-00).

Dear Mr. Biehl:

This letter presents an extension request for the Washington University Metro Garage wastewater discharge permit. The permit is for the discharge of petroleum impacted groundwater generated during construction activities (pier drilling). The request is for an additional 200,000 gallons, and an additional 30 days. The original permit limit for 50,000 gallons may be completed the week of April 4, 2005. The discharge quantities are being recorded and will be provided at the end of the project. The water discharge started March 1, 2005 and was for 60 days (until April 29, 2005). The additional 30 days will extend the permit to May 29, 2005.

A wastewater sample was collected on March 28, 2005 and analyzed for total petroleum hydrocarbons (TPH), benzene, ethylbenzene, toluene, xylenes & naphthalene (BTEXN), MTBE, and pH. The results are well below the petroleum discharge limit (200 ppm), with a combined TPH level of only 2.56 ppm. The results are attached for your review.

Please contact me at (314)-209-5910 if you have any questions or comments.

Sincerely,

Scott George, P.G., CHMM
Senior Scientist
MACTEC
3199 Riverport Tech Center Drive
St. Louis, MO 63043

ENVIRONMENTAL SCIENCE CORP.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Scott George
MACTEC - St. Louis, MO
3199 Riverport Tech Center Drive
St. Louis, MO 63043

March 31, 2005

Date Received : March 29, 2005
Description : Washington Univ. Hartog

ESC Sample # : L193125-02

Sample ID : WASTEWATER 2

Site ID :

Collected By : Jack Friesner
Collection Date : 03/28/05 08:45

Project # : 3250055122.02

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
pH	12.		su	9040A	03/29/05	1
Volatile Organics						
TPH (GC/MS) Low Fraction	0.96	0.50	mg/l	8260B	03/30/05	1
Benzene	0.0011	0.0010	mg/l	8260B	03/30/05	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	03/30/05	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	03/30/05	1
Naphthalene	0.010	0.0050	mg/l	8260B	03/30/05	1
Toluene	BDL	0.0050	mg/l	8260B	03/30/05	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	03/30/05	1
Surrogate Recovery						
Toluene-d8	97.		% Rec.	8260B	03/30/05	1
Dibromofluoromethane	27.		% Rec.	8260B	03/30/05	1
4-Bromofluorobenzene	98.		% Rec.	8260B	03/30/05	1
DRO	1.6	1.0	mg/l	8270	03/30/05	1
ORO	BDL	1.0	mg/l	8270	03/30/05	1
Surrogate Recovery						
Nitrobenzene-d5	97.		% Rec.	8270	03/30/05	1
2-Fluorobiphenyl	91.		% Rec.	8270	03/30/05	1
p-Terphenyl-d14	95.		% Rec.	8270	03/30/05	1

Jeff Carr, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ -0612, MN - 047-999-395, NY - 11742, NJ - 81002, WI - 998093910

Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/31/05 15:06 Printed: 03/31/05 15:17

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 25, 2005

Linda Vishino
WASHINGTON UNIVERSITY
660 S. Euclid
Campus Box 1036
St. Louis, MO 63130

Dear Ms. Vishino:

We have reviewed your application dated February 21, 2005 requesting approval to discharge approximately 50,000 gallons of wastewater to the Metropolitan St. Louis Sewer District for treatment. This wastewater is from soil borings at the Metro Garage located at 4526 Children's Place, St. Louis, Missouri. We understand that the impacted wastewater is related to former gasoline and diesel underground and aboveground storage tanks.

Based on the analytical results, this wastewater meets MSD Ordinance 8472 standards and is approved for discharge into a sanitary sewer on site. The discharge into the sewer must be controlled at a rate that will not surcharge the lines in that area. This approval is valid for 60 days from the date of this letter.

You must be certain the waste is discharged into a sanitary or combined sewer inlet only. This letter does not authorize any discharge to a separate storm sewer, or to any watercourse, as any such discharge would be in violation of state and federal laws. **Please notify me at the number below when the discharge is to commence.**

This discharge has been approved based upon the information and sample analysis you provided, and is subject to the conditions stated above. This approval may be revoked by the District at any time if any of the information is found to be incorrect, or if the conditions of this approval are violated. Also, if the discharge causes any operational or maintenance problem within the District's collection or treatment system, or results in violations of any conditions of the District's NPDES permit, Washington University will be considered responsible for damages.

If you have any questions, please call me at (314)436-8742.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Roland A. Biehl
Environmental Assistant Engineer

bv

File: IU, Washington University, 51122162-00

Approve Turn By 3

MACTEC

Facsimile Transmittal Sheet

Date:	2/24/05
To:	Mr. Roland Biehl
Firm:	MSD
Fax:	314-436-8766
Telephone:	
Copy to:	
Total number of pages (including cover sheet):	2

From:	Scott George
Office/Department:	St. Louis, MO
Fax:	314/209-5929
Telephone:	314/209-5900
Address :	3199 Riverport Tech Center Drive St. Louis, MO 63043

Subject: Wastewater Analysis Description

Comments: If acceptable, please fax the discharge permit to me.
Thanks
Scott

This facsimile is confidential and legally privileged information. If you are not the intended recipient kindly inform the sender immediately and destroy the original and all copies. Any copying, distribution, disclosure, or the taking of any action in reliance on the contents of this facsimile, or part thereof, in any form whatsoever, without the sender's express written consent, is prohibited and may be unlawful.

Wastewater Analysis Description (02.24.05)
Two methods were used to determine the petroleum hydrocarbon concentrations in the WASH U METRO GARAGE, INF-1 (collected 01/27/05) sample:

1. **Total petroleum Hydrocarbons by Methods OA-1(gasoline range) and OA-2 (diesel, etc. range). These two separate tests cover the full range of hydrocarbons and the methods carefully preserve the volatile and semi-volatile constituents. The combined total from these two tests was 187.3 mg/L.**
2. **Oil & Grease by Method 413.1. This method uses a freon extraction of the water followed by evaporation (heating) of the freon. The remaining residue is weighted (gravimetric) to determine the oil & grease concentration. This method resulted in a lower concentration (26 mg/L) due to the loss of the gasoline and part of the kerosene by evaporation.**

In conclusion, the TPH methods (OA-1 & 2) are considered a more accurate measure of the TPH level in the sample and should be used in the permit application.
All future samples for oil & grease analysis will be analyzed by Method 1664 which used a hexane extraction procedure and should provide a more accurate oil & grease concentration.

Proofed by:

Wayne L. Cooper
Director of Technical & Quality Services
Environmetrics

MACTEC

Facsimile Transmittal Sheet

Date:	02/22/05
To:	Mr. Roland Biehl
Firm:	MSD
Fax:	314-436-8766
Telephone:	314-436-8742
Copy to:	
Total number of pages (including cover sheet):	10

From:	Scott George
Office/Department:	St. Louis, MO
Fax:	314/209-5929
Telephone:	314/209-5900
Address :	3199 Riverport Tech Center Drive St. Louis, MO 63043

Subject:
Special Discharge Permit

Comments:
Please call (314-209-5910) if you have any questions or comments.

Scott George

This facsimile is confidential and legally privileged information. If you are not the intended recipient kindly inform the sender immediately and destroy the original and all copies. Any copying, distribution, disclosure, or the taking of any action in reliance on the contents of this facsimile, or part thereof, in any form whatsoever, without the sender's express written consent, is prohibited and may be unlawful.

Metropolitan St. Louis Sewer District

Phone No. (314) 436-8710
Division of Environmental Compliance, 10 East Grand Avenue, St. Louis, Missouri 63147 Fax No. (314) 436-8766

APPLICATION FOR SPECIAL DISCHARGE APPROVAL

I. WASTEWATER SOURCE IDENTIFICATION:

Site Name: METRO GARAGE
Premise Address: 4526 Children's Place
City: St. Louis State: MO Zip: 63110
Owner: Washington Univ. in St. Louis
Contact Person: Linda Vishino
Title: Environmental Compliance Officer
Phone: 314-935-7864 Fax: 314-935-5564

II. APPLICANT (mailing information):

Applicant Name: Ms. Linda Vishino
Title: Environmental Compliance Officer
Company Name: Washington Univ. in St. Louis
Mailing Address: Campus Box 1036
One Brookings Drive
City: St. Louis State: MO Zip: 63130
Phone: 314-935-7864 Fax: 314-935-5564

III. A. MATERIAL TO BE DISCHARGED (check all applicable boxes):

1. Wastewater description/location: Shallow groundwater from pier borings
2. Process/activity generating wastewater: The shallow groundwater is impacted by petroleum products (gasoline/diesel) from leaking ASTs and USTs that have been removed from the Former Hartog Oil Company site.
3. Physical and chemical composition: List all constituents, and known or potentially present regulated contaminants below.
   ☒ See separate listing enclosed, and/or ☐ See analytical results enclosed, and/or ☐ Material Safety Data Sheet enclosed.

DESCRIPTION	RANGE	UNIT

DESCRIPTION *(continued)*	RANGE	UNIT

4. Is this wastewater from a process subject to EPA's categorical standards in 40 CFR Subchapter N? ☐ Yes ☒ No
   a. If yes, the applicable standards are in: 40 CFR Part _____, Subpart _____ ☐ Existing source ☐ New source
5. Does this wastewater contain polychlorinated biphenyls, asbestos or radioactive material? ☐ Yes ☒ No
   a. If yes, describe: _____
6. Representative sample: ☒ Laboratory results attached, and/or ☐ Sample provided (1/2 gallon minimum, clear container)
   a. Sample collection point/location: Aboveground storage tank Collection method: Grab directly into bottles
   b. Sampler's name/Co.: M. Roark / Geotechnolgy Inc. Sample date/time: 1-27-2005 11:35 a.m.
   c. Attach chain of custody as available
7. Discharge will occur over the following time period: ☐ < 30 days ☐ ≥ Two years ☒ Other: ≈ 30-60 days
   a. Expected total volume of wastewater to be discharged over the time period above: ≈ 50,000 Gallons
   b. Proposed discharge volume: ≈ 5,000 Gallons, at a frequency of: ☐ One time ☐ Daily ☒ Weekly ☐ Monthly ☐ Once/three months ☐ Once/six months ☐ Other: _____
8. Pretreatment of wastewater prior to discharge: ☒ None ☐ Yes, describe: _____
   a. If yes, attach site plan, pretreatment system schematic, and design specifications.
9. Wastewater from a remediation project under: ☐ Superfund/CERCLA ☐ RCRA ☐ Voluntary program ☒ UST ☐ Not applicable
   a. If from a remediation project, briefly describe the past and present utilization of the property: Former Hartog Oil Company site that is being developed into a parking garage.

III.B. MATERIAL FROM UNDERGROUND STORAGE TANK SOURCE

☐ Not applicable (go to Section IV)

Please answer the following questions if you are requesting to discharge wastewater associated with an underground storage tank system.

1. a. Wastewater from: ☐ Inside UST(s) ☐ UST system pit ☒ Excavation outside UST system pit ☐ Monitoring well ☐ Groundwater remediation system

   b. UST project involves wastewater from: ☐ UST(s) closed in place ☐ UST(s) removed ☐ Remediation ☐ Upgrade ☐ Maintenance activities ☐ Well monitoring ☒ Other, explain: Groundwater from pier borings

   c. If wastewater is from a closure project, how long has UST(s) been out of service: ~7 years

2. a. State assigned UST site identification number: _____ ☒ Not applicable

   b. Number of USTs affected: _____ ☐ Unknown

   c. For the UST(s) involved, their state identification number(s): _____ ☐ Not applicable

   d. Service Station Identification Number, as applicable: _____

3. Tank contents/former contents: ☒ Gasoline ☒ #2 diesel ☐ Used oil ☐ Unknown ☒ Other: Kerosene

IV. DISCHARGE LOCATION

1. ☒ On-site. Describe proposed point of entry to sewer and the discharge rate (must be a sanitary or combined sewer): Combined sewer near intersection of Taylor & Children's Place. Note: Range of discharge must not surcharge sewer line.

2. ☐ Haul to MSD Bissell Point Hauled Waste Receiving Station at 10 E. Grand, St. Louis, MO.

   a. Transporters Name: _____ and MSD Hauler ID Number: _____

   b. Hazardous Waste Certification:

   For wastewater which is hauled to MSD's Bissell Point Hauled Waste Receiving Station, I hereby certify that to the best of my knowledge and belief, the above hauled waste is not classified as a RCRA "hazardous waste" as defined by the MDNR in 10 CSR 25 or USEPA in 40 CFR Part 261.

   Applicant Name (print): Linda Vishino

   Signature: _____ Date: _____

ADDITIONAL INFORMATION:

The wastewater is generated by pumping petroleum-impacted groundwater from pier borings at the Former Hartog Oil Company site currently managed by Washington University. Washington University is not conducting groundwater remediation at the site other than the proper disposal of petroleum-impacted groundwater from the pier borings.

V. APPLICANT SIGNATURE AND CERTIFICATION

This application must be signed by the applicant: either the source contact, or a contractor or agent directly responsible for site activities.

I hereby certify that I am directly responsible for activities at the site regarding the wastewater to be discharged, and to the best of my knowledge and belief, based on appropriate inquiry, the information in this application is true, complete, and accurate. The samples or analyses submitted are representative of the materials to be discharged. If granted approval to discharge, I agree to abide by the MSD Ordinances, and all applicable federal, state and local regulations. I agree to pay the costs of any pre-approval analyses performed by MSD and to pay any applicable disposal charges for the volume and strength of the waste discharged.

Applicant Name (print): Linda Vishino / EHS Washington University

Signature: Linda Vishino Date: 2/21/05

FOR MSD USE ONLY:

File Name: WASH U ID No. 5112 2162-00 Sample Point No. 803

Table 1. Former Hartog Oil Site, Sample, Washington University Metro Garage, INF-1

Parameter	Results	Units
Total Petroleum Hydrocarbons as Gasoline	44.3	mg/L
Total Petroleum Hydrocarbons as Kerosene	143	mg/L
Total Lead	Not Detected	mg/L
Oil and Grease	26	mg/L
Chemical Oxygen Demand	110	mg/L
pH	10.2	S.U.
Total Suspended Solids	65	mg/L

P:\3250055122\Table 1.doc

ENVIRONMETRICS

www.environmetrics.net

11401 Moog Drive
St. Louis, MO 63146

(314) 432-0550
Fax (314) 432-4977

January 28, 2005

Geotechnology, Inc.
2258 Grissom Drive
St. Louis, MO 63146

Attn: Mike Roark

Enclosed you will find analytical reports for the samples described below:

Date Received: 01/27/05
Chain of Custody Number: 22649
Project No.: 7532-0657DE
P.O.: 26590
Environmetrics Laboratory Number: 9912/18997

I have reviewed the data generated by the laboratory and have found the data to conform to the applicable methods and QC criteria, except as noted below:

1. Due to the dilution required for analysis, accurate surrogate recoveries could not be determined for the OA2 sample.

Results are reported as received unless otherwise noted on the report. If you have any questions, please feel free to call me at (314) 432-0550.

Sincerely,

Elizabeth Ghafoori
Project Manager

Enclosed: Invoice Number 66152

This report shall not be reproduced, except in full, without the written approval of Environmetrics.

This report contains 6 pages.

ACCREDITED IN ACCORDANCE WITH

Where Experience is the Difference

ENVIRONMETRICS

Geotechnology, Inc.
2258 Grissom Drive
St. Louis, MO 63146

ATTN: MIKE ROARK

INVOICE: 66152
PO: 26590
PROJECT NO: 7532-06-57DE

ANALYSIS RESULTS

SAMPLE ID: WASH U METRO GARAGE, INF-1
LAB ID: 9912018997-001
DATE COLLECTED: 01/27/05 11:35
DATE RECEIVED: 01/27/05

TEST PERFORMED	METHOD OF ANALYSIS	RESULTS	ANALYST
TOTAL LEAD	EPA 200.7	<0.022 mg/L	01/28/05 C.J
OIL/GREASE	EPA 413.1	26 mg/L	01/28/05 D.M
CHEMICAL OXYGEN DEMAND	EPA 410.4	110 mg/L	01/27/05 D.M
PH	EPA 150.1	10.2	01/27/05 D.M
TOTAL SUSPENDED SOLIDS	EPA 160.2	65 mg/L	01/27/05 D.M

See 2nd Page O&G
Follow-Up Per RB
Request

ENVIRONMETRICS

BTEX + MTBE + TPH as Gasoline by Capillary GC
METHOD OA1
PAGE One

SAMPLE ID: MBLK 19077
PARENT ORDER NUMBER: 247784 **RUN NUMBER:** 19077
QUANT FACTOR : 1.00

CAS NUMBER		PRACTICAL QUANTITATION LIMIT µg/L	RESULTS µg/L
1634-04-4	Methyl tert butyl ether	2	U
71-43-2	Benzene	2	U
108-88-3	Toluene	2	U
100-41-4	Ethylbenzene	2	U
1330-20-7	Total Xylenes	5	U
86290-81-5	TPH as Gasoline	1000	U

QUALITY CONTROL RECOVERY RESULTS

		% RECOVERY
540-36-3	1,4-Difluorobenzene	102
462-06-6	Fluorobenzene	96

U = UNDETECTED

DATE ANALYZED: 01/28/05
ANALYST: R.R.

ENVIRONMETRICS

Geotechnology, Inc.
2258 Grissom Drive
St. Louis, MO 63146

ATTN: MIKE ROARK

INVOICE: 66152
PROJECT NO: 7532-06-57DE
PO: 26590

BTEX + MTBE + TPH as Gasoline by Capillary GC
METHOD OA1
PAGE One

SAMPLE ID: WASH U METRO GARAGE, INF-1
LAB ID: 9912018997-001
PARENT ORDER NUMBER: 247784

RUN NUMBER: 19077
QUANT FACTOR : 10.00

CAS NUMBER		PRACTICAL QUANTITATION LIMIT µg/L	RESULTS µg/L
1634-04-4	Methyl tert butyl ether	20	U
71-43-2	Benzene	20	U
108-88-3	Toluene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Total Xylenes	50	U
86290-81-5	TPH as Gasoline	10000	44300

44.3 ppm

QUALITY CONTROL RECOVERY RESULTS

		% RECOVERY
540-36-3	1,4-Difluorobenzene	104
462-06-6	Fluorobenzene	103

ok

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

DATE COLLECTED: 01/27/05 11:35
DATE RECEIVED: 01/27/05
DATE ANALYZED: 01/28/05
ANALYST: R.R.

ENVIRONMETRICS

Total Extractable Hydrocarbons
METHOD OA2
PAGE One

SAMPLE ID: MBLK 19074
PARENT ORDER NUMBER: 247785

RUN NUMBER: 19074
QUANT FACTOR : 1.00

CAS NUMBER		PRACTICAL QUANTITATION LIMIT mg/L	RESULTS mg/L
	TPH as Mineral Spirits	0.10	U
	TPH as Motor Oil	0.15	U
68476-30-2	TPH as Diesel	0.10	U
	TPH as Jet Fuel	0.10	U
8008-20-6	TPH as Kerosene	0.06	U
	TPH as Hydraulic fluid	0.15	U

SURROGATE RECOVERY RESULTS

		% RECOVERY
92-94-4	p-Terphenyl	73

U = UNDETECTED

DATE ANALYZED: 01/27/05
ANALYST: J.K.

ENVIRONMETRICS

Geotechnology, Inc.
2258 Grissom Drive
St. Louis, MO 63146

ATTN: MIKE ROARK

INVOICE: 66152
PROJECT NO: 7532-06-57DE
PO: 26590

Total Extractable Hydrocarbons
METHOD OA2
PAGE One

SAMPLE ID: WASH U METRO GARAGE, INF-1
LAB ID: 9912018997-001
PARENT ORDER NUMBER: 247785 **RUN NUMBER:** 19074
QUANT FACTOR : 500.00

CAS NUMBER		PRACTICAL QUANTITATION LIMIT mg/L	RESULTS mg/L
	TPH as Mineral Spirits	50.00	U
	TPH as Motor Oil	75.00	U
68476-30-2	TPH as Diesel	50.00	U
	TPH as Jet Fuel	50.00	U
8008-20-6	TPH as Kerosene	30.00	143
	TPH as Hydraulic fluid	75.00	U

SURROGATE RECOVERY RESULTS

		% RECOVERY
92-94-4	p-Terphenyl	0

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

DATE COLLECTED: 01/27/05 11:35
DATE RECEIVED: 01/27/05
DATE ANALYZED: 01/27/05
ANALYST: J.K.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

TCB 02/02/05 SS Per Cuts DE

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine

Permit No: 5112262-00

Premise Address: 660 South Euclid Avenue St. Louis, MO 63110

Monitoring Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☒(OCT-DEC)

Samples Collected By: St. Louis testing Labs

Analyses Performed By: St. Louis testing labs.

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ——>		001		003		005		
DATES ON WHICH SAMPLES WERE COLLECTED ——>		G: 12/22/04 C: 12/21/04 - 12/22/04		G: 12/22/04 C: 12/21/04 - 12/22/04		G: 12/21/04 C: 12/20/04 - 12/21/04		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 11:30 Am C: 10:50 Am		G: 11:00 Am C: 10:30 Am		G: 10:30 Am C: 10:45 AM		24hr comps seedics
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW G=grab, C=composite, M=measured flow, E=estimated flow						UNITS
FLOW		E	12,500	E	28,500	E	700,000	gal/day
Biological Oxygen Demand		C	22	C	79	C	26	mg/L
Chemical Oxygen Demand		C	62	C	134	C	94	mg/L
Total suspended Solids		C	13	C	90	C	8	mg/L
pH		G	7.75	G	7.82	G	7.32	pH
Oil + Grease		G	<5	G	15	G	8	mg/L
Temperature °C		G	21.8	G	24.2	G	19.5	°C
Silver		C	<0.05	C	0.09	C	<0.05	mg/L

RECEIVED
JAN 20 2005
DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael J. Koch, CHMM

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 1/13/05

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine

Permit No: 511 2262-00

Premise Address: 660 South Euclid Avenue St. Louis, MO 63110

Monitoring Period: ☐(JAN-MAR) ☐(APR-JUNE) ☐(JULY-SEPT) ☒(OCT-DEC)

Samples Collected By: St. Louis testing labs

Analyses Performed By: St. Louis Testing labs

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ——>		006					
DATES ON WHICH SAMPLES WERE COLLECTED ——>		G: 12/21/04 C: 12/20/04 - 12/21/04					
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:00am C: 10:15am					
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW G=grab, C=composite, M=measured flow, E=estimated flow					UNITS
FLOW		E	19,000				gal/day
Biological Oxygen Demand		C	<10				mg/L
Chemical Oxygen Demand		C	29				mg/L
Total Suspended Solids		C	<5				mg/L
pH		G	8.10				pH
Oil & Grease		G	14				mg/L
Temperature °C		G	15.8				°C
Silver		C	<0.05				mg/L

RECEIVED
JAN 20 2005
DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

MSD 043806

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 your 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:

☐ I certify, since the last discharge monitoring report, there has been no change in the character of the wastes discharged at sampling point(s) _____ .

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:

☐ 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:

☐ I certify the grab sample results in this report accurately represent our average daily discharge at sample point(s) _____ _____.

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 :

☐ I certify, since the last discharge monitoring report, there has been no discharge of wastes which are subject to pretreatment standards in 40 CFR _____.

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:

☐ 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.

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: Michael T Koch, CHMM

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 1/13/05

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

December 30, 2004
Lab No. 04E-1610
Invoice No. 53911
P.O. 292480
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 12/22/04, 11:30 A.M.
WASTE WATER COMPOSITE, PT. 001, 12/21-22/04, 10:50 A.M.
WASTE WATER GRAB, PT. 003, 12/22/04, 11:00 A.M.
WASTE WATER COMPOSITE, PT. 003, 12/21-22/04, 10:30 A.M.
WASTE WATER GRAB, PT. 005, 12/21/04, 10:30 A.M.
WASTE WATER COMPOSITE, PT. 005, 12/20-21/04, 10:45 A.M.
WASTE WATER GRAB, PT. 006, 12/21/04, 10:00 A.M.
WASTE WATER COMPOSITE, PT. 006, 12/20-21/04, 10:15 A.M.

RESULTS: mg/L Except As Noted

ANALYTE	001	003	005	006	MDL	METHOD NUMBER
Biological Oxygen Demand (C)	22	79	26	<10	10	405.1
Chemical Oxygen Demand (C)	62	134	94	29	10	410.4
Total Suspended Solids (C)	13	90	8	<5	5	160.2
pH (Std. pH Units) (G)	7.75	7.82	7.32	8.10	---	150.1
Oil & Grease (G)	<5	15	8	14	5	1664
Temperature, °C (G)	21.8	24.2	19.5	15.8	---	170.1
Silver (C)	<0.05	0.09	<0.05	<0.05	0.05	200.7

MDL: Minimum Detection Limit

G- Grab
C-Composite

Steve Root

Steve Root, Manager
Environmental Testing

RECEIVED
JAN 20 2005
DIVISION OF
ENVIRONMENTAL COMPLIANCE

SR/jap

MEMBER ACIL

AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST. DO NOT REPRODUCE.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS.

5112216200 + LB
01/25/05
Rad55

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings East of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	4.1190
H-3	17.5765
I-125	0.0011
P-32	0.2066
S-35	0.0507
Zn-65	0.0040
TOTAL ACTIVITY DISCHARGED:	**21.9578**

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 of10 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 atachments were prepared under my direct 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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 01/20/2005

RE: radrpt.doc 2/00

red 01/25/05

METROPOLITAN SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University Medical School Buildings West of Euclid Ave.

Permit No:

Premise Address: 660 South Euclid, St. Louis, MO 63110

Reporting Period: ☐ (JAN-MAR) ☐ (APR-JUN) ☐ (JUL-SEP) ☒ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
C-14	0.0264
H-3	4.9999
I-125	0.0354
P-32	0.2969
P-33	0.0070
S-35	0.1905
TOTAL ACTIVITY DISCHARGED:	**5.5561**

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

DMK

I certify that to the best of my knowledge & belief, all requirements of10 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

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RE: radrpt.doc 2/00

RECEIVED

JAN 24 2005

DIVISION OF
ENVIRONMENTAL COMPLIANCE

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 51122162-00
Premise Address: 660 S. Euclid Zip Code: 63110-
Last Inspection Date: 5/27/03
MSD Categories: SIU ☒ CIU ☐ Surcharge ☐ Potential Toxic Waste ☒
Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐
Company Representative: Michael Koch
Title: Hazardous Materials Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 5/12/04 Time of Inspection: From 08:30 AM To 11:15 AM

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00, 51122176-01,90006372-01
   B. WERE ALL ACCT NUMBERS VERIFIED AS CORRECT & ACTIVE ON BILLING SYSTEM? Yes☒ No☐

2. PROCESS & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont		Yes	Daily	001,003,005
Research animal care	Cont		Yes	Daily	001,005
Food preparation	Batch		Yes	Daily	005
Cleanup at hazardous storage area (Bldg 80)	Batch		Yes	Daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (describe):

	Sample pt.
pH neutralization for labs, silver recovery units	001,003,006
Kitchen grease trap	005

4. HAS COMPANY BEGUN DISCHARGING ANY NEW POLLUTANTS SINCE THE LAST INSP? Yes☐ No☒
   A. List pollutants & process: _____
   B. Will MSD STP exceed existing NPDES discharge limit(s)? Yes☐ No☐
   C. Will MSD STP's discharge exceed 0.1 mg/l for any new pollutant? Yes☐ No☐
   (MSD must notify MDNR if B or C is yes and discharge will continue.)
   D. Comments: _____

5. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes☐ No☒
   A. If yes, list reg. & describe (including any discharge):
   _____

6. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes☐ No☒
   A. At which points? _____
   B. Current applied factor: _____ Is it correct? Yes☐ No☐
   C. If no, what is the correct factor & explain change? _____

7. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes☐ No☒
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes☐ No☐
   C. If yes, explain: _____

8. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes☒ No☐

A. Describe operations & disposal: Materials are collected from buildings and brought to Bldg 80 for disposal. Solids are hauled, liquids are decayed & sewered.

B. Does company have MSD authorization to disposal to sewer? Yes☒ No☐

C. Date of Authorization: 7/8/94 Annual amt approved: 320 mCi

D. Has company exceeded the approved quantity? Yes☐ No☒

E. If yes, explain: _____

9. DOES WATER USE APPEAR EXCESSIVE? Yes☐ No☒

A. Explain how verified & needed changes: The institution is very large and spread out. The usage appears normal for the activities I observed.

10. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes☐ No☒

A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

B. Comments: _____

11. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐

A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

B. Comments: _____

12. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes☒ No☐

A. Upsets? ☐ Bypasses of pretreatment facilities? ☐

Spills? ☐ Slug discharges? ☐ Other? On 9/2/03 75 gal. of phosphoric acid & 1200 gal. of diesel fuel were released to the sewer.

B. Explain any marked: A valve on a 200 gallon carboy leaked and dissolved chains on a hanging light fixture. The fixture fell on a diesel fuel day tank for a generator. A fill line on the tank broke and diesel fuel was released and the containment for the tank could not hold all of the diesel fuel. Corrective measures are detailed in a letter in the industry file.

13. ARE ANY SOLVENTS USED? Yes☒ No☐

A. Which solvents? Xylene, toluene, methanol Mineral spirits

B. What used for? Lab reagents Maintenance parts cleaning

C. How disposed? Collected & hauled Hauled off

14. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒
   A. If yes, what needs to be done? _____
   B. If no, how are they controlled? Secondary containment for drums. Procedures are in place for handling of chemicals in quantity.

15. DOES COMPANY HAVE ANY SPILL,SLUG OR SOLVENT MANAGEMENT PLANS(SMP)? Yes☒ No☐
   A. If yes:

Title	SMP? 413/433		Last Update		Copy in File? (SMP only)	Update needed? Explain if yes
Contingency Plan	N/A		2/4/04		Yes	No
	N/A				N/A	N/A
	N/A				N/A	N/A

   B. Are any Plans needed in addition to those listed in Part A? (write company and request) Yes☐ No☒

16. HAZARDOUS WASTES:
   A. Was the company informed/reminded that solid & hazardous waste management regulations (RCRA) exist and may potentially apply to industrial users? Yes☒ No☐
   B. Is there any discharge to the sewers of hazardous waste which has not been previously reported to MSD (under 40 CFR 403.12(p))? Yes☐ No☒
   C. If yes to B, list haz wastes: _____
   D. Was the company provided with a "Public Notice/Haz. Waste Discharge Notification" form for the above regulations (regardless of whether there are any discharges)? Yes☒ No☐
   F. Comments: _____

17. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes☒ No☐
   A. Are MSD contacts listed? Yes☒ No☐
   B. If no to either, describe how handled: _____

18. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐
   A. If yes, requirement is contained in permit ☒ or other document ☐.
   B. If other document, date & description: _____
   C. How frequently is sampling required? Quarterly
   D. How frequently are reports required? Quarterly
   E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐
   F. If no, explain: _____

19. IF COMPANY SELF-MONITORS (REQ'D OR NOT), DOES IT COLLECT REPRESENTATIVE GRAB/COMP SAMPLES & USE EPA-APPROVED 40CFR136 WASTEWATER TEST METHODS? N/A☐ Yes☒ No☐
   A. If no, explain needed changes: _____

20. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒
   A. If yes, type and date: _____
   B. Have the reports & actions been on-time & complete? Yes☐ No☐
   C. If no, explain: _____

21. DOES MSD CATEGORY NEED TO BE REVISED? Yes☐ No☒
   A. Indicate correct categories:
   SIU ☐ CIU ☐ Surcharge ☐ Potential Toxic Waste ☐
   Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐
   B. Explain changes: _____

22. SAMPLE POINTS

						DJ(y/n)
SP #	001	Fed.Reg.	N/A	Components:	Sanitary + NCCW + research teaching labs + p&e washdown + softener regeneration	No
SP #	003	Fed.Reg.	N/A	Components:	Sanitary + research teaching labs + p&e washdown	No
SP #	005	Fed.Reg.	N/A	Components:	Sanitary + NCCW + kitchen waste + animal care + teaching labs + p&e washdown + softener regen + boiler blowdown	No
SP #	006	Fed.Reg.	N/A	Components:	Sanitary + waste storage facility cleanup	No
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: 6/19/00
A. Is the map correct and accurate in all its details? Yes☐ No☒
B. If no, what changes are needed? Facility contact change

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.
A new building is being erected at the south side of the complex on the east side of the mouse house(Bldg 41/42). The building will be operational later in the fall 2004. The discharge will flow to McKinley.

MSD 043814

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**
Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

INDUSTRIAL USER CLASSIFICATIONS

01/10/1999
SIU PTW

WUNNENBERG INFO.

Base Map 19G3
Wun: St. Louis City & Co.
Grid: J 20 Page 26

SIU CRITERIA

PR25 Proc Disc => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO. 63110

INSPECTION INFORMATION

Next Due 06/30/2005
Insp Rslt
5/12/04 RIN
J. GOODALL

PERMIT INFORMATION

Issue Date: 01/01/2003
Expire Date: 12/31/2007
Extended Date:
Writer Fabian Grabsk

IUQ INFORMATION

IUQ Recvd Date: 08/19/2002
Reviewer: Fabian Grabski

CONTACTS

FLD1	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1995 Ext.
FLD2	Bruce Backus	Dir Environmental Health & Safety	OFF	(314) 362-6816 Ext.
OFF1	Michael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.
	Michael Koch	Hazardous Materials Manager	FAX	(314) 362-1095 Ext.
SIG1	MIchael Koch	Hazardous Materials Manager	OFF	(314) 362-6735 Ext.

OPERATIONAL INFORMATION

Work Days: 7

				S	M	T	W	T	F	S
1	6,650	08:00AM	8.0	Y	Y	Y	Y	Y	Y	Y
2	240	04:30PM	8.0	Y	Y	Y	Y	Y	Y	Y
3	255	11:30PM	8.0	Y	Y	Y	Y	Y	Y	Y

Total Emp: 7,145 **Hrs:** 24.0

OTHER AGENCIES INFORMATION

01/03/1997	Nuclear Regulatory Commission	24-00167-11
01/04/1997	MDNR - Hazardous Waste Program	01591
01/05/1997	EPA - Hazardous Waste Program	MOT 300010857

NON-SEWERED WASTE

On-Site Storage Y **On-Site Disposal** Y **Off-Site Disposal** Y
Data Conversion GAL

COMMENTS

RAW MATERIALS

EFF DATE	MATERIAL_DESCRIPTION	QUANTITY	UNIT
05/07/2004	Laboratory chemicals & reagents		

SIC INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

PRODUCTS

EFF	DESCRIPTION	UNIT	AVG_PROD	MAX_PROD
05/07/2004	Research			
05/07/2004	animal care and education			

Report No. PIMS012A 06/17/2004 2:43:39 pm
Data Date & Time: 06/17/2004 2:43:39 pm

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

SEWER ACCOUNTS

Sewer Accounts
5112216200
5112216100
5112216700
5112216800
5112217601
9000637201

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Start Date = 02/10/2003 **End Date =** 06/17/2004 **Wdays** **Cdays**

Acct. No.			Consumption				Discharge	
5112216100			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216100	02/07/2003	05/01/2003	490		84	84	84	
5112216100	05/02/2003	08/07/2003	1,510		98	98	182	
5112216100	08/08/2003	11/03/2003	940		88	88	270	
5112216100	11/04/2003	02/03/2004	180		92	92	362	
RF 1.00	**Acct. Total**		3,120	2,333,922	362	362	6,447	6,447
5112216200			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216200	11/20/2002	02/14/2003	30,536		87	87	87	
5112216200	02/15/2003	05/21/2003	21,688		96	96	183	
5112216200	05/22/2003	08/13/2003	44,096		84	84	267	
5112216200	08/14/2003	11/13/2003	22,525		92	92	359	
5112216200	11/14/2003	02/04/2004	40,791		83	83	442	
RF 0.91	**Acct. Total**		159,636	119,416,029	442	442	245,857	245,857
5112216700			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216700	02/06/2003	05/06/2003	47,726		90	90	90	
5112216700	05/07/2003	08/06/2003	44,285		92	92	182	
5112216700	08/07/2003	11/06/2003	48,592		92	92	274	
5112216700	11/07/2003	02/04/2004	41,083		90	90	364	
RF 0.73	**Acct. Total**		181,686	135,910,576	364	364	272,568	272,568
5112216800			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112216800	02/07/2003	05/01/2003	2,700		84	84	84	
5112216800	05/02/2003	08/07/2003	4,100		98	98	182	
5112216800	08/08/2003	11/03/2003	3,900		88	88	270	
5112216800	11/04/2003	02/02/2004	2,300		91	91	361	
RF 1.00	**Acct. Total**		13,000	9,724,676	361	361	26,938	26,938
5112217601			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
5112217601	02/07/2003	05/01/2003	290		84	84	84	
5112217601	05/02/2003	08/07/2003	930		98	98	182	
5112217601	08/08/2003	11/03/2003	740		88	88	270	
5112217601	11/04/2003	02/02/2004	300		91	91	361	
RF 1.00	**Acct. Total**		2,260	1,690,598	361	361	4,683	4,683
9000637201			**CCF's**	**Gallons**			**Gal/ Wday**	**Gal/ Cday**
9000637201	11/19/2002	02/13/2003	12,155		87	87	87	
9000637201	02/14/2003	05/08/2003	10,504		84	84	171	
9000637201	05/09/2003	11/05/2003	15,714		181	181	352	
9000637201	11/06/2003	02/13/2004	10,520		100	100	452	
RF 0.58	**Acct. Total**		48,893	36,574,506	452	452	46,932	46,932
	Facility Total		408,595					

Report No. PIMS012A 06/17/2004 2:43:39 pm
Data Date & Time: 06/17/2004 2:43:39 pm

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
01	Sanitary Or Combined	20G2	232C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings located S of McKin

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 001 Ordinance **NPDES Outfall No.**

Description Flow from W in MH 30' N, 10' W of NE corner of building 2

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		650	GPD		GPD	D	8/19/02
Sanitary		13,650	GPD		GPD	D	8/19/02
Regeneration/Rejec	Water softner regen waste	6,045	GPD		GPD	D	8/19/02
Non Contact Coolir		3,710	GPD		GPD	D	5/12/04
Research & Develo		2,200	GPD		GPD	D	5/12/04
Process Waste	Research animal care	5,575	GPD		GPD	D	5/12/04
	Total Flow Avg =	**31,830**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
02	Sanitary Or Combined	19G3	229C	Trunk Sewer	Old Mill Creek

Description Lateral from buildings N&S of Scott Av &

Sewer Route S on Taylor to Clayton Av, E to Boyle, N t

SAMPLE POINT NO. 005 Ordinance **NPDES Outfall No.**

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment		4,938	GPD		GPD	D	8/19/02
Kitchen Waste		4,778	GPD		GPD	D	8/19/02
Regeneration/Rejec		36,270	GPD		GPD	D	8/19/02
Sanitary		120,266	GPD		GPD	D	8/19/02
Research & Develo	Teaching labs	53,365	GPD		GPD	D	8/19/02
Process Waste	Research animal care	135,800	GPD		GPD	D	5/12/04
Non Contact Coolir		119,519	GPD		GPD	D	5/12/04
Boiler Blowdown		12,400	GPD		GPD	D	5/12/04
	Total Flow Avg =	**487,336**		**Max =**			

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Lemay
03	Sanitary Or Combined	19G3	543C	Trunk Sewer	River des Peres (County Section)

Description Lateral N from Building 14 W of Euclid A

Sewer Route W across S Kingshighway Blvd into Fores

SAMPLE POINT NO. 003 Ordinance **NPDES Outfall No.**

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanl

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Sanitary		23,570	GPD		GPD	D	8/19/02
Research & Develo		20,180	GPD		GPD	D	5/12/04
Plant & Equipment		1,500	GPD		GPD	D	5/12/04
	Total Flow Avg =	**45,250**		**Max =**			

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME **WASHINGTON UNIVERSITY MEDICAL SCHOOL**
PRIMARY MSD ACCOUNT NO. **5112216200**

Premise Address 660 S. Euclid Ave.
St. Louis MO. 63110

CONNECTION and SAMPLE POINT INFORMATION

LATERAL NO.	Lateral Type	DSMH		Treatment Area	Bissell Point
04	Sanitary Or Combined	19G3	259C	Trunk Sewer	Old Mill Creek

Description 8" lateral E from Building 80 at Taylor an

Sewer Route N to Parkview to Duncan, E to trunk to tre

SAMPLE POINT NO. 006 Ordinance **NPDES Outfall No.**

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Avg Flow	Unit	Max Flow	Unit	RUD	Effective Date
Plant & Equipment	Waste Storage Facility	19,050	GPD		GPD	D	8/19/02
Sanitary		500	GPD		GPD	D	8/19/02
	Total Flow Avg =	**19,550**		**Max =**			

PRETREATMENT TYPES

SP	EFF DATE	TYPE	DESCRIPTION
001	09/02/1998	DC32	Metallic Replacement
001	09/02/1998	DC37	pH Adjustment / Neutralization
002	09/02/1998	DC28	Grease Trap
002	09/02/1998	DC32	Metallic Replacement
002	09/02/1998	DC37	pH Adjustment / Neutralization
003	09/02/1998	DC32	Metallic Replacement
003	09/02/1998	DC37	pH Adjustment / Neutralization
004	09/02/1998	DC32	Metallic Replacement
004	09/02/1998	DC37	pH Adjustment / Neutralization
005	06/16/1995	DC28	Grease Trap
006	06/19/2000	DC32	Metallic Replacement
006	05/08/2001	DC37	pH Adjustment / Neutralization

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
2,4-Dinitrotoluene	SP	2,6-Dinitrotoluene	SP	Naphthalene	SP
Cyanide (Total)	SP	Asbestos (Fibrous)	SP	Silver (Total)	SP
Mercury (Total)	SP	Chromium (Total)	SP	Arsenic (Total)	SP
Phenol	SP	2,4-Dinitrophenol	SP	Toluene	SP
Methylene Chloride	SP	Chloroform	SP	Carbon Tetrachloride	SP
Benzene	SP				

EXTRA STRENGTH SURCHARGE INFORMATION

For Account Number 5112216200 **PIMS FACILITY CONTACTS**
WASHINGTON UNIVERSITY MEDIC
Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type / Contact Type	Contact Name		Contact Title	Phone	Number	Ext.
Office Mailing Address						
Auth Signature - Primary	MIchael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1095	
Office Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Premise Address						
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	FAX	(314)362-1995	
Field Contact - Primary	Michael	Koch	Hazardous Materials Manager	OFF	(314)362-6735	
Field Contact 1st Alt	Bruce	Backus	Dir Environmental Health & Safety	OFF	(314)362-6816	

PIMS

RE[illegible]RT OF FIELD SAMPLING REQUIREME[illegible]

Account No Entered **5112216200** WASHINGTON UNIVERSITY MEDICAL SCHOOL

SPN	Premise Address	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs			
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs			
	T237000	pH	Once/year	Grab			
	T247000	Temperature	Once/year	Grab			
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs			
	T309000	Benzene	Once/year	Grab			
	T328000	Carbon Tetrachloride	Once/year	Grab			
	T332000	Chloroform	Once/year	Grab			
	T371000	Methylene Chloride	Once/year	Grab			
	T375000	Naphthalene	Once/year	Grab			
	T388000	Phenol	Once/year	Grab			
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs			
	T397000	Toluene	Once/year	Grab			
	T999000	Total Toxic Organics	Once/year	Grab			

003	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs			
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs			
	T237000	pH	Once/year	Grab			
	T247000	Temperature	Once/year	Grab			
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs			
	T309000	Benzene	Once/year	Grab			
	T328000	Carbon Tetrachloride	Once/year	Grab			
	T332000	Chloroform	Once/year	Grab			
	T371000	Methylene Chloride	Once/year	Grab			
	T375000	Naphthalene	Once/year	Grab			
	T388000	Phenol	Once/year	Grab			
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs			
	T397000	Toluene	Once/year	Grab			
	T999000	Total Toxic Organics	Once/year	Grab			

005	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs			
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs			
	T234000	Oil and Grease (Total)	Once/year	Grab			
	T237000	pH	Once/year	Grab			
	T247000	Temperature	Once/year	Grab			
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs			
	T309000	Benzene	Once/year	Grab			
	T328000	Carbon Tetrachloride	Once/year	Grab			
	T332000	Chloroform	Once/year	Grab			
	T371000	Methylene Chloride	Once/year	Grab			
	T375000	Naphthalene	Once/year	Grab			
	T388000	Phenol	Once/year	Grab			
	T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs			
	T397000	Toluene	Once/year	Grab			
	T999000	Total Toxic Organics	Once/year	Grab			

006	Poll Code	Pollutant Description	Frequency	Sample Type	IM	= IPD - Company - MSD	End Date
	T208000	Biochemical Oxygen Demand (5 D	Once/year	Comp-Time 04 Hrs			
	T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs			
	T234000	Oil and Grease (Total)	Once/year	Grab			
	T237000	pH	Once/year	Grab			
	T247000	Temperature	Once/year	Grab			
	T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs			

PIMS

REPORT OF FIELD SAMPLING REQUIREMENTS

Account No Entered **5112216200** WASHINGTON UNIVERSITY MEDICAL SCHOOL

SPN	Premise Address	CITY	ST	ZIP
T309000	Benzene	Once/year	Grab	
T328000	Carbon Tetrachloride	Once/year	Grab	
T332000	Chloroform	Once/year	Grab	
T371000	Methylene Chloride	Once/year	Grab	
T375000	Naphthalene	Once/year	Grab	
T388000	Phenol	Once/year	Grab	
T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs	
T397000	Toluene	Once/year	Grab	
T999000	Total Toxic Organics	Once/year	Grab	

Metropolitan Saint Louis Sewer District
2350 Market Street
Saint Louis, Missouri 63103-2555

WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229

St. Louis, MO 63110

MSD ACCOUNT #: W5112216200

INVOICE

Invoice Number: PDP-3063

Invoice Date: 12/23/03

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2003 through September 30, 2004 issued in accordance with the Metropolitan St. Louis Sewer District Ordinance #8660 for the location at 660 S. Euclid Ave..

Basecharge @ $150.00 per permit		150.00
Volume charge (computed on average daily ccf's)	844.530 ccfs @ $.72 per ccf	608.06
Sample Point Charge 4 points @ $100.00 per sample point.		400.00
	Total Fee Due:	$1,158.06

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

IND: Wash. U. Med. School

Washington University in St. Louis

Environmental Health & Safety

September 7, 2003

Doug Mendoza
Department of Environmental Compliance
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Chemical Release to Combined Sewer

Dear Mr. Mendoza:

On September 2, 2003, Facilities Management personnel from Washington University School of Medicine discovered a large spill of diesel fuel on the subbasement floor of CSRB-NTA (see building # 86 on enclosed map). As the site was investigated it was discovered that the diesel fuel had reached the floor drains and was draining into the containment sump where excess basement water flows for pumping up to the combined sewer. This was discovered at about 3:45 p.m. on the day of the spill. Soon thereafter I was contacted and immediately reported the incident to your office and was asked to submit an incident report to Doug Mendoza of MSD.

Description of the Incident

Around 3:45 p.m., 9/2/03, Bruce Backus, Assistant Vice Chancellor for Environmental Health and Safety, was notified by the School of Medicine Facilities Management Department (FMD) that a large spill of diesel fuel was released in the basement of the Clinical Sciences Research Building-North Tower Addition (CSRB-NTA). It was estimated that approximately 1,300 gallons of No. 2 diesel fuel were released to the floor of the equipment room. The fuel went to sump areas, where sump pumps then pumped the fuel to the MSD combined sewer system. According to equipment records, it appears the incident occurred around 12:30 p.m. on that day.

FMD personnel shut off the source of the leak, notified EH&S, and contracted Wellington Environmental to clean up the residual fuel. (There appeared to be a large volume of liquid contained on the floor and in the sumps.)

EH&S immediately notified MSD and the Missouri Department of Natural Resources (MDNR) spill line. The MDNR Response Center took the spill information, assigned the release Report No. 655732 and said they would contact the National Spill Response Center.

On 9/3/03, at approximately 8:30 a.m., further investigation of the incident revealed that in the CSRB-NTA loading dock above the generator room, a 200-gallon carboy of concentrated phosphoric acid, which contained approximately 100 gallons of acid at the time, had sprung a leak from a side-mounted valve. (The acid is used by the Division of Comparative Medicine to clean their animal cages.) The leak collected in a containment pit designed for such releases.

RECEIVED
SEP 15 2003

Washington University in St. Louis, Campus Box 8229
660 S. Euclid Avenue, St. Louis, Missouri 63110-1093, (314) 362-6816, *Fax* (314) 362-1995
esafety@msnotes.wustl.edu, www.ehs.wustl.edu

but the acid penetrated the chemically resistant coating and subsequently seeped through the concrete floor below. The acid dissolved the chains holding up a large fluorescent light fixture and the light fixture fell on top of the day tank for the emergency generator. The falling light fixture caught on fire and the fire shorted out the solenoid valves on the day tank, which caused the pumps to overfill the day tank. (The light fixture or the fire also damaged a hose connection on the top of the day tank, which allowed the fuel to overflow.) The day tank does have secondary containment, but it could not hold the approximately 1,300 gallons of diesel fuel pumped into the day tank from the main fuel tank.

It was finally determined that the approximate total volume of chemicals released to the combined sewer system was 1,200 gallons of diesel fuel and 75 gallons of phosphoric acid (please note that approximately 100 gallons of diesel fuel was recovered by Wellington Environmental Emergency Response Services).

Preventive Actions

This incident's root cause was the leaking phosphoric acid from a side-mounted valve on a large (200-gallon) storage carboy of phosphoric acid. Initial plans are to phase-out the large carboys and start to use 55-gallon drums of phosphoric acid with a system that pumps through a tube inserted into the top of the drum. This both reduces the potential volume for a spill and eliminates the concern of valve leaks. The containment basin will be properly repaired and/or the 55-gallon drums will be stored on containment pallets. All new light fixtures will be secured using solid braces along with cross-supports. This will stabilize the light fixture and help prevent the fixture from falling from physical or chemical stress. Additionally, the day tank will be fitted with a protective cover to prevent damage from falling objects. All other tank systems on campus will be reviewed for potential problems and action will be taken if needed at other locations. Finally, all maintenance personnel will be briefed on this incident and these preventive actions. It is our belief that these actions will greatly reduce the probability of similar problems recurring.

We welcome any questions, comments, or suggestions. If you need to contact me, please call 314-362-6735.

Sincerely,

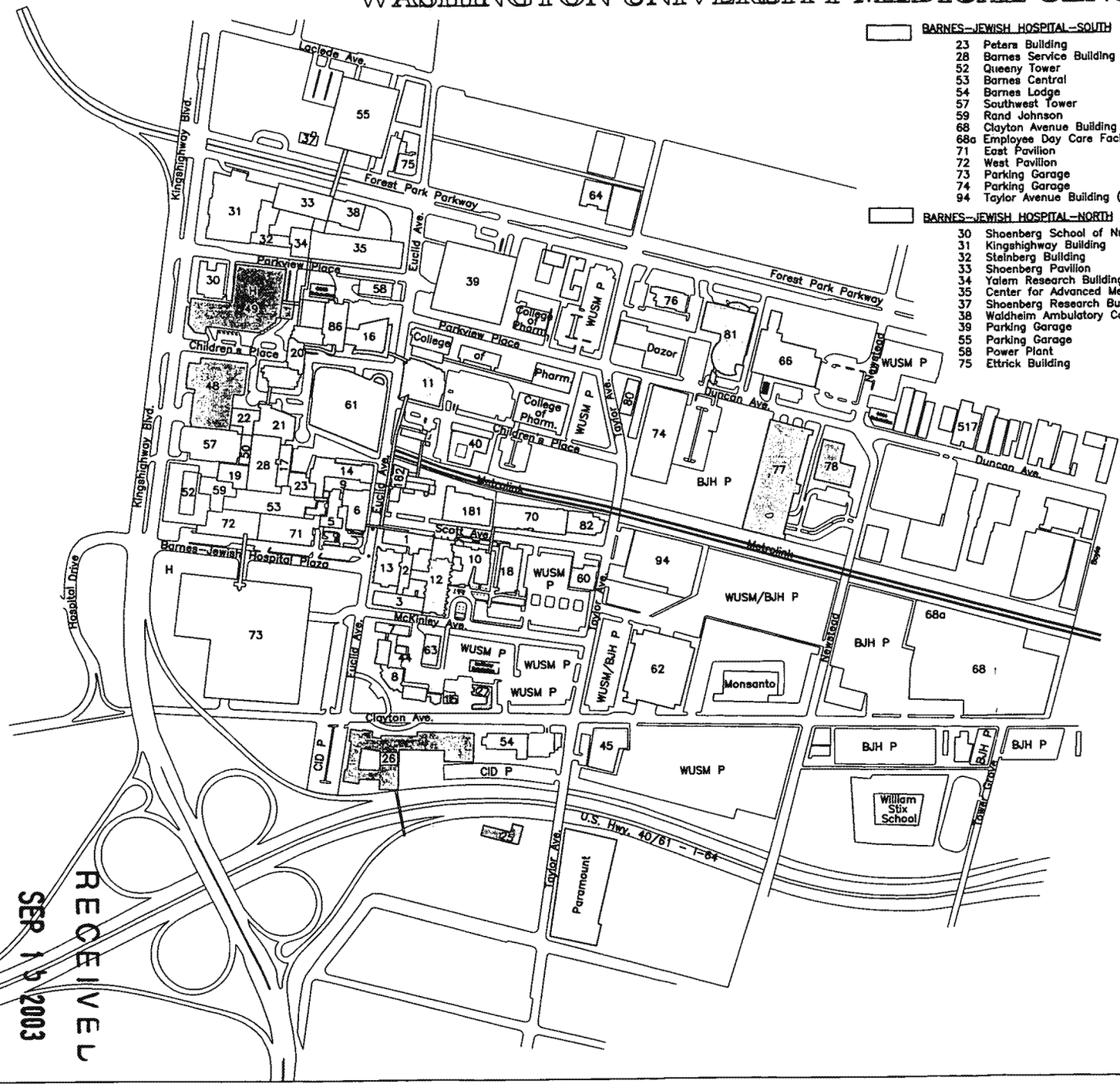
Michael T. Kershaw

Enc: 1

cc: Bruce Backus, Assistant Vice Chancellor for Environmental Health and Safety
Linda Vishino, University Environmental Compliance Officer

RECEIVED
SEP 15 2003

WASHINGTON UNIVERSITY MEDICAL CENTER



BARNES-JEWISH HOSPITAL-SOUTH

23 Peters Building
28 Barnes Service Building
52 Queeny Tower
53 Barnes Central
54 Barnes Lodge
57 Southwest Tower
59 Rand Johnson
68 Clayton Avenue Building
68a Employee Day Care Facility
71 East Pavilion
72 West Pavilion
73 Parking Garage
74 Parking Garage
94 Taylor Avenue Building (TAB)

BARNES-JEWISH HOSPITAL-NORTH

30 Shoenberg School of Nursing
31 Kingshighway Building
32 Steinberg Building
33 Shoenberg Pavilion
34 Yalem Research Building
35 Center for Advanced Medicine (CAM)
37 Shoenberg Research Building
38 Waldheim Ambulatory Care Center
39 Parking Garage
55 Parking Garage
58 Power Plant
75 Ettrick Building

WASHINGTON UNIVERSITY MEDICAL CENTER

11 Eric P. Newman Education Center

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

1 North Building
2 Cancer Research Building
3 South Building
5 Maternity
6 McMillan
7 Biomedical Computing Laboratory
8 Shriner's
9 Irene Walter Johnson Institute of Rehab
10 Olin Residence Hall
12 McDonnell Medical Sciences Building
13 Becker Medical Library
14 West Building
15 Health Administration Program
16 McDonnell Pediatric Research Building
17 Renard
18 East McDonnell S.R.F.
19 Mallinckrodt Institute of Radiology
20 Clinical Sciences Research Building
21 Wohl Clinic
22 Wohl Hospital
40 Storz Building
44 Supply Room
45 4480 Clayton
60 Library Annex
61 Parking Garage
62 Parking Garage
63 Interim Sp. Res. Facility
64 4511 Forest Park
66 4444 Forest Park
70 East Building
76 4488 Forest Park
80 4500 Parkview
82 East Imaging
86 CSRB-North Tower Addition
181 Biotechnology Center
182 Euclid Power Plant
517 4363 Duncan

BARNARD HOSPITAL

50 Barnard Hospital

ST. LOUIS CHILDREN'S HOSPITAL

48 Parking Garage
49 Children's Hospital
77 Parking Garage
78 Child Development Center

CENTRAL INSTITUTE FOR THE DEAF

25 Clinic/Research Building
26 Central Institute for the Deaf
27 Residence Hall

HEALTH SOUTH

81 Rehabilitation Institue of St. Louis (RISL)

SURFACE PARKING LOTS

BJH P	– Barnes-Jewish Hospital
CID P	– Central Institute
WUSM P	– Medical School
WUSM/BJH P	– Medical School & Barnes-Jewish
H	– Heliport

Washington University in St. Louis
SCHOOL OF MEDICINE

REVISION 8/20/02

RECEIVED
SEP 16 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University School of Medicine Account #: 51122162-00
Premise Address: 660 S. Euclid Zip Code: 63110-
Last Inspection Date: 6/10/02
MSD Categories: SIU ☒ CIU ☐ Surcharge ☐ Potential Toxic Waste ☒
Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐
Company Representative: Mike Kershaw
Title: Hazardous Materials Division Manager Phone#: 314-362-6735
Inspector: J. Goodall
Others Present: None
Inspection Date: 5/27/03 Time of Inspection: From 09:30 AM To 11:05 AM

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes☒ No☐
   List them, note any changes: 51122161-00,51122167-00,51122168-00, 51122176-01,90006372-01
   B. WERE ALL ACCT NUMBERS VERIFIED AS CORRECT & ACTIVE ON BILLING SYSTEM? Yes☒ No☐

2. PROCESS & CLEANUP/WASHDOWN:

	Cont/ Batch		Water Used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont		Yes	Daily	001,003, 005
Research animal care	Cont		Yes	Daily	001,005
Food preparation	Batch		Yes	Daily	005
Cleanup at hazardous storage area - Bldg 80	Batch		Yes	Daily	006
	(None)		N/A		
	(None)		N/A		

3. PRETREATMENT (describe):

	Sample pt.
pH neutralization for labs, silver recovery units	001,003 006
Kitchen grease trap	005

4. HAS COMPANY BEGUN DISCHARGING ANY NEW POLLUTANTS SINCE THE LAST INSP? Yes☐ No☒
   A. List pollutants & process: _____
   B. Will MSD STP exceed existing NPDES discharge limit(s)? Yes☐ No☐
   C. Will MSD STP's discharge exceed 0.1 mg/l for any new pollutant? Yes☐ No☐
   (MSD must notify MDNR if B or C is yes and discharge will continue.)
   D. Comments: _____

5. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes☐ No☒
   A. If yes, list reg. & describe (including any discharge):
   _____

6. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes☐ No☒
   A. At which points? _____
   B. Current applied factor: _____ Is it correct? Yes☐ No☐
   C. If no, what is the correct _____
   factor & explain change?

MSD 043826

7. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes☐ No☒
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes☐ No☐
   C. If yes, explain: _____

8. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes☒ No☐
   A. Describe operations & disposal: Materials are collected from buildings and brought to Bldg 80 for disposal. Solids hauled, liquids decayed & sewered.
   B. Does company have MSD authorization to disposal to sewer? Yes☒ No☐
   C. Date of Authorization: 7/8/94 Annual amt approved: 320 mCi
   D. Has company exceeded the approved quantity? Yes☐ No☒
   E. If yes, explain: _____

9. DOES WATER USE APPEAR EXCESSIVE? Yes☐ No☒
   A. Explain how verified & needed changes: Large volume appears normal for the size of the institution and the operations performed.

10. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes☐ No☒
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

11. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA☒ Yes☐ No☐
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? Yes/No	Describe
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	
			N/A	

   B. Comments: _____

12. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes☐ No☒
   A. Upsets? ☐ Bypasses of pretreatment facilities? ☐
   Spills? ☐ Slug discharges? ☐ Other? _____
   B. Explain any marked: _____

13. ARE ANY SOLVENTS USED? Yes☒ No☐
   A. Which solvents? Xylene, toluene, methanol Mineral spirits
   B. What used for? Lab reagents Maintenance parts cleaning
   C. How disposed? Collected & hauled Hauled

14. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes☐ No☒
   A. If yes, what needs to be done? _____
   B. If no, how are they controlled? Secondary containment for drums. Procedures for handling of chemicals in quantity.

15. DOES COMPANY HAVE ANY SPILL, SLUG OR SOLVENT MANAGEMENT PLANS (SMP)? Yes☒ No☐

A. If yes:

Title	SMP? 413/433		Last Update		Copy in File? (SMP only)	Update needed? Explain if yes
Contingency Plan	N/A		11/1/98		Yes	No
	N/A				N/A	N/A
	N/A				N/A	N/A

B. If no, is one needed? (write company and request) Yes☐ No☐

16. HAZARDOUS WASTES:

A. Was the company informed/reminded that solid & hazardous waste management regulations (RCRA) exist and may potentially apply to industrial users? Yes☒ No☐

B. Is there any discharge to the sewers of hazardous waste which has not been previously reported to MSD (under 40 CFR 403.12(p))? Yes☐ No☒

C. If yes to B, list haz wastes: _____

D. Was the company provided with a "Public Notice/Haz. Waste Discharge Notification" form for the above regulations (regardless of whether there are any discharges)? Yes☒ No☐

F. Comments: _____

17. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes☒ No☐

A. Are MSD contacts listed? Yes☒ No☐

B. If no to either, describe how handled: _____

18. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes☒ No☐

A. If yes, requirement is contained in permit ☐ or other document ☐.

B. If other document, date & description: _____

C. How frequently is sampling required? Quarterly

D. How frequently are reports required? Quarterly

E. Have reports been on-time, complete & signed by proper person? Yes☒ No☐

F. If no, explain: _____

19. IF COMPANY SELF-MONITORS (REQ'D OR NOT), DOES IT COLLECT REPRESENTATIVE GRAB/COMP SAMPLES & USE EPA-APPROVED 40CFR136 WASTEWATER TEST METHODS? N/A☐ Yes☒ No☐

A. If no, explain needed changes: _____

20. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes☐ No☒

A. If yes, type and date: _____

B. Have the reports & actions been on-time & complete? Yes☐ No☐

C. If no, explain: _____

21. DOES MSD CATEGORY NEED TO BE REVISED? Yes☐ No☒

A. Indicate correct categories:

SIU ☐ CIU ☐ Surcharge ☐ Potential Toxic Waste ☐

Non-Toxic Waste ☐ No Process Flow ☐ Multi User ☐ IIU ☐

B. Explain changes: _____

22. SAMPLE POINTS

						DJ(y/n)
SP #	001	Fed.Reg.	N/A	Components:	Sanitary + NCCW + Teaching Labs + Animal care + Softener regen + P&E washdown	No
SP #	003	Fed.Reg.	N/A	Components:	Sanitary + Teaching labs + P&E washdown	No
SP #	005	Fed.Reg.	N/A	Components:	Sanitary + NCCW +Kitchen waste + Animal care + Teaching labs + P&E washdown + Softener regen + Boiler blowdown	No
SP #	006	Fed.Reg.	N/A	Components:	Sanitary + Waste storage facility cleanup	No
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: 6/19/00
   A. Is the map correct and accurate in all its details? Yes☒ No☐
   B. If no, what changes are needed? _____

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.

_____

MSD 043829

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCHOOL
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

INDUSTRIAL USER CATEGORIZATIONS

Effective Date	SIU	CIU	Surcharge	High Flow	Pot Toxic Waste	No Proc Flow	Multi User Acct	IIU
01/12/1999	Y				Y			

Effective Date	SIU Criteria
01/12/1999	Proc Disc => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

MSD Base Map: 19G3
Wun: St. Louis City & Co.
Grid: J 20 **Page:** 26

Last Routine Inspection
Date; 05/27/2003
Inspector: James Goodall
Next Due:

Last Inspection
Date: 05/27/2003 **Type:** RIN
Inspector James Goodall

IUQ Recvd Date: 08/19/2002
Reviewer: Fabian Grabski

Permit Issue Date: 01/01/2003
Permit Exp.Date: 12/31/2007
Extend / Term Date
Permit Writer Fabian Grabski

CONTACTS:

Auth Signature - Primary	MIchael T Kershaw	Haz Materials Div Mgr; EH&S	Office Phone	(314) 362-6816 Ext
Field Contact - Primary	Mike Kershaw	Hazardous Materials Division Manager	Office Phone	(314) 362-6735 Ext
Field Contact 1st Alt	Bruce Backus	Dir Environmental Health & Safety	Office Phone	(314) 362-6816 Ext
Office Contact - Primary	Mike Kershaw	Hazardous Materials Division Manager	Office Phone	(314) 362-6735 Ext

OPERATIONAL INFORMATION

Work Days / Week:	7
Employees:	7,145
Shifts / Day:	3
Hrs. of Operation:	24

Shift No.	No. of Emp.	Shift Start Time	Shift Duration
1	6,650	08:00 AM	8
2	240	04:30 PM	8
3	255	11:30 PM	8

Other Agencies	Permit Number
EPA - Hazardous Waste Program	MOT 300010857
MDNR - Hazardous Waste Program	01591
Nuclear Regulatory Commission	24-00167-11

NON-SEWERED WASTE **On-Site Storage:** Y **On-Site Disposal:** Y **Off-Site Disposal:** Y

COMMENTSCont-op, SPCCP-yes

PRODUCT & SERVICE INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

Raw Materials / Processes:
Laboratory chemicals & reagents

Products / Services:
Research, animal care and education

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCHOOL
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Sewer Accounts
5112216100
5112216200
5112216700
5112216800
5112217601
9000637201

Start Date: 06/01/2001 **End Date =** 12/31/2002

Acct No.			Consumption CCF's	Consumption Gallons	Wdays	Cdays	Discharge Gal / Wday	Discharge Gal / Cday
5112216100								
	05/02/2001	08/03/2001	1,330		94	94		
	08/04/2001	11/01/2001	1,090		90	90		
	11/02/2001	02/01/2002	350		92	92		
	02/02/2002	05/01/2002	330		89	89		
	05/02/2002	08/01/2002	1,570		92	92		
RF 1.00	Acct. Total		4,670	3,493,403	457	457	7,644	7,644
5112216200			**CCF's**	**Gallons**			**Gal / Wday**	**Gal / Cday**
	05/09/2001	08/08/2001	33,088		92	92		
	08/09/2001	11/07/2001	50,007		91	91		
	11/08/2001	02/25/2002	34,140		110	110		
	02/26/2002	05/08/2002	40,026		72	72		
	05/09/2002	08/02/2002	40,525		86	86		
RF 0.91	Acct. Total		197,786	147,954,213	451	451	298,533	298,533
5112216700			**CCF's**	**Gallons**			**Gal / Wday**	**Gal / Cday**
	05/08/2001	08/06/2001	50,953		91	91		
	08/07/2001	11/06/2001	51,803		92	92		
	11/07/2001	02/25/2002	38,616		111	111		
	02/26/2002	05/14/2002	40,996		78	78		
	05/15/2002	08/09/2002	51,718		87	87		
RF 0.73	Acct. Total		234,086	175,108,500	459	459	278,495	278,495
5112216800			**CCF's**	**Gallons**			**Gal / Wday**	**Gal / Cday**
	05/02/2001	08/03/2001	4,300		94	94		
	08/04/2001	11/01/2001	4,800		90	90		
	11/02/2001	02/01/2002	2,800		92	92		
	02/02/2002	05/01/2002	2,600		89	89		
	05/02/2002	08/01/2002	5,600		92	92		
RF 1.00	Acct. Total		20,100	15,035,845	457	457	32,901	32,901
5112217601			**CCF's**	**Gallons**			**Gal / Wday**	**Gal / Cday**
	05/02/2001	08/03/2001	660		94	94		
	08/04/2001	11/01/2001	820		90	90		
	11/02/2001	02/01/2002	260		92	92		
	02/02/2002	05/01/2002	270		89	89		
	05/02/2002	08/01/2002	770		92	92		
RF 1.00	Acct. Total		2,780	2,079,585	457	457	4,551	4,551
9000637201			**CCF's**	**Gallons**			**Gal / Wday**	**Gal / Cday**
	05/02/2001	08/03/2001	30,222		94	94		
	08/04/2001	11/01/2001	30,636		90	90		
	11/02/2001	02/01/2002	11,710		92	92		
	02/02/2002	05/01/2002	14,704		89	89		
	05/02/2002	08/01/2002	21,624		92	92		
RF 0.58	Acct. Total		108,896	81,459,871	457	457	103,385	103,385
	Facility Total		**568,318**				**725,508**	**725,508**

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCHOOL
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

SEWER CONNECTION INFORMATION

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
01	Sanitary Or Combined	20G2 232C	Bissell Point	Old Mill Creek

Description Lateral from buildings located S of McKinley Av & E of Euclid Av

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT No. 001 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Sanitary		13,650	GPD	D	08/19/2002
Non Contact Cooling Water		20,150	GPD	D	
Non Categorical Process Waste	Research animal care	25,805	GPD	D	
Research & Development Waste		6,305	GPD	D	
Regeneration/Reject Water	Water softner regen waste	6,045	GPD	D	
Plant & Equipment Washdown		650	GPD	D	
	TOTAL QNTY:	72,605			

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
02	Sanitary Or Combined	19G3 229C	Bissell Point	Old Mill Creek

Description Lateral from buildings N&S of Scott Av & E of Euclid

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT No. 005 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Plant & Equipment Washdown		4,938	GPD	D	08/19/2002
Regeneration/Reject Water		36,270	GPD	D	
Boiler Blowdown		65,023	GPD	D	
Research & Development Waste	Teaching labs	53,365	GPD	D	
Non Categorical Process Waste	Research animal care	229,210	GPD	D	
Kitchen Waste		4,778	GPD	D	
Non Contact Cooling Water		181,350	GPD	D	
Sanitary		120,266	GPD	D	
	TOTAL QNTY:	695,200			

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
03	Sanitary Or Combined	19G3 543C	Lemay	River des Peres (County Section)

Description Lateral N from Building 14 W of Euclid Av to courtyard

Sewer Route W across S Kingshighway Blvd into Forest Park to trunk to treatment plant

SAMPLE POINT No. 003 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Sanitary		23,569	GPD	D	08/19/2002
Research & Development Waste		5,681	GPD	D	
Plant & Equipment Washdown		500	GPD	D	
	TOTAL QNTY:	29,750			

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
04	Sanitary Or Combined	19G3 259C	Bissell Point	Old Mill Creek

Description 8" lateral E from Building 80 at Taylor and Parkview to an unnamed street

Sewer Route N to Parkview to Duncan, E to trunk to treatment plant

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCHOOL
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

SAMPLE POINT No. 006 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Sanitary		500	GPD	D	08/19/2002
Plant & Equipment Washdown	Waste Storage Facility	19,050	GPD	D	
	TOTAL QNTY:	19,550			

PRETREATMENT TYPES

SPN	Pretreatment Description	SPN	Pretreatment Description	SPN	Pretreatment Description
001	Metallic Replacement	001	pH Adjustment / Neutralization	003	Metallic Replacement
003	pH Adjustment / Neutralization	005	Grease Trap	006	Metallic Replacement
006	pH Adjustment / Neutralization				

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
2,4-Dinitrophenol	SP	2,4-Dinitrotoluene	SP	2,6-Dinitrotoluene	SP
Arsenic (Total)	KP	Asbestos (Fibrous)	KP	Benzene	KP
Carbon Tetrachloride	KP	Chloroform	KP	Chromium (Total)	KP
Cyanide (Total)	KP	Mercury (Total)	KP	Methylene Chloride	KP
Naphthalene	KP	Phenol	KP	Silver (Total)	KP
Toluene	KP				

EXTRA STRENGTH SURCHARGE INFORMATION

Certification / Recertification Date

ECIMS FACILITY CONTACTS

For Account Number Selecte 5112216200 WASHINGTON UNIVERSITY MEDICA
Located at 660 S. Euclid Ave.
St. Louis MO 63110

Address Type / Contact Type	Contact Name	Contact Title	Phone Type	Number	Ext.
Office Mailing Address					
Auth Signature - Primary	MIchael T Kershaw	Haz Materials Div Mgr; EH&S	OFF	(314)362-6816	
Office Contact - Primary	Mike Kershaw	Hazardous Materials Division Ma	FAX	(314)362-1995	
	Mike Kershaw	Hazardous Materials Division Ma	OFF	(314)362-6735	
Premise Address					
Field Contact - Primary	Mike Kershaw	Hazardous Materials Division Ma	FAX	(314)362-1995	
	Mike Kershaw	Hazardous Materials Division Ma	OFF	(314)362-6735	
Field Contact 1st Alt	Bruce Backus	Dir Environmental Health & Safe	OFF	(314)362-6816	

ECIMS

REPORT OF FIELD SAMPLING REQUIREMENTS

Account No Entered **5112216200** **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

SPN	Premise Address	CITY	ST	ZIP
	660 S. Euclid Ave.	St. Louis	MO	63110

001 | **Poll Code** | **Pollutant Description** | **Frequency** | **Sample Type** | **IM** | **= IPD - Company - MSD** | **End Date** | **06/30/2004**

Poll Code	Pollutant Description	Frequency	Sample Type
T208000	Biochemical Oxygen Demand (5 D:	Once/year	Comp-Time 04 Hrs
T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs
T237000	pH	Once/year	Grab
T247000	Temperature	Once/year	Grab
T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs
T309000	Benzene	Once/year	Grab
T328000	Carbon Tetrachloride	Once/year	Grab
T332000	Chloroform	Once/year	Grab
T371000	Methylene Chloride	Once/year	Grab
T375000	Naphthalene	Once/year	Grab
T388000	Phenol	Once/year	Grab
T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs
T397000	Toluene	Once/year	Grab
T999000	Total Toxic Organics	Once/year	Grab

003 | **Poll Code** | **Pollutant Description** | **Frequency** | **Sample Type** | **IM** | **= IPD - Company - MSD** | **End Date** | **06/30/2004**

Poll Code	Pollutant Description	Frequency	Sample Type
T208000	Biochemical Oxygen Demand (5 D:	Once/year	Comp-Time 04 Hrs
T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs
T237000	pH	Once/year	Grab
T247000	Temperature	Once/year	Grab
T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs
T309000	Benzene	Once/year	Grab
T328000	Carbon Tetrachloride	Once/year	Grab
T332000	Chloroform	Once/year	Grab
T371000	Methylene Chloride	Once/year	Grab
T375000	Naphthalene	Once/year	Grab
T388000	Phenol	Once/year	Grab
T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs
T397000	Toluene	Once/year	Grab
T999000	Total Toxic Organics	Once/year	Grab

005 | **Poll Code** | **Pollutant Description** | **Frequency** | **Sample Type** | **IM** | **= IPD - Company - MSD** | **End Date** | **06/30/2004**

Poll Code	Pollutant Description	Frequency	Sample Type
T208000	Biochemical Oxygen Demand (5 D:	Once/year	Comp-Time 04 Hrs
T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs
T234000	Oil and Grease (Total)	Once/year	Grab
T237000	pH	Once/year	Grab
T247000	Temperature	Once/year	Grab
T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs
T309000	Benzene	Once/year	Grab
T328000	Carbon Tetrachloride	Once/year	Grab
T332000	Chloroform	Once/year	Grab
T371000	Methylene Chloride	Once/year	Grab
T375000	Naphthalene	Once/year	Grab
T388000	Phenol	Once/year	Grab
T393000	Silver (Total)	Once/year	Comp-Time 04 Hrs
T397000	Toluene	Once/year	Grab
T999000	Total Toxic Organics	Once/year	Grab

006 | **Poll Code** | **Pollutant Description** | **Frequency** | **Sample Type** | **IM** | **= IPD - Company - MSD** | **End Date** | **06/30/2004**

Poll Code	Pollutant Description	Frequency	Sample Type
T208000	Biochemical Oxygen Demand (5 D:	Once/year	Comp-Time 04 Hrs
T213000	Chemical Oxygen Demand	Once/year	Comp-Time 04 Hrs
T234000	Oil and Grease (Total)	Once/year	Grab
T237000	pH	Once/year	Grab
T247000	Temperature	Once/year	Grab
T256000	Total Suspended Solids	Once/year	Comp-Time 04 Hrs

0

ECIMS
REPORT OF FIELD SAMPLING REQUIREMENTS

Account No Entered **5112216200** **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

SPN	Premise Address	CITY	ST	ZIP
T309000	Benzene	Once/year		Grab
T328000	Carbon Tetrachloride	Once/year		Grab
T332000	Chloroform	Once/year		Grab
T371000	Methylene Chloride	Once/year		Grab
T375000	Naphthalene	Once/year		Grab
T388000	Phenol	Once/year		Grab
T393000	Silver (Total)	Once/year		Comp-Time 04 Hrs
T397000	Toluene	Once/year		Grab
T999000	Total Toxic Organics	Once/year		Grab

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: Washington University Medical School Account #: 51122162-00
Premise Address: 660 S. Euclid Zip Code: 63110
Last Inspection Date: 5/8/01
MSD Categories: SIU ✓ CIU____ Surcharge____ Potential Toxic Waste ✓
Non-Toxic Waste____ No Process Flow____ Multi User____ IIU____
Company Representative: Mike Kershaw
Title: Hazardous Materials Division Manager Phone #: (314) 362-6735
Others Present: None
Inspector: Jim Goodall
INSPECTION DATE: 6/10/02 Time of Inspection: From 9:00 A To 11:15 A

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** DATABASE ALSO UPDATED WITH APPROPRIATE CHANGES - see attached database reports *****

1. A. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes ✓ No__
   List them, note any changes & reasons: 51122161-00, 51122167-00, 51122168-00, 51122176-01, 90006372-01
   B. WERE ALL ACCT NUMBERS VERIFIED AS CORRECT & ACTIVE ON BILLING SYSTEM? Yes ✓ No__

2. PROCESS & CLEANUP/WASHDOWN:

Description	Cont/Batch	Water used?	Frequency of discharge	Sample pt.
Research & teaching labs	Cont	yes	daily	001, 003, 005
Research Animal Care	Cont	yes	daily	001, 003, 005
Cleanup at Haz Storage-Bldg 80	Batch	yes	daily	006
Food preparation	Cont	yes	daily	005

3. PRETREATMENT (describe) Sample pt.
   pH adjustment for Labs, Silver recovery 001, 003, 006
   Kitchen grease trap 005

4. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes__ No ✓
   A. If yes, list reg. & describe (including any discharge):

5. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes__ No ✓
   A. At which points?____
   B. Current applied factor:____ Is it correct? Yes__ No__
   C. If no, what is the correct factor & explain change?

6. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes__ No ✓
   A. At which points?____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes__ No__
   C. If yes, explain:

7. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes ✓ No__
   A. Describe operations & disposal: Solids hauled, liquids decayed & sewered
   B. Does company have MSD authorization to disposal to sewer? Yes ✓ No__
   C. Date of authorization: 7/8/94 Annual amt approved: 320 mCi
   D. Has company exceeded the approved quantity? Yes__ No ✓
   E. If yes, explain:

8. DOES WATER USE APPEAR EXCESSIVE? Yes__ No ✓

A. Explain how verified & needed changes: LARGE INSTITUTION. USAGE OBSERVED SEEMS NORMAL FOR TYPES OF OPERATIONS PERFORMED.

9. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes ✓ No__

A. If yes:

Pollutant	When	Sample Points	Is problem resolved? yes/no - describe	
SILVER	2/14/02	003	YES	INCREASE CLEANING of units

B. Comments: ADDITIONAL SAMPLING SHOWS RETURN TO COMPLIANCE

10. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA ✓ Yes__ No__

A. If yes:

Pollutant	When	Sample Points	Is problem resolved? yes/no - describe	

B. Comments:

11. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes__ No ✓

A. Upsets?_____ Bypasses of pretreatment facilities?_____

Spills?_____ Slug discharges?_____ Other?_____

B. Explain any marked:

12. ARE ANY SOLVENTS USED? Yes ✓ No__

A. Which solvents? Xylene, toluene, methanol MINERAL SPIRITS

B. What used for? LAB REAGENTS MAINTENANCE

C. How disposed? COLLECTED & HAULED HAULED

13. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes__ No ✓

A. If yes, what needs to be done?

B. If no, how are they controlled? SECONDARY CONTAINMENT FOR DRUMS. PROCEDURES FOR HANDLING OF CHEMICALS IN QUANTITY.

14. DOES COMPANY HAVE ANY SPILL, SLUG OR SOLVENT MANAGEMENT PLANS (SMP)? Yes ✓ No__

A. If yes:

Title	SMP? 413/433	Last Update	Copy in file? (Only get SMP)	Update needed? Explain if yes
CONTINGENCY PLAN	NO	11/98	YES	NO

B. If no, is one needed? (write company and request) Yes__ No__

15. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes ✓ No__

A. Are MSD contacts listed? Yes ✓ No__

B. If no to either, describe how handled:

16. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes ✓ No__
A. If yes, requirement is contained in permit ✓ or other document_____.
B. If other document, date & description:
C. How frequently are sampling & reports required? Quarterly
D. Have reports been on-time, complete & signed by proper person? Yes ✓ No__
E. If no, explain:

17. IF COMPANY SELF-MONITORS (REQ'D OR NOT), DOES IT COLLECT REPRESENTATIVE GRAB/COMP SAMPLES & USE EPA-APPROVED 40CFR136 WASTEWATER TEST METHODS? NA__ Yes ✓ No__
A. If no, explain needed changes:

18. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes__ No ✓
A. If yes, type and date:
B. Have the reports & actions been on-time & complete? Yes__ No__
C. If no, explain:

19. DOES MSD CATEGORY NEED TO BE REVISED? Yes__ No ✓
A. Indicate correct categories:
SIU_____ CIU_____ Surcharge_____ Potential Toxic Waste_____
Non-Toxic Waste_____ No Process Flow_____ Multi User_____ IIU_____
B. Explain changes:

20. SAMPLE POINTS DJ(y/n)
SP No. 001 Fed. Reg. N/A Components: SANITARY + NCCW + P&E WASHDOWN + SOFTENER REGEN + PROCESS + R&D/ABS N
SP No. 003 Fed. Reg. N/A Components: SANITARY + P&E WASHDOWN + R&D/ABS N
SP No. 006 Fed. Reg. N/A Components: SANITARY + P&E WASHDOWN + FILM & /AB WASTE N
SP No. 005 Fed. Reg. N/A Components: Boiler Blowdown + PROCESS + SANITARY + SOFTENER REGEN + Kitchen + R&D/ABS + N
SP No.____ Fed. Reg.____ Components: P&E WASHDOWN + NCCW ____

21. ANY UNSAMPLED DISCHARGES? (list each lateral separately) Yes__ No ✓
Dummy SP No.____ Components:
Dummy SP No.____ Components:

22. WERE ALL SAMPLE POINTS OPENED AND INSPECTED? Yes ✓ No__
A. If any SPs cannot be located or opened, explain:
B. If any SP descriptions need to be changed, explain:

23. REVIEW THE SAMPLE POINT MAP! Last map revision date: 6/19/00
A. Is the map correct and accurate in all its details? Yes ✓ No__
B. If no, what changes are needed?

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.

The incinerator has been removed to make room for a teaching/learning center. Boiler has been converted from coal to natural gas.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCH
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

INDUSTRIAL USER CATEGORIZATIONS

Effective Date	SIU	CIU	Surcharge	High Flow	Pot Toxic Waste	No Proc Flow	Multi User Acct	IIU
01/12/1999	Y				Y			

Effective Date	SIU Criteria
01/12/1999	Proc Disc => 25,000 GPD

GENERAL INFORMATION

Office Mailing Address
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

MSD Base Map: 19G3
Wun: St. Louis City & Co.
Grid: J 20 **Page:** 26

Last Routine Inspection
Date; 06/10/2002
Inspector: James Goodall
Next Due:

Last Inspection
Date: 06/10/2002 **Type:** RIN
Inspector James Goodall

IUQ Recvd Date:
Reviewer:

Permit Issue Date: 01/01/2003
Permit Exp.Date: 12/31/2007
Extend / Term Date
Permit Writer Fabian Grabski

CONTACTS:

Auth Signature - Primary	Bruce Backus	Dir Environmental Health & Safety	Office Phone	(314) 362-6816 Ext
Field Contact - Primary	Mike Kershaw	Hazardous Materials Division Manager	Office Phone	(314) 362-6735 Ext
Field Contact 1st Alt	Bruce Backus	Dir Environmental Health & Safety	Office Phone	(314) 362-6816 Ext
Office Contact - Primary	Mike Kershaw	Hazardous Materials Division Manager	Office Phone	(314) 362-6735 Ext

OPERATIONAL INFORMATION

Work Days / Week:	7
Employees:	5,750
Shifts / Day:	3
Hrs. of Operation:	24

Shift No.	No. of Emp.	Shift Start Time	Shift Duration
1	5,530	08:00 AM	8
2	170	04:30 PM	8
3	50	11:30 PM	8

Other Agencies	Permit Number
EPA - Hazardous Waste Program	MOT 300010857
MDNR - Hazardous Waste Program	01591
Nuclear Regulatory Commission	24-00167-11

NON-SEWERED WASTE **On-Site Storage:** Y **On-Site Disposal:** Y **Off-Site Disposal:** Y

COMMENTS: Cont-op, SPCCP-yes

PRODUCT & SERVICE INFORMATION

SIC	DESCRIPTION
0279	Animal Specialties, NEC
8221	Colleges, Universities & Professional Schools
8733	Noncommercial Research Organizations

Raw Materials / Processes:
Laboratory chemicals & reagents

Products / Services:
Research, animal care and education

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCH
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

WATER CONSUMPTION AND WASTEWATER DISCHARGE

Sewer Accounts
5112216100
5112216200
5112216700
5112216800
5112217601
9000637201

Start Date: 12/01/2000 **End Date =** 12/31/2002

Acct No.			Consumption CCF's	Consumption Gallons	Wdays	Cdays	Discharge Gal / Wday	Discharge Gal / Cday
5112216100								
	11/03/2000	02/02/2001	191		92	92		
	02/03/2001	05/01/2001	350		88	88		
	05/02/2001	08/03/2001	1,330		94	94		
	08/04/2001	11/01/2001	1,090		90	90		
RF 1.00	Acct. Total		2,961	2,214,982	364	364	6,085	6,085
5112216200			CCF's	Gallons			Gal / Wday	Gal / Cday
	11/02/2000	02/14/2001	39,729		105	105		
	02/15/2001	05/08/2001	48,274		83	83		
	05/09/2001	08/08/2001	33,088		92	92		
	08/09/2001	11/07/2001	50,007		91	91		
RF 0.91	Acct. Total		171,098	127,990,201	371	371	313,938	313,938
5112216700			CCF's	Gallons			Gal / Wday	Gal / Cday
	11/07/2000	02/02/2001	43,043		88	88		
	02/03/2001	05/07/2001	38,947		94	94		
	05/08/2001	08/06/2001	50,953		91	91		
	08/07/2001	11/06/2001	51,803		92	92		
RF 0.73	Acct. Total		184,746	138,199,615	365	365	276,399	276,399
5112216800			CCF's	Gallons			Gal / Wday	Gal / Cday
	11/02/2000	02/02/2001	1,300		93	93		
	02/03/2001	05/01/2001	1,800		88	88		
	05/02/2001	08/03/2001	4,300		94	94		
	08/04/2001	11/01/2001	4,800		90	90		
RF 1.00	Acct. Total		12,200	9,126,234	365	365	25,003	25,003
5112217601			CCF's	Gallons			Gal / Wday	Gal / Cday
	11/02/2000	02/02/2001	160		93	93		
	02/03/2001	05/01/2001	140		88	88		
	05/02/2001	08/03/2001	660		94	94		
	08/04/2001	11/01/2001	820		90	90		
RF 1.00	Acct. Total		1,780	1,331,533	365	365	3,648	3,648
9000637201			CCF's	Gallons			Gal / Wday	Gal / Cday
	11/02/2000	02/02/2001	10,262		93	93		
	02/03/2001	05/01/2001	11,893		88	88		
	05/02/2001	08/03/2001	30,222		94	94		
	08/04/2001	11/01/2001	30,636		90	90		
RF 0.58	Acct. Total		83,013	62,098,041	365	365	98,676	98,676
	Facility Total		455,798				723,750	723,750

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCH
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

SEWER CONNECTION INFORMATION

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
01	Sanitary Or Combined	20G2 232C	Bissell Point	Old Mill Creek

Description Lateral from buildings located S of McKinley Av & E of Euclid Av

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT No. 001 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Sanitary		10,500	GPD	D	06/09/1998
Non Contact Cooling Water		15,500	GPD	D	
Process Waste	Research Animal Care	19,850	GPD	D	
Research & Development Waste		4,850	GPD	D	
Plant & Equipment Washdown		500	GPD	D	
Regeneration/Reject Water	Water softener regeneration waste	4,650	GPD	D	
	TOTAL QNTY:	55,850			

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
02	Sanitary Or Combined	19G3 229C	Bissell Point	Old Mill Creek

Description Lateral from buildings N&S of Scott Av & E of Euclid

Sewer Route S on Taylor to Clayton Av, E to Boyle, N to Duncan then E to trunk to treatment plant

SAMPLE POINT No. 005 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description MH 200' W of Taylor Ave. on S side of Scott Ave. in street

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Boiler Blowdown		52,325	GPD	D	06/04/1999
Process Waste	Research animal care	191,700	GPD	D	
Sanitary		94,500	GPD	D	
Regeneration/Reject Water	Water softener regeneration waste	27,900	GPD	D	
Kitchen Waste		3,675	GPD	D	
Research & Development Waste	Teaching labs	41,050	GPD	D	
Plant & Equipment Washdown		4,500	GPD	D	
Non Contact Cooling Water		139,500	GPD	D	
	TOTAL QNTY:	555,150			

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
03	Sanitary Or Combined	19G3 543C	Lemay	River des Peres (County Section)

Description Lateral N from Building 14 W of Euclid Av to courtyard

Sewer Route W across S Kingshighway Blvd into Forest Park to trunk to treatment plant

SAMPLE POINT No. 003 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Sanitary		2,745	GPD	D	06/09/1998
Research & Development Waste		525	GPD	D	
Plant & Equipment Washdown		175	GPD	D	
	TOTAL QNTY:	3,445			

LATERAL NO:	Lateral Type	DS MH	Treatment Area	Trunk Sewer
04	Sanitary Or Combined	19G3 259C	Bissell Point	Old Mill Creek

Description 8" lateral E from Building 80 at Taylor and Parkview to an unnamed street

Sewer Route N to Parkview to Duncan, E to trunk to treatment plant

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET - FACILITY INFORMATION

INDUSTRY NAME: WASHINGTON UNIVERSITY MEDICAL SCH
PRIMARY MSD ACCOUNT NO: 5112216200

Premise Address 660 S. Euclid Ave.
St. Louis, MO 63110

SAMPLE POINT No. 006 **SAMPLE POINT TYPE.** Ordinance **NPDES Outfall No:** N/A

Description 6" clay pipe 13' N, 9' E of SE corner of building 80

Discharge Components	Process Description	Quantity	Unit	RUD	Effective Date
Sanitary		250	GPD	D	06/13/2000
Plant & Equipment Washdown	Waste Storage Facility	9,610	GPD	D	
Process Waste	Film developer waste, lab waste	5	GPD	D	
	TOTAL QNTY:	9,865			

PRETREATMENT TYPES

SPN	Pretreatment Description	SPN	Pretreatment Description	SPN	Pretreatment Description
001	Metallic Replacement	001	pH Adjustment / Neutralization	003	Metallic Replacement
003	pH Adjustment / Neutralization	005	Grease Trap	006	Metallic Replacement
006	pH Adjustment / Neutralization				

PRIORITY POLLUTANTS

Pollutant Description	Status	Pollutant Description	Status	Pollutant Description	Status
2,4-Dinitrophenol	KP	Acrolein	KP	Arsenic (Total)	KP
Asbestos (Fibrous)	KP	Benzene	KP	Benzidine	KP
Carbon Tetrachloride	KP	Chloroform	KP	Chromium (Total)	KP
Cyanide (Total)	KP	Mercury (Total)	KP	Methylene Chloride	KP
Phenol	KP	Silver (Total)	KP	Toluene	KP

EXTRA STRENGTH SURCHARGE INFORMATION **Certification / Recertification Date**

||

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY REINSPECTION REPORT

Company: WASHINGTON UNIVERSITY MEDICAL SCHOOL Account #: 5112-2162-00
Premise Address: 660 S. EUCLID AVE Zip Code: 63110
Last Inspection Date: 6-13-00
MSD Categories: SIU ✓ CIU____ Surcharge____ Potential Toxic Waste ✓
Non-Toxic Waste____ No Process Flow____ Multi User____ IIU____
Company Representative: MIKE KERSHAW
Title: HAZARDOUS MATERIAL DIVISION MANAGER Phone #: (314) 362-6735
Others Present: NONE
Inspector: JIM VILBERT
INSPECTION DATE: 5-8-01 Time of Inspection: From 8:30 AM To 10:45 AM

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION. ANSWERS ARE BASED ON INFORMATION PROVIDED BY COMPANY DURING INSPECTION, AS WELL AS INFORMATION IN FILE.

***** ECIMS ALSO UPDATED WITH APPROPRIATE CHANGES - USING THE ABOVE INSPECTION DATE *****

1. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes ✓ No__
   List them, note any changes & reasons: 5112-2167-00, 9000-6372-01, 5112-2168-00, 5112-2176-01, 5112-2161-00

2. PROCESS & CLEANUP/WASHDOWN:

Description	Cont/Batch	Water used?	Frequency of discharge	Sample pt.
RESEARCH ANIMAL CARE	CONT.	YES	DAILY	001, 003, 005
RESEARCH & TEACHING LABS (MEDICAL TRAINING FACILITY)	CONT.	YES	DAILY	001, 003, 005
FOOD PREP	BATCH	YES	DAILY	005
HOSE DOWN FLOORS OF ANIMAL CAGES	BATCH	YES	DAILY	001, 003, 005

3. ARE THERE ANY FEDERALLY REGULATED (40 CFR 405-471) OPERATIONS? Yes__ No ✓
   A. If yes, list reg. & describe (including any discharge):

4. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes__ No ✓
   A. At which points?
   B. Current applied factor:_____ Is it correct? Yes__ No__
   C. If no, what is the correct factor & explain change?

5. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes__ No ✓
   A. At which points?
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes__ No__
   C. If yes, explain?

6. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes ✓ No__
   A. Describe operations & disposal: BIOMEDICAL RESEARCH & CLINICAL NUCLEAR MEDICINE
   B. Does company have MSD authorization to disposal to sewer? Yes ✓ No__
   C. Date of authorization: 7-8-94 Annual amt approved: 320 MCI
   D. Has company exceeded the approved quantity? Yes__ No ✓
   E. If yes, explain:

7. DOES WATER USE APPEAR EXCESSIVE? Yes__ No ✓
   A. Explain how verified & needed changes: USAGE NORMAL FOR THIS TYPE OF FACILITY - SEE ATTACHED WATER USAGE CHART.

MSD 043844

8. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes__ No ✓

A. If yes:

Pollutant	When	Sample Points	Is problem resolved? yes/no -	describe

B. Comments: _____

9. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA ✓ Yes__ No__

A. If yes:

Pollutant	When	Sample Points	Is problem resolved? yes/no -	describe

B. Comments: _____

10. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes__ No ✓

A. Upsets?_____ Bypasses of pretreatment facilities?_____
Spills?_____ Slug discharges?_____ Other?_____

B. Explain any marked: _____

11. ARE ANY SOLVENTS USED? Yes ✓ No__

A. Which solvents? XYLENE, TOLUENE, METHANOL, ACETENITRILE

B. What used for? LAB REAGENTS

C. How disposed? COLLECTED & HAULED OFF

12. DOES COMPANY HAVE ANY SPILL, SLUG OR SOLVENT CONTROL PLANS? Yes ✓ No__

A. If yes:

Title	SMP?	Last Update	Is a copy in file? (obtain)	Update needed? (if yes-explain)
HAZ. WASTE DISPOSAL GUIDE	yes	4/2000	yes	NO
CONTINGENCY PLAN				

13. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes__ No ✓

A. If yes, what needs to be done? _____

14. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes ✓ No__

A. Are MSD contacts listed? Yes ✓ No__

B. If no to either, describe how handled: _____

15. IS COMPANY REQUIRED TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes ✓ No__

A. If yes, requirement is contained in permit ✓ or other document_____.

B. If other document, date & description: _____

C. How frequently are sampling & reports required? QUARTERLY

D. Have reports been on-time, complete & signed by proper person? Yes ✓ No__

E. If no, explain: _____

16. IS COMPANY UNDER ANY ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes__ No ✓

A. If yes, type and date: _____

B. Have the reports & actions been on-time & complete? Yes__ No__

C. If no, explain: _____

17. DOES MSD CATEGORY NEED TO BE REVISED? Yes__ No ✓

A. Indicate correct categories:
SIU_____ CIU_____ Surcharge_____ Potential Toxic Waste_____
Non-Toxic Waste_____ No Process Flow_____ Multi User_____ IIU_____

B. Explain changes:

18. SAMPLE POINTS

SP No. 001 Fed. Reg.____ Components: Process Waste (Lab & Film WASTE), P&E wash, San, NCCW, Stormwater, softener Regen.

SP No. 003 Fed. Reg.____ Components: Process waste, P&E wash, San, stormwater

SP No. 005 Fed. Reg.____ Components: Kitchen waste, Process waste, P&E wash, San, NCCW, Boiler B.D., Stormwater

SP No. 006 Fed. Reg.____ Components: Process waste, P&E wash, San, stormwater

SP No.____ Fed. Reg.____ Components:

19. WERE ALL SAMPLE POINTS OPENED AND INSPECTED? Yes ✓ No__

A. If any SPs cannot be located or opened, explain: SP's 001 and 005 had Auto samplers in them

B. If any SP descriptions need to be changed, explain:

20. REVIEW THE SAMPLE POINT MAP! Last map revision date: 6-19-00

A. Are all sample points correctly located & identified? Yes ✓ No__

B. Is the map correct and accurate in all its details? Yes ✓ No__

C. If no to A or B, what changes are needed?

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.

NOTES FOR WASHINGTON UNIVERSITY SCHOOOL OF MEDICINE

School has a large number of animal quarters. Pigs, dogs, mice, rats, rabbits and primates are quartered. Floors of larger animal quarters are hosed down for cleaning-→ water to sewer. Animal bedding is sent through autoclave and dumpstered. Animal carcasses are red-bagged and hauled off.

Policy of school is to collect all lab waste for treatment and disposal either to sewer or by hauling off site. This is not always the case, however, as some users do not cooperate. Lab waste volume is low compared to volume of water used. Combined discharge from film processing/silver recovery waste and from other lab wastes is approximately 75 gallons per month. School has both film developing and x-ray developing facilities.

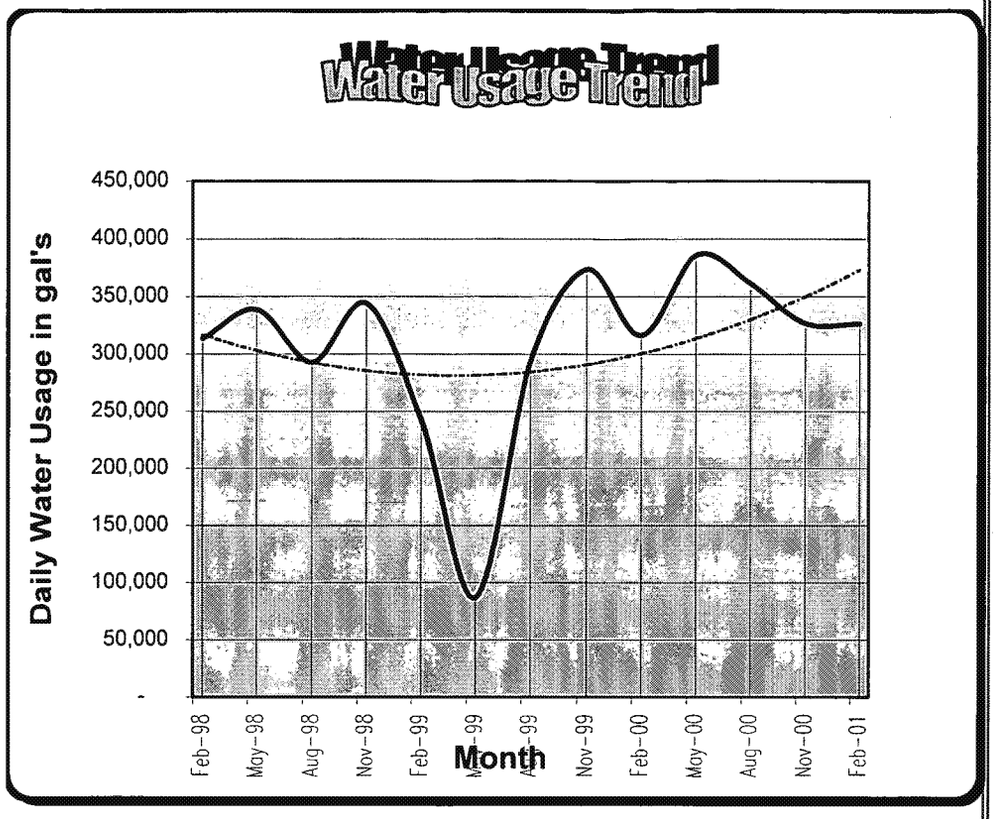
Company Name	Water Company Records MCXM	May 8, 2001

Washington University- Primary Account Only

Low 87,105 **High** 385,902

Reading Date	Enter water usage values in CCF's below	Daily Water Usage (Gal)
02/05/1998	38,147	313,560
05/06/1998	41,205	338,696
08/09/1998	35,598	292,608
11/03/1998	41,855	344,039
02/02/1999	29,558	242,960
05/05/1999	10,597	87,105
08/02/1999	35,705	293,487
11/10/1999	45,449	373,581
02/16/2000	38,460	316,133
05/24/2000	46,948	385,902
08/17/2000	43,957	361,317
11/01/2000	39,764	326,851
02/14/2001	39,729	326,564

Enter "Q" below if readings are Quarterly	Enter below #days/week working	Enter below # of Employees
Q	7	5750



Average per month in CCF's	12,263.03
Average gallons used per month	9,172,749
Number of days worked per month	30.33
Number of gallons used per day (AVG)	**302,398**

Estimated Water Usage From Sanitary	143750		
Estimated Water Usage From Process and Other	158,648		
Avg. Usage Last 6 Readings	**348,391**	Avg. Usage Last 4 Readings	**350,159**

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY SHORT INSPECTION REPORT

Company: Washington University School of Medicine

Premise Address: 660 S. Euclid Zip Code: 63110

Mailing Address: SAME Zip Code:

Account #: 5112 2162-00 Current MSD category: 49

Inspection Contact Person: MIKE KERSHAW

Title: HAZARDOUS MATERIALS MANAGER Phone #: 362-6735

Others Present: NONE

Inspection Date: 6/13/00 Time of inspection: From 10:00 A To 11:20 A

Inspector: J. GOODALL Reinspection ✓ Initial Inspection

References used: IUQ Date: 8/17/98 IDS Date: 5/16/00 Permit Date: 7/15/99

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION

Date of Last Inspection: 6/4/99

1. HAS FIELD CONTACT CHANGED? Yes__ No ✓
   New contact name and title:
2. HAS EMPLOYEE NUMBER CHANGED? Yes__ No ✓
   New Number:
3. HAVE SHIFTS OR DAYS PER WEEK CHANGED? Yes__ No ✓
   New Shifts: New Days per Week:
4. HAVE THERE BEEN ANY CHANGES IN PROCESSES OR RAW MATERIALS? Yes__ No ✓
   A. If yes, what?
   B. Affect which sample points?
5. HAVE THERE BEEN ANY CHANGES IN TYPES OF PRODUCTS PRODUCED? Yes__ No ✓
   A. If yes, what?
   B. Comments:
6. HAVE THERE BEEN ANY CHANGES IN WASTEWATER QUALITY OR QUANTITY? Yes__ No ✓
   A. If yes, what?
   B. Affect which sample points?
   C. Is surcharge status affected (add, remove or change)? Yes__ No__
   D. Is return factor status affected (add, remove or change)? Yes__ No__
   E. Is SIU status affected (process discharge <> 25000 GPD)? Yes__ No__
   F. If yes to C, D or E explain:
7. ARE THERE ANY GREASE TRAPS OR OIL INTERCEPTORS? Yes ✓ No__
   A. Food wastes? ✓ Affected sample points: 005
   B. Petroleum wastes? Affected sample points:
   C. Frequency of cleaning: AS NEEDED
   D. Are cleaning logs kept? Yes__ No ✓
   E. How is oil/grease disposed? hauled off site
8. PRETREATMENT:

Description	New/ exist	Frequency of discharge	How/where is water discharged (& which SP)?
NEUTRALIZATION for LAB SINKS	EXIST	CONTINUOUS	SEWER 001, 003, 004, 005
Ag RECOVERY - WASTE disposal building	EXIST	2-3 days/month	SEWER 004
Ag RECOVERY - LABS	EXIST	CONTINUOUS	SEWER 001, 003, 005

Comments:

MSD 043848

9. ARE ANY SOLVENTS USED? Yes ✓ No__
   A. Which solvents? Xylene toluene methanol
   B. What used for? REAGENTS IN LABS
   C. How disposed? hauled off site

10. ARE ANY WASTES GENERATED WHICH ARE NOT DISPOSED TO THE SEWER? Yes ✓ No__
   A. If yes, what non-haz. wastes? WASTE OIL, ANTIFREEZE, ANIMAL bedding, INFECT WASTE
   B. If yes, what hazardous wastes? LAB REAGENTS, SPENT SOLVENT
   C. How disposed? hauled off site
   D. MDNR and/or EPA hazardous waste generator No.: 01591
   E. If yes to B and no HW#, explain why:

11. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes__ No ✓
   A. If yes, what needs to be done?

12. HAVE THERE BEEN ANY CHANGES TO SOLVENT MGT, SPILL CONTROL OR SLUG DISCHARGE CONTROL PLANS? Yes__ No ✓
   A. If yes, explain:

13. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes ✓ No__
   A. Are MSD contacts listed? Yes ✓ No__
   B. If no to 13 or 13A, describe how handled:

14. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes__ No ✓
   A. Upsets?_____ Bypasses of pretreatment facilities?_____
      Spills?_____ Slug discharges?_____ Other?_____
   B. Explain any marked:

15. ARE THERE ANY FEDERALLY REGULATED (CATEGORICAL) OPERATIONS? Yes__ No ✓
   A. If yes, list reg. & describe (including discharge):

16. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes__ No ✓
   A. List the category & its WW components:
   B. List the non-cat. WW components:
   C. At which points?
   D. Is the Combined Wastestream Formula (CWF) applicable? Yes__ No__
   E. If no, explain:
   F. If yes, what is the currently applied factor?
   G. If yes, is the correct factor currently applied? Yes__ No__
   H. If no, explain:

17. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes__ No ✓
   A. List the applicable category:
   B. At which points?
   C. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes__ No__
   D. If yes, explain:

18. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes ✓ No__
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? yes/no	- describe
Ag	12/15/99	003	YES	Additional Samples
O&G	12/15/99	004	YES	show return to
				compliance.

   B. Comments: PARKING GARAGE by SP004 MAY HAVE CONTRIBUTED. NEW SP WAS located closer to building. The garage is not part of WASH U complex.

MSD 043849

19. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA ✓ Yes__ No__

A. If yes:

Pollutant	When	Sample Points	Is problem resolved? yes/no - describe

B. Comments:

20. IS COMPANY **REQUIRED** TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes ✓ No__

A. If yes, requirement is contained in permit ✓ or other document____.

B. If other document, date & description:

C. How frequently are sampling & reports required? Quarterly

D. Have reports been on-time, complete & signed by proper person? Yes ✓ No__

E. If no, explain:

21. IS COMPANY UNDER **ANY** ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes__ No ✓

A. If yes, type and date:

B. Have the reports & actions been on-time & complete? Yes__ No__

C. If no, explain:

22. DOES COMPANY HAVE ANY ON-SITE "SPECIAL DISCHARGE" APPROVALS? Yes__ No ✓

DOES COMPANY HAVE ANY HAULED WASTE APPROVALS? Yes__ No ✓

A. If yes, is company in compliance with requirements? Yes__ No__

B. Approval date:_____ Length of approval:

C. Comments:

23. IS MSD CATEGORY CORRECT? Yes ✓ No__

A. If no, explain:

B. What should category be?

24. IS COMPANY AN SIU? Yes ✓ No__

A. If yes, why? Process discharge > 25,000 GPD

25. WERE **ALL** SAMPLE POINTS OPENED AND INSPECTED? Yes ✓ No__

A. If any SPs cannot be located or opened, explain:

B. If any SP descriptions need to be changed, explain: SP006 will replace SP004. See comments.

26. REVIEW THE SAMPLE POINT MAP! Last map revision date: 6/16/99

A. Are all sample points correctly located & identified? Yes__ No ✓

B. Is the map correct and accurate in **all** its details? Yes ✓ No__

C. If no to A or B, what changes are needed? Deleting SP004 and replacing with SP006.

USE THIS SPACE FOR ANY OTHER COMMENTS/OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS SITE.

I found standing water in the MH for SP004. The contact suspects that runoff from the garage across the street may have pooled in the MH. We were able to locate a vent outside of the building which should not be affected by offsite discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY INSPECTION REPORT

Company: WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Premise Address: 660 S. Euclid Zip Code: 63110

Mailing Address: SAME Zip Code:

Account #: 5112 2162-00 Current MSD category: 49

Inspection Contact Person: MIKE KERSHAW

Title: HAZARDOUS MATERIALS MGR Phone #: 362-6735

Others Present: NONE

Inspection Date: 6/4/99 Time of inspection: From 8 30 A To 10 30 A

Inspector: J. GOODALL Reinspection ✓ Initial Inspection

References used: IUQ Date: 8/17/98 IDS Date: 5/27/99 Permit Date: NONE

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION

Date of Last Inspection: 6/9/98

1. HAS FIELD CONTACT CHANGED? Yes__ No ✓
New contact name and title:

2. HAS EMPLOYEE NUMBER CHANGED? Yes__ No ✓
New Number:

3. HAVE SHIFTS OR DAYS PER WEEK CHANGED? Yes__ No ✓
New Shifts: New Days per Week:

4. ARE THE LISTED SIC's ACCURATE & CORRECT? Yes ✓ No__
Note any changes & why:

5. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes ✓ No__
List them, note any changes & reasons: 5112 2167-00, 90006372-01, 5112 2168-00, 5112 2176-01, 5112 2161-00

6. BATCH PROCESSES:

Description	New/ exist	Water used?	Frequency of discharge	How/where is water discharged (& which SP)?
FOOD PREPARATION	EXIST	YES	daily	SEWER SP002

Comments:

7. CONTINUOUS PROCESSES:

Description	New/ exist	Water used?	Frequency of discharge	How/where is water discharged (& which SP)?
RESEARCH ANIMAL CARE	EXIST	YES	daily	SEWER 001, 002, 003
RESEARCH & TEACHING LABS	EXIST	YES	daily	SEWER 001, 002, 003

Comments: MEDICAL TRAINING FACILITY

8. CLEANUP/WASHDOWN:

Description	New/ exist	Water used?	Frequency of discharge	How/where is water discharged (& which SP)?
WET MOPUP OF BUILDINGS	EXIST	YES	daily	SEWER 001, 002, 003, 004

Comments:

MSD 043851

9. PRETREATMENT:

Description	New/ exist	Frequency of discharge	How/where is water discharged(& which SP)?
NEUTRALIZATION - LAB SINKS	EXIST	CONTINUOUS	SEWER 001,002,003,004
SILVER RECOVERY - WASTE DISPOSAL	EXIST	2-3 DAYS/MONTH	SEWER 004
SILVER RECOVERY - LABS	EXIST	CONTINUOUS	SEWER 001,002,003

Comments: _____

10. FOR ITEMS 6, 7, 8 AND 9:
   A. Is water use excessive? Yes__ No ✓
   B. If yes to A, what needs to be done? _____
   C. Method used to verify A (attach diagrams/records as needed): USAGE NORMAL for type of facility.

11. HAVE THERE BEEN ANY CHANGES IN PROCESSES OR RAW MATERIALS? Yes__ No ✓
   A. If yes, what? _____
   B. Affect which sample points? _____

12. HAVE THERE BEEN ANY CHANGES IN TYPES OF PRODUCTS PRODUCED? Yes__ No ✓
   A. If yes, what? _____
   B. Comments: _____

13. HAVE THERE BEEN ANY CHANGES IN WASTEWATER QUALITY OR QUANTITY? Yes__ No ✓
   A. If yes, what? _____
   B. Affect which sample points? _____
   C. Is surcharge status affected (add,remove or change)? Yes__ No__
   D. Is return factor status affected (add, remove or change)? Yes__ No__
   E. Is SIU status affected (process discharge <> 25000 GPD)? Yes__ No__
   F. If yes to C, D or E explain: _____

14. IS ANY WATER USED FOR COOLING? Yes ✓ No__

What does it cool	Contact or Non-Contact	Once-thru or Recirc	Discharges Where?	Which SP?
HVAC systems	NCCW	RECIRC	CT	001,002

15. ARE THERE ANY COOLING TOWERS? Yes ✓ No__
   A. If yes, is the water treated or conditioned before or during use? Yes ✓ No__
   B. What contaminants may be present? biocides
   C. How many? 8 Capacity (tons): 6,000 TONS
   D. Frequency & volume of blowdown: daily Discharge to: SEWER
   E. At which sample points? 001,002
   F. Comments: _____

16. IS ANY WATER USED IN BOILERS? Yes ✓ No__
   A. Is the water treated or conditioned before or during use? Yes ✓ No__
   B. What contaminants may be present? CAUSTIC, O_2 SCAVENGER
   C. Frequency & volume of blowdown: daily ~52,000 gal Discharge to: SEWER
   D. At which sample points? 002
   E. Comments: _____

17. IS ANY WATER USED IN AIR POLLUTION CONTROL DEVICES? Yes__ No ✓
   A. What types of devices? _____
   B. How is the water disposed? _____
   C. What contaminants may be present? _____
   D. Frequency & volume if discharged: _____ Discharge to: _____
   E. At which sample points? _____
   F. Comments: _____

18. ARE THERE, ON THE ROOF, ANY AIR POLLUTION CONTROL DEVICES OR EXHAUST FANS THAT DISCHARGE POLLUTANTS? Yes ✓ No__
   A. Describe: COAL FIRED BOILER STACK
   B. What contaminants may be present? COAL dust
   C. List any sample points/storm drain locations that would receive the stormwater: storm inlets at power house discharge to SP002
   D. Comments: _____

19. ARE THERE ANY GREASE TRAPS OR OIL INTERCEPTORS? Yes ✓ No__
   A. Food wastes? ✓ Affected sample points: 002
   B. Petroleum wastes?____ Affected sample points:
   C. Frequency of cleaning: NONE - AS NEEDED
   D. Are cleaning logs kept? Yes__ No ✓
   E. How is oil/grease disposed? hauled off site

20. ARE ANY SOLVENTS USED? Yes ✓ No__
   A. Which solvents? xylene, toluene, methanol
   B. What used for? REAGENTS IN LABS
   C. How disposed? collected & hauled off

21. DOES COMPANY HAVE A SOLVENT MANAGEMENT PLAN? Yes__ No ✓
   A. If yes, last time updated:
   B. Update needed? Yes__ No__
   C. Ifyes to B, why?
   D. Is it part of another document? Yes__ No__
   E. If yes, list document name:
   F. Is there a copy in MSD file? (Obtain copy) Yes__ No__

22. ARE ANY INFECTIOUS MATERIALS HANDLED? Yes ✓ No__
   A. If yes, describe operations: RESEARCH ANIMAL & human tissue, blood
   B. How is waste disposed? hauled off FOR INCINERATION

23. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes ✓ No__
   A. Describe operations: BIOMEDICAL RESEARCH & CLINICAL NUCLEAR MEDICINE
   B. NRC License No.: 24-00167-11
   C. How is waste disposed? Solids decayed & hauled off - 4500 PARKVIEW Bldg
   D. If to sewer, describe procs: lab sinks for glassware, liquids decayed & sewered.
   E. Does company have authorization per Ord. 8472, Art. V.1.A? Yes ✓ No__
   F. Date of authorization: 7/8/94 Annual amt approved: 320 mCi
   G. Has company exceeded the approved quantity? Yes__ No ✓
   H. If yes, explain:

24. ARE THERE ANY X-RAY OR PHOTO OR FILM PROCESSING OPERATIONS? Yes ✓ No__
   A. If yes, describe: X-RAY & photo film developing
   B. Are there silver recovery facilities? Yes ✓ No__
   C. Affecting which sample points? 001, 002, 003 004
   D. Comments: DEVELOPER RINSE WATER IN LABS RUNS THRU METALLIC REPLACEMENT buckets to SEWER. FIX & DEVELOP SOLUTIONS COLLECTED.

25. ARE ANY WASTES GENERATED WHICH ARE NOT DISPOSED TO THE SEWER? Yes ✓ No__
   (ALSO INCLUDE ANY WASTES PREVIOUSLY LISTED)
   A. If yes, what non-haz. wastes? inf. waste, animal bedding, waste oil, ANTIFREEZE
   B. If yes, what hazardous wastes? lab REAGENTS & SPENT SOLVENTS
   C. How disposed? hauled off site
   D. MDNR and/or EPA hazardous waste generator No.: 01591
   E. If yes to B and no HW#, explain why:

26. IS THERE ANY DISCHARGE OF HAZARDOUS WASTE SUBJECT TO REPORTING UNDER 40 CFR 403.12(p) WHICH WAS NOT PREVIOUSLY REPORTED TO MSD? Yes__ No ✓
   A. If yes, describe:

27. DOES THE COMPANY HAVE ANY UNDERGROUND STORAGE TANKS? Yes__ No ✓
   A. How many?_____ Capacities:
   B. What do they contain?
   C. Have there been any known leaks from these tanks? Yes__ No__
   D. If yes to C, explain:
   E. Are all of the tanks registered with MDNR? Yes__ No__
   F. If no to E, explain:

28. DOES THE COMPANY HAVE ANY ABOVE GROUND STORAGE TANKS? Yes__ No ✓
   A. How many?_____ Capacities:
   B. What do they contain?
   C. Are they protected with spill containment facilities? Yes__ No__
   D. If no to C, explain:
   E. If yes to C, how is accumulated stormwater disposed?

29. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes__ No✓
A. If yes, what needs to be done?_____

30. DOES COMPANY HAVE WRITTEN SPILL PREVENTION, CONTINGENCY, POLLUTION PREVENTION, WASTE MINIMIZATION, ETC. PLANS? Yes✓ No__
A. If yes, list titles: CONTINGENCY PLAN
B. Last time updated: 11/98
C. Is there a copy in MSD file? (Obtain copy) Yes✓ No__
D. If no to 30, is a plan needed? Yes__ No__
E. If yes to D, explain:_____

31. DOES COMPANY HAVE A WRITTEN SLUG DISCHARGE CONTROL PLAN? Yes__ No✓
A. If yes, is it fully contained in another document? Yes__ No__
B. List plan's title:_____
C. Last time updated:_____
D. Is there a copy in MSD file? (Obtain copy) Yes__ No__
E. If no to 31, Is a plan needed? Yes__ No✓
F. If yes to E, explain:_____

32. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes✓ No__
A. Are MSD contacts listed? Yes✓ No__
B. If no to 32 or 32A, describe how handled:_____

33. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes__ No✓
A. Upsets?_____ Bypasses of pretreatment facilities?_____
Spills?_____ Slug discharges?_____ Other?_____
B. Explain any marked:_____

34. IS THERE ANY PROCESS SUBJECT TO CATEGORICAL PRETREATMENT STANDARDS? Yes__ No✓
A. If yes, identify the CFR Part, Subpart & PSES/NS:_____
B. Is the wastewater discharged to the sewer? Yes__ No__
C. If yes, which sample points?_____
D. If no, what is done with the wastewater?_____
E. Method used to verify no disch.(attach diagrams/records as needed):_____
F. What pretreatment is used?_____
G. Is it adequate? Yes__ No__
H. Explain answer to G:_____
I. What date did this process begin?_____
J. Does date agree with PSES/NS? Yes__ No__
K. Comments:_____

35. IF YES TO ITEM 34, AND IF 34A = 413 or 433: NA✓
A. What metals are plated?_____
B. Is cyanide used/on-site? Yes__ No__
C. Is facility a job shop (owns ≤50% of material finished annually)? Yes__ No__
D. If yes to C, how was it verified?_____
E. If 413, what is daily process discharge volume?_____
F. If 413, how was volume verified?_____

36. IF YES TO ITEM 34, HAS THE COMPANY SUBMITTED A BMR? NA✓ Yes__ No__
A. If yes, date BMR received:_____
B. If yes, does it correctly reflect current conditions? Yes__ No__
C. If no to 36 or 36B, explain:_____

37. IF YES TO ITEM 34, HAS THE COMPANY SUBMITTED A 90 DAY COMPL. REP.? NA✓ Yes__ No__
A. If yes, date 90 Day Report received:_____
B. If yes, does it correctly reflect current conditions? Yes__ No__
C. If no to 37 or 37B, explain:_____

38. IS THERE ANY PROCESS SUBJECT TO CATEGORICAL PRETREATMENT STANDARDS BUT WHICH PRODUCES NO WASTEWATER? Yes__ No✓
   A. If yes, identify the CFR Part, Subpart & PSES/NS which would be applicable if process wastewater was produced: _____
   B. Explain the absence of process wastewater: _____
   C. What date did this process begin? _____
   D. Does date agree with PSES/NS? Yes__ No__

39. IS THERE ANY PROCESS FOR WHICH A CPS CATEGORY HAS BEEN IDENTIFIED BUT FOR WHICH CPS HAS BEEN REMANDED OR HAS NOT BEEN PROMULGATED? Yes__ No✓
   A. If yes, identify the CFR Part, Subpart & PSES/NS: _____
   B. What is done with the process wastewater? _____
   C. What date did this process begin? _____
   D. Does date agree with PSES/NS? Yes__ No__
   E. Comments: _____

40. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes__ No✓
   A. List the non-cat. WW components: _____
   B. At which points? _____
   C. Is the Combined Wastestream Formula (CWF) applicable? Yes__ No__
   D. If no, explain: _____
   E. If yes, what is the currently applied factor? _____
   F. If yes, is the correct factor currently applied? Yes__ No__
   G. If no, explain: _____

41. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes__ No✓
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes__ No__
   C. If yes, explain: _____

42. IS ANY WASTEWATER SUBJECT TO "NON-CATEGORICAL" PRETREATMENT STDS? Yes__ No✓
   A. If yes, identify the CFR Part, Subpart & PSES/NS: _____
   B. Is the wastewater discharged to the sewer? Yes__ No__
   C. If yes, which sample points? _____
   D. If no, what is done with the wastewater? _____
   E. What date did this process begin? _____
   F. Does date agree with PSES/NS? Yes__ No__
   G. Comments: _____

43. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes__ No✓
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? (if yes, describe how)

   B. If unresolved, what is being done? _____
   C. Comments: _____

44. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA✓ Yes__ No__
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? (if yes, describe how)

   B. If unresolved, what is being done? _____
   C. Comments: _____

45. IS COMPANY **REQUIRED** TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes__ No✓
A. If yes, requirement is contained in permit_____ or other document_____.
B. If other document, date & description: Discharge permit under review.
C. How frequently are sampling & reports required?_____
D. Have reports been on-time, complete & signed by proper person? Yes__ No__
E. If no, explain:_____

46. DOES COMPANY DO NON-REQUIRED OR ADDITIONAL SELF-MONITORING ? Yes__ No✓
A. If yes, explain:_____

47. IS COMPANY COLLECTING THE APPROPRIATE TYPE OF SAMPLE (GRAB OR COMPOSITE) FOR EACH POLLUTANT MONITORED? Yes__ No N/A
A. If no, explain:_____

48. IS COMPANY USING 40 CFR 136 METHODS FOR ALL REPORTABLE ANALYSES? Yes__ No N/A
A. If no, explain:_____

49. DOES COMPANY EMPLOY CONTINUOUS MONITORING TECHNIQUES FOR pH? Yes__ No✓
A. At which sampling points?_____
B. Do charts show compliance with the frequency & duration limits? Yes__ No__
C. If no, explain:_____
D. If company has a permit, have excursion summaries been submitted? Yes__ No__
E. If no, explain:_____

50. IS COMPANY SUBMITTING THE RESULTS OF **ALL** REPORTABLE MONITORING? Yes__ No N/A
A. If no, explain:_____

51. IS COMPANY MAINTAINING ADEQUATE RECORDS? Yes✓ No__
A. If no, explain:_____

52. IS COMPANY UNDER **ANY** ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes__ No✓
A. If yes, type and date:_____
B. Have the reports & actions been on-time & complete? Yes__ No__
C. If no, explain:_____

53. DOES COMPANY HAVE ANY ON-SITE "SPECIAL DISCHARGE" APPROVALS? Yes__ No✓
DOES COMPANY HAVE ANY HAULED WASTE APPROVALS? Yes__ No✓
A. If yes, is company in compliance with requirements? Yes__ No__
B. Approval date:_____ Length of approval: _____
C. Comments:_____

54. DOES COMPANY HAVE ANY DISCHARGES SUBJECT TO NPDES PERMITTING? Yes__ No✓
A. What is discharged?_____
B. Any corresponding MSD sample points:_____
C. If yes, does company have a permit? Number_____ Yes__ No__
D. Is there a copy in MSD file? (Obtain copy) Yes__ No__
E. If no to C, explain:_____

55. IS MSD CATEGORY CORRECT? Yes✓ No__
A. If no, explain:_____
B. What should category be?_____

56. IS COMPANY AN SIU? Yes✓ No__
A. If yes, why? Process discharge >25,000 GPD

57. WERE **ALL** SAMPLE POINTS OPENED AND INSPECTED? Yes✓ No__
A. If any SPs cannot be located or opened, explain:_____
B. If any SP descriptions need to be changed, explain: SP002 location moved to downstream MH to pick up discharge from another building. (SP005)

58. REVIEW THE SAMPLE POINT MAP! Last map revision date: 9/2/98
A. Are all sample points correctly located & identified? Yes__ No✓
B. Is the map correct and accurate in **all** its details? Yes__ No✓
C. If no to A or B, what changes are needed? Delete SP002, Add SP005, Added flow direction to SP001. Also more detail to DS manholes

59. COMPLETE THIS TABLE FOR ALL CATEGORICAL DISCHARGE POINTS AND ALL MAJOR POINTS OF CONNECTION TO THE MSD SANITARY OR COMBINED SEWERS.

POINT:	1	2	3	4	5	6
Sample Point (MSD #):	001	005	003	004		
Applicable Cat. Std.:		(Replaced SP002)				
If SP flows to a downstream SP, list it:						
Is discharge Batch (B) or Continuous (C)?	B__C✓	B__C✓	B__C✓	B__C✓	B__C__	B__C__
Oil or grease inter.?	Y__N✓	Y✓N__	Y__N✓	Y__N✓	Y__N__	Y__N__
Other Pretreatment? Describe:	Y✓N__ Neut. Ag Recov	Y✓N__ Neut. Ag Recov	Y✓N__ Neut. Ag Recov	Y✓N__ Neut. Ag Recov	Y__N__	Y__N__
Process wastes? LAB & FILM WASTE	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Plant & Equip washdn?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Sanitary Wastes?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Contact CW?	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__
Noncontact CW?	Y✓N__	Y✓N__	Y__N✓	Y__N✓	Y__N__	Y__N__
Boiler Blowdown?	Y__N✓	Y✓N__	Y__N✓	Y__N✓	Y__N__	Y__N__
Stormwater?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Other? Describe: Soft. REGEN	Y✓N__	Y✓N__	Y__N✓	Y__N✓	Y__N__	Y__N__
CWF factor correct?	Y__N N/A	Y__N N/A	Y__N N/A	Y__N N/A	Y__N__	Y__N__
Disch. Fact. Correct? If no, list new factor:	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Is it possible to obtain representative sample?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Is SP safe/accessible?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Any problems with SP? If yes, describe below.	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__
Is the SP trapped?	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__
Is SP dry-justified?	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__

A. For each sample point which has a process water flow from a categorical process:
SP:____ Specific operation:____
SP:____ Specific operation:____
SP:____ Specific operation:____

B. Describe in detail any sample point problems found:____

C. Are **all** connection points included in the above table? Yes__ No✓

D. If No, explain: Some buildings W of Euclid Av are sampled with Barnes Hospital complex.

USE THE SPACE ON THIS PAGE FOR ANY OTHER COMMENTS OR OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS FACILITY.

Bldgs included in Barnes Jewish Hospital complex
16, 17, 19, 20, 21, 22, 56, 86

Wash. U. Med School buildings with remote locations which are also not included in this inspection:
4511 Forest Park (Bldg 64) AIDS Clinic & Research
4488 Forest Park (Bldg 76) Clinic
4444 Forest Park (Bldg 66) Gene sequence research, occupational & physical therapy training
4480 Clayton (Bldg 45) Human Resources

No Y2K impact on pretreatment - manually controlled.

Metropolitan St. Louis Sewer District
2000 Hampton Avenue
St. Louis, MO 63139-2979
(314) 768-6200

APPROVAL DATE: December 21, 2001
MSD Reference No.: P-0024172-01
County **PAC** No.: 071-04-01

IND
Wash. U. - main campus

P-24172-00
PLANS ARE IN THE FILE

PROJECT TITLE: MILLBROOK & HOYT (WASHINGTON UNIVERSITY BIOMEDICAL ENGINEERING BLDG)

Site Address: 6740 Millbrook Blvd, ~~63105~~ 63130

Plan Status: Supercede to Plans Approved, 05-18-2001

On this date the above referenced plans have been approved for construction work relating to these items:

(X) Storm Sewers
( ) Detention Basin
(X) Combined Sewers
(X) Pump Station and Force Main
(X) Sanitary Sewers
( ) House Connection Only
(X) Miscellaneous MSD Inspection

The following Permit will be required from MSD for this work:
( ) Construction ( ) House Connection (X) Misc. MSD Inspection ( ) No MSD Permit

****
(X) **NO OCCUPANCY PERMITS** ARE TO BE ISSUED UNTIL MSD CONSTRUCTION APPROVAL OF THIS WORK
****

Prior to the issuance of the required Permit the following fees must be paid and documents executed by the Project Owner:

( ) As-Built Deposit in the amount of N/A.
(Deposit may be paid by cash or personal check made payable to the Metropolitan St. Louis Sewer District).

( ) Construction Escrow Deposit in the amount of N/A.
(Deposit must be in a form of cash or a **cashier's check** payable to the Metropolitan St. Louis Sewer District).

( ) Pump Station Construction Escrow Deposit in the amount of N/A.
(Deposit must be in a form of cash or a **cashier's check** payable to the Metropolitan St. Louis Sewer District).

( ) Cash Deposit Agreement (two copies enclosed, execute and return both).

Please refer to Chapter 8 of the District's "Rules and Regulation and Engineering Design Requirements for Sanitary Sewage and Stormwater Drainage Facilities" for and explanation of these requirements. Questions regarding the deposits or agreement should be directed to Keith Milson, Escrow Group (768-6206).

Construction Permitting Information

1. Permits will only be issued to licensed and bonded drainlayers for all work related to sewer construction.
1. The Construction Permit fee is $105.00 and must be paid at the time of the issuance of permits. The Construction Inspection fee is $1.78 per lineal foot of sanitary sewer and $2.49 per lineal foot of storm/combined sewer.
2. The House Connection Permit and Misc. MSD Inspection fees are $15.00 for each connection or point of inspection. Where a Machine Tap is required, an additional fee of $200.00 will be required.
3. All fees must be paid by the drainlayer, prior to issuance of the permits. Please refer to Chapter 10 of the District's "Rules and Regulations and Engineering Design Requirements for Sanitary Sewage and Stormwater Drainage Facilities" for additional information regarding the Construction Permits.
4. Questions regarding Permits should be directed to the Permit Section at 768-6286.
5. The approved plans will remain active for one year. If permits have not been applied for within the year a new set of plans will have to be submitted for approval.

NOTE: THIS APPROVAL IS SUBJECT TO STATE HIGHWAY REGULATIONS AND U.S. ARMY CORPS OF ENGINEERS REQUIREMENTS WHERE APPLICABLE.

Michael G.Borgard, P.E.
Manager of Plan Review

Consulting Engineer
Owner
St. Louis County Department of Highways and Traffic
Municipality
St. Louis County Public Works/Grading

St. Louis County Public Works
Office of Plumbing and Inspection
Environmental Compliance ✓
Permit

Metropolitan
St. Louis Sewer
District

2000 Hampton Avenue
St. Louis, MO 63139-2979
(314) 768-6200

PUBLIC COMBINED SEWER

DESCRIPTION	UNITS/ FOOTAGE	COST
MISC	2 EA	$0.00

MEMORANDUM

TO: Patrick Mais Finance Department

FROM: Bruce Litzsinger DEC BAJ

DATE: March 15, 2001

RE: **Billing for Wastewater Sample Analytical Costs**

Please bill the following charges, by invoice. These charges, for the cost of MSD laboratory analyses of samples submitted as part of a special discharge application, were agreed to by the applicant for special discharge.

These charges are based on the fees in MSD Wastewater User Charge Ordinance 10177, Appendix II.

PARTY TO BILL: Mike Kershaw
WASHINGTON UNIVERSITY
660 S. Euclid
St. Louis, MO 63110

BILLING IS FOR: Cost of Sample Analysis

SAMPLES SUBMITTED: March 6, 2001

REASON FOR SAMPLE: Special Discharge Application for Polybor solution from Washington University School of Medicine, 4525 Scott, St. Louis, Missouri.

Laboratory Report Date	Billing Item	Charge
3/13/01	Special Discharge TSS and COD wastewater analyses	$23.00
Total:	------	$23.00

If you have any questions, please call me at 8757.

dss

File: IU - Washington University Medical School, 51122162-00

WASHINGTON U.
School of MEDICINE
#5112 2162-00

Hazardous Waste Disposal Guide

What is Hazardous Waste?

There are many ways to define hazardous waste but the following Department of Transportation (DOT) definition can be used as a general guide: A hazardous material/waste is a substance....which has been determined to be capable of posing an unreasonable risk to health, safety, and property, when transported in commerce (49 CFR (171.8)). However, in addition to the DOT, the EPA and OSHA have their own definitions of what is hazardous. To simplify this, we will provide simple guidelines for you to use when disposing of chemicals.

Procedures for Disposal:

All *hazardous waste* must have a completed *hazardous waste label*, prior to pick-up and must be properly *containerized*. Then, fill out and fax a request for pick-up (RFP) form to the EH&S office. To obtain an RFP, call 362-6816. To fax an RFP, fax to 362-1995. Next, segregate the chemicals by *hazard class*. This helps to reduce the risk of a reaction between chemicals during transportation. If these steps are followed, the EH&S chemical team will pick up the waste and dispose of it properly. Due to the quantity of labs served (1500) and large volume of waste collected, please allow two weeks for service. See below for more detailed information.

Examples of *Hazardous Waste*:

- Flammable and non-flammable solvents
- Corrosives – acids and bases
- Oxidizers – nitric acid, nitrates, chlorates, peroxides
- Reactives – hydrides, azides, picryls
- Toxic – poisons, mutagens, carcinogens, controlled substances, mercury, dyes, stains, heavy metals etc.
- UV germicidal lamps, HID lamps, Metal Halide lamps
- Solvent contaminated paper, rags, or other clean-up debris
- Photo-fixer, developer, x-ray film
- Batteries – NiCad, button batteries, lead-acid etc.
- Computers, circuit boards, monitors etc.
- Oil, oil filters, antifreeze
- Paint, sand-blasting sand, wet paint filters, etc.
- Shop rags and floor dry containing oil and solvents
- Mercury switches, etc.
- Concentrated boiler treatment chemicals or cleaning supplies

Problem Hazardous Waste

- Gas cylinders, lecture bottles, aerosol cans
  - Make arrangements when purchasing gas cylinders that the manufacturer or supplier will accept return of cylinders
- Shock sensitive materials – peroxidized ethers, dry picric acid
- Naturally occurring radioactive materials – uranyl nitrate, thorium nitrate
  - Include in the experimental protocol, a treatment to remove the hazard – see EH&S for details

Hazardous Waste *Labeling* Requirements

- Use our hazardous waste label – (see attachment) you may make your own label as long as it contains all of the same information and wording as ours
- Be sure to fill in the start date as the date that you declare the chemical a waste or the date you begin to accumulate chemicals into a waste container

Rec'd @ inspection JSV

RECEIVED
MAY 08 2001
DEPT. of ENVIRONMENTAL COMPLIANCE

- Contents – Please write the full name of the compound(s) and the percentages of each. If there is not sufficient space for this, attach the information on a separate sheet to the container. Please do not use acronyms, chemical formulas or chemical structures.
- P.I.'s name, dept, room# and building
- EH&S will supply labels

Hazardous Waste *Container* Requirements

- Container must be compatible with waste
- Container must be kept closed except when adding or removing waste
- One container per waste stream – **Warning:** More than one container per waste stream requires documented weekly inspections
- Send in RFP when container is full or within one year of start date

Hazard Classes

A simple method for determining if your waste is hazardous is if it fits into the following hazard classes:

- Flammable
- Oxidizer
- Reactive
  - Water reactive
  - Shock sensitive
  - Light, heat reactive
- Corrosive Acid – mineral
- Corrosive Acid – organic
- Corrosive Base
- Poison/irritant/carcinogen etc.
- Gas cylinders – segregate by hazard class

Segregation by *Hazard Class*

Use the following resources to determine the hazard class of your waste:

- MSDS
- Original Container Label
- Manufacturers catalog
- Lab Safety's Pocket Guide to Hazard Ratings – see http://www.cdc.gov/niosh/ipcs0000.html
- University of Minnesota Drum Designation Code system http://www.dehs.umn.edu/guidebook/appendix1.html

Moving Out?

All labs must be decommissioned prior to vacating the WUSM campus. Please contact the EH&S office four weeks in advance of moving, or leaving campus. The EH&S teams will remove any radioactive, chemical, or any asbestos containing materials for free. Failure to notify EH&S will result in a charge of $40 per man-hour for removal, inventory, and transportation of orphan chemicals.

WASHINGTON U.
SCHOOL OF MEDICINE
5112.2162-00

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

March 16, 2001

Mike Kershaw
WASHINGTON UNIVERSITY
660 S. Euclid
St. Louis, MO 63110

Dear Mr. Kershaw:

We have reviewed your application dated February 20, 2001 requesting approval to discharge 3,200 gallons of wastewater to the Metropolitan St. Louis Sewer District for treatment. This wastewater is a solution of Polybor and water from the Washington University School of Medicine, 4525 Scott Avenue, St. Louis, Missouri. We have analyzed a sample of this material. A copy of the analytical results is enclosed.

Based on the information you provided and the analytical results, this wastewater meets MSD Ordinance 8472 standards and is approved for discharge into a sanitary sewer on site at a rate not to exceed eleven gallons per minute. This limited rate is necessary due to the high Boron concentration in the material. This approval is valid for 30 days from the date of this letter.

You must be certain the waste is discharged into a sanitary or combined sewer inlet only. This letter does not authorize any discharge to a separate storm sewer, or to any watercourse, as any such discharge would be in violation of state and federal laws. **Please notify me at the number below when the discharge is to commence.**

This discharge has been approved based upon the information and sample you provided, and is subject to the conditions stated above. This approval may be revoked by the District at any time if any of the information is found to be incorrect, or if the conditions of this approval are violated. Also, if the discharge causes any operational or maintenance problem within the District's collection or treatment system, or results in violations of any conditions of the District's NPDES permit, Washington University will be considered responsible for damages.

You will be billed by invoice for our costs for analyzing the sample submitted with your application. These costs are listed in Appendix II of Ordinance 10177 and payment was agreed to by signing the Application for Approval for Special Discharge. We will advise our Finance Department to bill you $23.00. Please do not pay this amount until you receive our invoice.

If you have any questions, please call me at 314/436-8757.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Bruce H. Litzsinger, P.E.
Civil Engineer

dss

Enclosure

pc Bernie Rains

File: IU – Washington University School of Medicine, 51122162-00

MSD

Certificate of Analysis

Metropolitan St. Louis Sewer District

Department of Environmental Compliance
10 East Grand
Saint Louis, MO 63147

Phone: (314) 436-8710 Fax: (314) 436-8753

Report Date: *13-Mar-01*

Sample Match No. : 0101424

Account No:	5112216200	Industry Name:	WASHINGTON UNIVERSITY MEDICAL SCHOOL
Sample Point:	802	Source:	
Log Date:	07-Mar-01	Reason:	Hauler Acceptance
Due Date:	15-Mar-01	Project:	Special Discharge - Onsite - Acceptance
Requestor:	Litzsinger Bruce	Location:	Polybor solution (10% sodium octaborate tetrahydra
Collected By:		Treatment Area	
Remarks:			

Sample Match No. : 0101424

Logbk #	PC	BT	Result Name	Test Value	Units	Comp	Sampling Start		Sampling End	
03889	OA	OC	Appearance	clear		G			03/05/2001	10:35
03889	OA	OC	Color	yellow tint		G			03/05/2001	10:35
03889	OA	OC	Total Suspended Solids	6	mg/l	G			03/05/2001	10:35
03889	OA	OC	Volatile Solids (SS)	3	mg/l	G			03/05/2001	10:35
03889	OA	OC	Chemical Oxygen Demand	<10	mg/l	G			03/05/2001	10:35
03889	OA	OC	pH	8.00	su	G			03/05/2001	10:35

Notes

APPROVED BY

Mario J. DePrimo APPROVAL DATE: 03/13/2001

Laboratory Manager

BT = Bottle Type PC = Project Code

rcvd. 3/14/01

Metropolitan St. Louis Sewer District
Office of Environmental Compliance, 10 East Grand Avenue, St. Louis, Missouri 63147
Phone No: (314) 436-8710
Fax No: (314) 436-8766

APPLICATION FOR SPECIAL DISCHARGE APPROVAL

I. WASTEWATER SOURCE IDENTIFICATION:

Site name: Washington University School of Medicine
Premise Address: 4525 Scott Avenue, Basement
City: St. Louis State: MO Zip: 63110
Owner: Washington University: Radiation Sciences
Contact person: Mike Kershaw
Title: Hazardous Materials Division Manager
Phone: 314-362-6735 Fax: 314-362-1995

II. APPLICANT (mailing information):

Applicant name: Mike Kershaw
Title: Hazardous Materials Division Manager
Company name: Washington University
Mailing address: 660 S. Euclid, St. Louis MO 63110, Campus Box 8229
City: St. Louis State: MO Zip: 63110
Phone: 314-362-6735 Fax: 314-362-1995

III. A. MATERIAL TO BE DISCHARGED (check all applicable boxes):

1. Wastewater description/location: Water, Poly Bor Solution Location: Basement, 4525 Scott
2. Process/activity generating wastewater: This solution was mixed for use as a target shield for a linear accelerator.

3. Physical and chemical composition: List all constituents, and known or potentially present regulated contaminants below.
   - See separate listing enclosed, and/or
   - See analytical results enclosed, and/or
   - Material Safety Data Sheet enclosed.

Description	Range	Unit	Description *(continued)*	Range	Unit
Sodium Octaborate Tetrahydrate	5-10	%			
Water	90-95	%			

4. Is this wastewater from a process subject to EPA's categorical standards in 40 CFR Subchapter N? • Yes • No
   a. If yes, the applicable standards are in: 40 CFR Part _____, Subpart _____ • Existing source • New source
5. Does this wastewater contain polychlorinated biphenyls, asbestos or radioactive material? • Yes • No
   a. If yes, describe: _____
6. Representative sample: • Laboratory results attached, and/or • Sample provided (1/2 gallon minimum, clear container)
   a. Sample collection point/location: _____ Collection method: _____
   b. Sampler's name/Co.: _____ Sample date/time: _____
   c. Attach chain of custody as available
7. Discharge will occur over the following time period: • < 30 days • ≥ Two years • Other: _____
   a. Expected total volume of wastewater to be discharged over the time period above: 3,200 Gallons
   b. Proposed discharge volume: _____ Gallons, at a frequency of: • One time • Daily • Weekly • Monthly • Once/three months • Once/six months • Other: as recommended by MSD
8. Pretreatment of wastewater prior to discharge: • None • Yes, describe: _____
   a. If yes, attach site plan, pretreatment system schematic, and design specifications.
9. Wastewater from a remediation project under: • Superfund/CERCLA • RCRA • Voluntary program • UST • Not applicable
   a. If from a remediation project, briefly describe the past and present utilization of the property: _____

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III. B. MATERIAL FROM UNDERGROUND STORAGE TANK SOURCE

• **Not applicable (go to Section IV.)**

Please answer the following questions if you are requesting to discharge wastewater associated with an underground storage tank system .

1. a. Wastewater from: • Inside UST(s) • UST system pit • Excavation outside UST system pit • Monitoring well • Groundwater remediation system

b. UST project involves wastewater from: • UST(s) closed in place • UST(s) removed • Remediation • Upgrade • Maintenance activities • Well monitoring • Other, explain:_____

c. If wastewater is from a closure project, how long has UST(s) been out of service: _____ years

2. a. State assigned UST site identification number:_____ • Not applicable

b. Number of USTs affected: _____ • Unknown

c. For the UST(s) involved, their state identification number(s):_____ • Not applicable

d. Service Station Identification Number, as applicable: _____

3. Tank contents/former contents: • Gasoline • #2 diesel • Used oil • Unknown • Other:_____

IV. DISCHARGE LOCATION

1. • On-site. Describe proposed point of entry to sewer and the discharge rate (must be a sanitary or combined sewer): Entry will occur at Scott Avenue, 100ft West of Taylor Avenue Note: Rate of discharge must not surcharge sewer line.

2. • Haul to MSD Bissell Point Hauled Waste Receiving Station at 10 E. Grand, St. Louis, MO.

a. Transporters Name:_____ and MSD Hauler ID Number:_____

b. Hazardous Waste Certification:

For wastewater which is hauled to MSD's Bissell Point Hauled Waste Receiving Station, I hereby certify that to the best of my knowledge and belief, the above hauled waste is not classified as a RCRA "hazardous waste" as defined by the MDNR in 10 CS R 25 or USEPA in 40 CFR Part 261.

Applicant name (print):_____

Signature:_____ **Date:**_____

ADDITIONAL INFORMATION:

Attached is an MSDS for Polybor. We are requesting MSD guidance about whether or not a sample must be analyzed, given generator knowledge of the composition of the wastewater. We would also be flexible on the frequency and volume of release to the system.

V. APPLICANT SIGNATURE AND CERTIFICATION:

This application must be signed by the applicant: either the source contact, or a contractor or agent directly responsible for site activities.

I hereby certify that I am directly responsible for activities at the site regarding the wastewater to be discharged, and to the best of my knowledge and belief, based on appropriate inquiry, the information in this application is true, complete, and accurate. The samples or analyses submitted are representative of the materials to be discharged. If granted approval to discharge, I agree to abide by the MS D Ordinances, and all applicable federal, state and local regulations. I agree to pay the costs of any pre-approval analyses performed by MS D and to pay any applicable disposal charges for the volume and strength of the wastes discharged.

Applicant name (print): Mike Kershaw

Signature: Mike K **Date:** 2/20/01

FOR MSD USE ONLY:

File Name: Wash. U Medical School ID No: 51127162-00 BHH Sample Point No: 802

Sample to Lab 3/7/01 BHH

RECEIVED

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Other Pollutant Acceptance Criteria at Bissell HWRS 23-Feb-01

Source: Wash U, Polybor
Waste Volume: 2000 Gal. — Rate Limited Discharge = 700 GPH

Weight of Pollutant in the Discharge:

Bissell Point (8/95 data in lb/day):

Pollutant	Conc. (ppm)	Total (lb)	Allowable Loading	Current Load	SD Allowed	Accept??	Time Dis?
Cyanide (CN)	0	0	136	135	0	Yes	..
Phenol	0	0	152	0	15	Yes	

	TCLP?	Source Conc. (ppm)	Total (lb.)	Influent Conc. ppm	Primary Conc. ppm	Inhibition Level (ppm)	Primary Removal %	Removed by AS (%)	Effluent Conc. ppb	Conc. in ZID (ppb)	Permit limit/ Acute WQ Stand. ppb	Conc. in MZ (ppb)	Chronic WQ Stand. ppb	Sludge Acceptble?	Acceptable? Safety Factor=
Benzene	ok	0	0	0	0	100	0%	66%	0	0	9999999	0	5	Yes	Yes
Ethyl Benzene		0	0	0	0	200	0%	86%	0	0	9999999	0	320	Yes	Yes
Toluene		0	0	0	0	200	0%	63%	0	0	9999999	0	1000	Yes	Yes
Xylene		0	0	0	0	999999	0%	88%	0	0	9999999	0	10000	Yes	Yes
Oil and Grease		0	0	0	0	999999	50%	0%	2000	342	87750	29	999999		Yes
TPH (HEM)		0	0	0	0	999999	0%	65%	2000	342	87750	29	999999		Yes
Ammonia (NH3)**		0	0	0	0	480	0%	56%	30	5	3333	0	667	Yes	Yes
Ammonia-N (total)		0	0	0	0	480	0%	56%	1000	171	468000	15	99999999		Yes
Chloride		0	0	0	0	6062	0%	0%	116000	19829	860000	1698	230000		Yes
Chlorine		0	0	0	0	9999999	0%	0%	0	0	9999999	0	2		Yes
Nitrates (or nitrite)		0	0	0	0	9999999	0%	0%	8000	1368	9999999	117	10000		Yes
Sulfate		0	0	0	0	500	0%	0%	47000	8034	9999999	688	250000		Yes
Sulfide		0	0	0	0	25	0%	0%	0	0	9999999	0	9999999		Yes
Surfactants		0	0	0	0	100	0%	0%	0	0	9999999	0	9999999		Yes
Anionic surfactants		0	0	0	0	120	0%	0%	0	0	3500	0	9999999		Yes
Cationic Surfactants		0	0	0	0	20	0%	0%	0	0	9999999	0	9999999		Yes
Nonionic surfactants		0	0	0	0	500	0%	0%	0	0	9999999	0	9999999		Yes

	TCLP?	Source Conc. (ppm)	Total (lb.)	Influent Conc. ppm	Primary Conc. ppm	Inhibition Level (ppm)	Primary Removal %	Removed by AS (%)	Effluent Conc. ppb	Conc. in ZID (ppb)	Acute WQ Stand. ppb	Conc. in MZ (ppb)	Chronic WQ Stand. ppb	Sludge Acceptble?	Acceptable? Safety Factor=
Acetone		0	0	0	0	9999999	0%	95%	0	0	9999999	0	9999999	Yes	Yes
Chloroform	ok	0	0	0	0	10	0%	41%	0	0	9999999	0	2	Yes	Yes
Dimethylamine		0	0	0	0	250	0%	51%	0	0	9999999	0	100	Yes	Yes
Formaldehyde		0	0	0	0	135	0%	21%	0	0	2000	0	9999999	Yes	Yes
Methylene Chloride		0	0	0	0	100	0%	29%	0	0	9999999	0	5	Yes	Yes
Methyl Ethyl Ketone	ok	0	0	0	0	999999	0%	0%	0	0	9999999	0	3220000	Yes	Yes
Methanol		0	0	0	0	999999	0%	0%	0	0	9999999	0	9999999	Yes	Yes
N-methyl pyrrolidone		0	0	0	0	999999	0%	0%	0	0	5000000	0	5000000		Yes
111-Trichloroethane		0	0	0	0	10	0%	80%	0	0	9999999	0	200	Yes	Yes
Tetrachloroethylene	ok	0	0	0	0	1	0%	70%	0	0	9999999	0	5	Yes	Yes
Trichloroethylene	ok	0	0	0	0	1	0%	72%	0	0	9999999	0	5	Yes	Yes
Triethylamine		0	0	0	0	999999	0%	0%	0	0	999999	0	999999	Yes	Yes

* - evaluate under TCLP.

** note - discharge rate based on ppm * 4.5= COD increase of 10%.

Other Chemicals:	Source Conc. (ppm)	Total (lb.)	Influent Conc. ppm	Primary Conc. ppm	Inhibition Level (ppm)	Primary Removal %	Removed by AS (%)	Effluent Conc. ppb	Conc. in ZID (ppb)	Acute WQ Stand. ppb	Conc. in MZ (ppb)	Chronic WQ Stand. ppb	Sludge Acceptble?	Acceptable? Safety Factor=
boron	100000	1668	40	13	999999	0%	0%	13333	2279	999999	195	2000	Yes	Yes
chem 2	input	0	0	0	input	0%	0%	0	0	input	0	input	NO	NO
chem 3	input	0	0	0	input	0%	0%	0	0	input	0	input	NO	NO

10%

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

FACILITIES MANAGEMENT OFFICE

ENVIRONMENTAL SAFETY OFFICE

facsimile transmittal

Post-it™ brand fax transmittal memo 7671 | # of pages ▸

To Bruce Litzinger	From Mike Kershaw
Co. MSD	Co. Wash Univ School of Med
Dept.	Phone # 362-6735
Fax # 436-8766	Fax #

Bruce,

Here is the MSDS that was missing from our application.

Campus Box 8229
660 S. Euclid Avenue
St. Louis, MO 63110
(314) 362-6816 FAX: (314) 362-1995

* *

M S D S

Canadian Centre for Occupational Health and Safety

* (January, 2001)

*** IDENTIFICATION ***

MSDS RECORD NUMBER : 2496417

PRODUCT NAME(S) : Polybor

PRODUCT IDENTIFICATION : Code LA4191

DATE OF MSDS : 2000-11-28

CURRENCY NOTE : This MSDS was provided to CCOHS in electronic form on 2000-12-20

*** SUPPLIER/DISTRIBUTOR INFORMATION ***

SUPPLIER/DISTRIBUTOR : VAN WATERS & ROGERS LTD

ADDRESS : 9800 Van Horne Way
Richmond British Columbia
Canada V6X 1W5

EMERGENCY TELEPHONE NO. : 800-424-9300 (CHEMTREC)

*** MATERIAL SAFETY DATA ***

LA4191.1 LA4191 1 EEE

VAN WATERS & ROGERS LTD. 9800 VAN HORNE WAY RICHMOND, B C

WHMIS CODES: D.2A

For Emergency Assistance
Involving Chemicals Call CHEMTREC
(800) 424-9300

WHMIS (Classification)
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

Section I. Chemical Product Identification

Product Name Polybor

		Code	LA4191
Synonym	Disodium octaborate tetrehydrate	CAS#	Mixture.
Chemical Name	Not applicable.	DSL	On the DSL list.
Chemical Family	Inorganic borates	CI#	Not available.

Chemical Formula	Na2B80134H2O
Material Uses	Industrial applications: Flame retardant

Section II. Composition and Information on Ingredients

Name	CAS #	% by Weight	LC50/LD50
Disodium octaborate tetrahydrate	12008-41-2	>99	ORAL (LD50): Acute: 2550 mg/kg [Rat]. DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Section III. Hazards Identification

Potential Acute Health Effects	Hazardous in case of inhalation. Slightly hazardous in case of eye contact (irritant), of ingestion. Non-irritant for skin. Non-sensitizer for skin. Non-permeator by skin.
Potential Chronic Health Effects	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Classified SUSPECTED for human [Disodium octaborate tetrahydrate]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Disodium octaborate tetrahydrate]. The substance is toxic to the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. COLD water may be used. Get medical attention.
Skin Contact	NO known EFFECT on skin contact; rinse with water for a few minutes.
Hazardous Skin Contact	Not available.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Hazardous Inhalation	Not available.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Have conscious person drink several glasses of water or milk. Seek medical attention.
Hazardous Ingestion	Note to physician: Observation only is required for adult ingestion in the range of 4-8 grams of Polybor. For ingestion of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful

for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

Section V. Fire and Explosion Data

The Product is: Non-flammable.

Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not applicable.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	Use extinguishing media suitable for surrounding materials.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section VI. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Prevent entry into sewers, basements or confined areas; dike if needed. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section VII. Handling and Storage

Precautions	Keep locked up. DO NOT ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as reducing agents, metals, alkalis.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Indoor storage is recommended. To maintain package integrity and to minimize caking of the

product, bags should be handled on a first-in, first-out basis. Good house keeping procedures should be followed to minimize dust generation and accumulation.

Storage temperature: Ambient
Storage pressure: Atmospheric
Special sensitivity: Moisture (caking)

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	In case of insufficient ventilation, wear suitable respiratory equipment. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Splash goggles. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.
Exposure Limits	Disodium octaborate tetrahydrate TWA: 15 (mg/m3) from OSHA (PEL) [United States] Inhalation Total. TWA: 5 (mg/m3) from OSHA (PEL) [United States] Inhalation Respirable. TWA: 10 (ppm) from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

Section IX. Physical and Chemical Properties

Physical State and Appearance	Solid. (Crystalline solid.)	Odor	Odorless.
Molecular Weight	412.52	Taste	Not available.
pH (1% soln/water)	8.3 [Basic.] (3%)	Color	White.
Boiling Point	Not available.		
Melting Point	815 C (1499 F)		
Critical Temperature	Not available.		
Specific Gravity	Not available.		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Evaporation rate	Not available.		

Viscosity	Not available.
Water/Oil Dist. Coeff.	Not available.
Ionicity (in Water)	Not available.
Dispersion Properties	See solubility in water.
Solubility	Soluble in hot water. Partially soluble in cold water.

Section X. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Not available.
Incompatibility with various substances	Highly reactive with metals, alkalis. Reactive with reducing agents.
Corrosivity	Not available.
Special Remarks on Reactivity	Reaction with strong reducing agents, such as metal hydrides or alkali metals, will generate hydrogen gas, which could create an explosive hazard.
Special Remarks on Corrosivity	Not available.
Hazardous Polymerization	Will not occur.

Section XI. Toxicological Information

Routes of Entry	Inhalation.
Toxicity to Animals	Acute oral toxicity (LD50): 2550 mg/kg [Rat]. Acute dermal toxicity (LD50): >2000 mg/kg [Rabbit].
Chronic Effects on Humans	CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Classified SUSPECTED for human [Disodium octaborate tetrahydrate]. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN] [Disodium octaborate tetrahydrate]. The substance is toxic to the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage.
Other Toxic Effects on Humans	Hazardous in case of inhalation. Slightly hazardous in case of eye contact (irritant), of ingestion. Non-irritant for skin. Non-sensitizer for skin. Non-permeator by skin.
Special Remarks on	Not available.

Toxicity to Animals	
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Polybor is poorly absorbed through intact skin. Symptoms of accidental over-exposure to Polybor might include nausea, vomiting and diarrhea, with delayed effects of skin redness and peeling. These symptoms have been associated with the accidental over exposure to the chemically related substance boric acid.

Section XII. Ecological Information

Ecotoxicity	Boron (B) is the element in disodium octaborate tetrahydrate (Polybor) which is used by convention to report borate product ecological effects. It occurs naturally in sea water at an average concentration of 5 mg B/L and generally occurs in fresh water at concentrations up to 1 mg B/L.
BOD5 and COD	Not available.
Products of Biodegradation	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	Not available.

Section XIII. Disposal Considerations

Waste Disposal	Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Section XIV. Transport Information

TDG Classification	Not controlled under TDG (Canada).
Shipping name	Not applicable.
PIN	Not applicable.
Packing Group	Not applicable.
Special Provisions for Transport	No additional remark.

Section XV. Other Regulatory Information

Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Section XVI. Other Information

References -Manufacturer's Material Safety Data Sheet.

Other Special Considerations Not available.

Validated by Hardev Bendick on 11/28/2000. Verified by Hardev Bendick.

Information Contact
EH&S Department
Vancouver, B C.
(604) 273-1441

FOR UPDATED COPIES OF AN MSDS, PLEASE CONTACT YOUR LOCAL VAN WATERS & ROGERS LTD. BRANCH.

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Van Waters & Rogers Ltd. expressly disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose with respect to the product provided.

========== END OF MSDS ==========

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Request for Laboratory Analytical Services

Purchase Order No.	BPEL Quote No.	Client Job No.

SEND INVOICE TO

Name	
Company	Dept.
Address	
City, State, Zip	

REPORT RESULTS TO

Name: Mike Kershaw	Title: HazMat Mgr
Company: Washington University School of Medicine	Dept.: EH&S
Address: 660 S. Euclid, Box 8089	
City, State, Zip: St Louis MO 63110	
Telephone No.: 314-362-6735	Telefax No.: 314-362-1995

Date Results Req.	Rush Charges Authorized	Phone / Fax Results
	☐ Yes ☐ No	☐ Yes ☐ No

SPECIAL INSTRUCTIONS

Check Regulatory Type
☐ NPDES ☐ UST
☐ SDWA ☐ FDA/USDA
☐ RCRA ☐ Other
☐ Collected in State of _____

ANALYSIS REQUESTED
(Enter an X in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	Date Sampled	Time	Comp	Grab	Matrix Type	Number of Containers	TSS	COD	pH							LAB ONLY
Boron/Water Solution	3/05	10:35 am		X			X	X	X							
E. Building 277 Vault Basement.																

Chain of Custody (if required)

Relinquished by: Mike Kershaw	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received at lab by:	Date/Time
Method of Shipment:			

Authorized by: Date

(Client Signature Must Accompany Request)

Comments

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE

TELEPHONE OR CONFERENCE RECORD

File Type: IND Date: 2/27/01 Time: 1:05

File Name: Washington U. School of Medicine

Account No.:

Telephone Call: Incoming ( ) Outgoing ( ) Returned (✓) Conference Field ( ) Office ( )

SUBJECT: SD - Polybor

PERSONS INVOLVED

Name	Affiliation
Mike Kerchan	Wash U
BHZ	

SUMMARY OF CONVERSATION:

Radiation Oncology used the material as a shield (for electrons) in a linear accelerator. Radiation group checked material for radiation + found none. Why a range on the material? It was not an exact mixture. They ran pH on material and it was 7.8. The higher the pH, the lower the concentration. A 10% solution will have a pH of 7.6.

We will require their pH data + a sample run for SS + COD

ACTION TAKEN:

Signature

MSD 043878

ACCOUNT NUMBER: 5112-2162-00

COMPANY NAME: WASHINGTON UNIV MEDICAL SCHOOL
660 South Euclid, Box 8229
St. Louis, MO 63110

CORRESPONDENCE

FROM 1993 **THRU** 2000

☐ **CORRESPONDENCE LOCATED IN** [redacted]

Moved to Archive files 11-01-12

f://form

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. west of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	4.865
P-32	0.650
S-35	0.483
C-14	0.051
I-125	0.147
P-33	0.001
TOTAL ACTIVITY DISCHARGED:	6.197 mCi

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

OJS 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 26 2000
Environmental Control

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: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-25-00

radrpt.doc 2/00

MSD 043880

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs east of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	74,380
P-32	0.868
S-35	0.236
C-14	2.131
I-125	0.060
P-33	0.002
Zn-65	0.010
TOTAL ACTIVITY DISCHARGED:	77.687 mCi

PART III: CERTIFICATION STATEMENTS

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RECEIVED
OCT 26 2000
Environmental Compliance

Print/type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-25-00

radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University - Hilltop Campus

Permit No:

Premise Address: 1 Brookings Hall Drive St. Louis MO 63130

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)
P-32	0.087
TOTAL ACTIVITY DISCHARGED:	0.087 mCi

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

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RECEIVED
OCT 26 2000
Environmental Control

Print/type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-25-00

radrpt.doc 2/00

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

Washing Univ. Medical Ctr.

April 6, 1999

Mark Lukens
KENNEDY ASSOCIATES INCORPORATED
One Metropolitan Square
211 North Broadway
Suite 1900
St. Louis, MO 63102

Dear Mr. Lukens:

This is in response to your letter of April 1, 1999 regarding the District's requirements pertaining to discharge of infectious wastes to District sewers. As previously discussed item 12 in paragraph A, Section One, Article V of MSD Sewer Use Ordinance 8472 prohibits discharges of infectious wastes other than those authorized under State regulations 10 CSR 80-7.010 and 19 CSR 30-20.011.

There are three sections within 80-7.010 which apply to sewering of infectious wastes. Sections (5)(C)1.B and 2.C allow floor drains in infectious waste processing and storage areas to be connected to a sanitary sewer. Within 30-20.021, Section (5)(D)3 includes this same allowance and further, in Section (5)(D)4, states that bulk blood, suctioned fluids, excretions and secretions may be poured into a drain connected to a sanitary sewer. Taking note that these allowances essentially pertain to fluid materials and do not extend to materials such as bodily organs, sharps, dressings, linens, etc. your interpretation of the referenced regulatory citations is correct.

If you have any questions, please call me at 436-8715.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Bob Zeman

Bob Zeman, P.E.
Manager of Environmental Compliance

ph

KENNEDY

KENNEDY ASSOCIATES INCORPORATED
Architecture ▪ Engineering ▪ Interior Design

Date: April 1, 1999

To: Bob Zeman — 436-8753 (Fax)
M.S.D. St. Louis

From: Mark Lukens
Kennedy Associates inc.

Project: BJC Health System
Washington University Medical Center
North Garage

Re: Infectious Waste

CC: David Camp – H.O.K. inc.
Carl Osberg – A.E.I.
Arnold Appel – H.A.I.

Dear Bob,

This letter is in regards to our phone conversation last week about the floor drain and waste discharge from the fixtures in the infectious waste room being deposited into the sanitary sewer system. You had stated that the public sewer system could handle the waste discharge from the infectious waste room as long as the state regulations were meet. I am aware of only two state regulation sections with in the M.S.D. requirements that address infectious waste disposal; they are 10 CSR 80-7.010 and 19 CSR 30-20.011. Nether of which prohibit the disposal of infectious waste into the public sewer system. Therefore M.S.D. will allow the infectious waste discharge into the public sewer system. Please confirm in writing that my interpretation is correct.

Respectfully,
Mark Lukens

One Metropolitan Square ▪ 211 N. Broadway ▪ Suite 1900 ▪ St. Louis, Missouri 63102 ▪ 314-241-8188 ▪ FAX 314-241-0125
Edwardsville, Illinois St. Louis, Missouri Dallas, Texas

FILE INSERT FOR BULKY DOCUMENT

FILE NAME: Washington University School of Medicine

ACCOUNT NUMBER: 5112 2162-00

BECAUSE OF ITS BULK, THE FOLLOWING DOCUMENT
IS NOT CONTAINED IN THIS FOLDER

IT DOES CONTAIN MATERIAL OR INFORMATION
PERTINENT TO THIS FILE

DATE DOCUMENT WAS RECEIVED IN DEC: July 26, 2000

COMPLETE TITLE OF DOCUMENT, WHO PREPARED AND DATE:

Contingency Plan
prepared by Mike Kershaw 3/2000

THE ABOVE DOCUMENT IS FILED
IN THE FOLLOWING LOCATION

WHERE FILED: Bulky document file

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

ENVIRONMENTAL HEALTH
& SAFETY

July 24, 2000

RE: Updated Chemical and Biological Contingency Plan — In Bulky file

James Goodall
Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

Dear Mr. Goodall,

Enclosed is an updated version of Washington University School of Medicine's Contingency Plan. Please contact me at 314-362-6735 if you have any questions or comments regarding this plan.

Sincerely,

Mike Kershaw
Hazardous Materials Division Manager
Washington University School of Medicine
Enclosure (1)

RECEIVED
JUL 26 2000
Environmental Compliance

Washington University School of Medicine
at Washington University Medical Center
Campus Box 8229, 660 South Euclid Avenue
St. Louis, Missouri 63110
(314) 362-6816 FAX: (314) 362-1995
www.ehs.wustl.edu
esafety@msnotes.wustl.edu

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. west of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	5.187
P-32	0.433
S-35	0.304
C-14	0.081
I-125	0.154
P-33	0.001
Ca-45	0.001
TOTAL ACTIVITY DISCHARGED:	6.158 mCi

RECEIVED
JUL 24 2000
Environmental Compliance

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

OJS

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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Print/type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-21-00

radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs east of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	54.232
P-32	1.005
S-35	0.102
C-14	3.161
I-125	0.075
P-33	0.003
Mn-54	0.045
Zn-65	0.160
TOTAL ACTIVITY DISCHARGED:	58.785 mCi

RECEIVED
JUL 24 2000
Environmental Compliance

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Print/type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-21-00

radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs east of Euclid

Permit No:

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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)
H-3	45,764
P-32	1,251
S-35	0.357
C-14	0.490
I-125	0.151
P-33	0.005
Gd-153	0.001
TOTAL ACTIVITY DISCHARGED:	48.019 mCi

RECEIVED
APR 24 2000
Environmental Compliance

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Print/type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 4-20-00

radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

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PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
H-3	6.400
P-32	0.616
S-35	0.284
C-14	0.033
I-125	0.101
P-33	0.002
Ca-45	0.001
TOTAL ACTIVITY DISCHARGED:	7.437 mCi

R
APR 24 2000
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

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A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print/type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 4-20-00

radrpt.doc 2/00

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PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
^{3}H	58.662
^{32}P	1.024
^{35}S	0.249
^{14}C	0.470
^{125}I	0.055
^{33}P	0.006
^{36}Cl	0.010
^{153}Gd	0.001
TOTAL ACTIVITY DISCHARGED:	60.477 mCi

RECEIVED
JAN 20 2000
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

[DJS] I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

[DJS] I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission have been met for the period covered by this report.

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: [signature] Date: 1-19-00

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

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Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
^{3}H	5.544
^{32}P	0.578
^{35}S	0.379
^{14}C	0.124
^{125}I	0.045
^{33}P	0.041
TOTAL ACTIVITY DISCHARGED:	6.711 mCi

JAN 20 2000
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

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A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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[OJS] I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission have been met for the period covered by this report.

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-19-00

radrpt 6/94

FILE INSERT FOR BULKY DOCUMENT

FILE NAME: WASHINGTON UNIV

ACCOUNT NUMBER: 5112 2162-00

BECAUSE OF ITS BULK, THE FOLLOWING DOCUMENT
IS NOT CONTAINED IN THIS FOLDER

IT DOES CONTAIN MATERIAL OR INFORMATION
PERTINENT TO THIS FILE

DATE DOCUMENT WAS RECEIVED IN DEC:

COMPLETE TITLE OF DOCUMENT, WHO PREPARED AND DATE:

~~ENGINEER~~ PLAN 11132-03
5112 2162-00
WASHINGTON UNIVERSITY SCHOOL OF MED.
4905 CHILDREN'S PLACE
ST. LOUIS, MO 63110

THE ABOVE DOCUMENT IS FILED
IN THE FOLLOWING LOCATION

WHERE FILED: BULKY FILE

BZ

ah

File=WD

From: DOUG MENDOZA
To: MAIN.MKPATEL
Date: 3/22/99 11:53am
Subject: DEC REVIEW OF PLANS FOR P-11132-03 (Wash U School of Medicine)

We have completed our review of the plans for the above-referenced facility. The sampling tee detail on the plans is actually a wye or cleanout connection, not a straight tee connection. However, we can use the manhole where the laterals discharge as a sampling point.

Therefore, please feel free to give final approval at your convenience.

METROPOLITAN ST. LOUIS SEWER DISTRICT - DEPT OF ENVIRONMENTAL COMPLIANCE
10 East Grand Ave., St. Louis, MO 63147, (314) 436-8710

COMMERCIAL/INDUSTRIAL USER WASTEWATER SURVEY

. MSD P-Reference Number 11132-03 (see instructions)

. MSD Account Number _____ Telephone Number _____

Company Name WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Mailing Address 660 SO EUCLID
ST. LOUIS, MO 63110

Premise Address 4905 CHILDRENS PLACE 63110

. No. of Employees 500, No. days/week 7, No. shifts/day 2, Peak months N/A

. Please check off all items which describe activities at your premise:

Doctor/Dental Serv.	__	Manufacturing	__	Product Formulating	__	Vehicle Maint.	__
Dry Cleaning	__	Offices	__	Product Packaging	__	Veterinarian	__
Health Care Serv.	__	Photo/X-Ray Proc.	__	Residential	__	Warehousing	__
Laundromat	__	Printing	__	Restaurant	__	Wholesale Distrib	__
Machine Shop	__	Product Assembly	__	Retail Sales	__		

Other (Describe) MEDICAL RESEARCH

. Provide a brief description of the specific activities performed at this establishment:
RESEARCH INTO CANCER & PEDIATRIC DISEASES

. Raw materials & chemicals: N/A

Final products/services: N/A

7. Are other companies located within the same building? Yes X No __

If yes, list them: BARNES NOBLE BOOKS

8. Do you
Use water in any manufacturing process? Yes __ No X Avg vol/day _____
Use water for cooling purposes? Yes __ No X Avg vol/day _____
Use water in a boiler system? Yes __ No X Avg vol/day _____
Use any air pollution devices w/water? Yes __ No X Avg vol/day _____
Have any above ground storage tanks? Yes __ No X # _____ Contents: _____

Have any underground storage tanks? Yes __ No X # _____ Contents: _____

Use or have on site any oils or grease? Yes __ No X List: _____
Use or have on site any solvents? Yes X No __ List: SEE BELOW

9. Do you prepare metal parts for any coating or painting step? Yes __ No X
If yes is an acid or acid-containing product used? Yes __ No __

List the acid or product used: _____

10. Do you generate hazardous waste? Yes X No __ MO has waste generator # MO-01591

If yes but no HW #, explain: _____

List haz wastes generated: LAB REAGENT WASTES (TOXIC, CORROSIVE, Flammable Solvents)

11. ATTACH PLANS AND DRAWINGS AS REQUIRED (see instructions)

12. Information furnished by: Name: DANIELL. KINDER
Title: CONSTRUCTION MANAGER Tel No. 362-0099

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision; and the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

13. Name and title of signing official: WALTER W. DAVIS JR / ASSO DEAN & CHIEF FAC OFF
Tel No. _____

Signature: [signature] Date 11/13/98

FILE INSERT FOR BULKY DOCUMENT

FILE NAME: WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

ACCOUNT NUMBER: 5112 2102-00

BECAUSE OF ITS BULK, THE FOLLOWING DOCUMENT
IS NOT CONTAINED IN THIS FOLDER

IT DOES CONTAIN MATERIAL OR INFORMATION
PERTINENT TO THIS FILE

DATE DOCUMENT WAS RECEIVED IN DEC: 3-22-99

COMPLETE TITLE OF DOCUMENT, WHO PREPARED AND DATE:

ENGINEERING PLANS (4 SHEETS - COVER & C1, C4 & C5)

FOR WVSOM PEDIATRICS BIOMEDICAL RESEARCH BUILDING

BY HEIDEMAN & ASSOCIATES

COVER 9/8/97 C1 4/27/98 C4 12/1/97 C5 4/27/98

THE ABOVE DOCUMENT IS FILED
IN THE FOLLOWING LOCATION

WHERE FILED: BULKY DOCUMENTS FILE

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	5.913
P-32	0.828
S-35	0.332
C-14	0.004
I-125	0.061
P-33	0.048
In-111	0.020
TOTAL ACTIVITY DISCHARGED:	7.206

REC
JAN 27 1999
Environmental Control

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

OJS I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

OJS I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission 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 or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-26-99

radrpt 6/94

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. East of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave St. Louis MO 63110

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)
H-3	86.179
P-32	1.088
S-35	0.493
C-14	0.222
I-125	0.075
P.33	0.049
Zn-65	0.360
TOTAL ACTIVITY DISCHARGED:	88.466 mCi

REC
JAN 27 1999
Environmental Compliance

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-26-99

radrpt 6/94

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

December 1, 1998

Cris Short
General Safety Manager
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
660 South Euclid
Campus Box 8229
St. Louis, MO 63110

RE: MSD Account 51124253-03

Dear Mr. Short:

Thank you for the recent call in which you expressed concerns of the discharges from the laboratories in the building at 4444 Forest Park Boulevard. Federal Pretreatment Regulations have been promulgated by the United States Environmental Protection Agency to control the discharge of wastewater from industrial sources into publicly owned treatment works and to ensure the protection of our natural resources.

The District has incorporated the federal requirements into MSD Sewer Use Ordinance No. 8472. A copy of the ordinance is enclosed. All discharges from your property to the District's sewers must comply with the provisions of this ordinance.

Under the federal regulations the District is required to identify the character and volume of pollutants contributed by industrial users. Article VIII, Section One of Ordinance No. 8472 provides for a questionnaire to be completed by industrial users to obtain this information.

I have enclosed a copy of the water usage for the last couple of years. I believe this account corresponds to the 4444 Forest Park building. A copy of our Industrial User Questionnaire (IUQ) with instructions is also enclosed. You may skip Section G. Please complete and return the questionnaire to us within 30 days of receipt. An inspection of the facility will be required following completion of the questionnaire.

We appreciate your cooperation and support in helping us comply with the federal regulations. Please call me at 436-8720 to discuss how we may coordinate the completion of both the questionnaire and the inspection.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

James E. Goodall

James E. Goodall
Environmental Engineering Associate

rmk
Enclosures: Acct history
Base map
IUQ & instructions
Ordinance 8472

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

FACILITIES MANAGEMENT OFFICE

ENVIRONMENTAL SAFETY OFFICE

RECEIVED
DEC 01 1998
DEPT. of ENVIRONMENTAL COMPLIANCE

November 30, 1998

Dear Sir or Madam:

Washington University School of Medicine is required by law to maintain a Hazardous Biological or Chemical Release Contingency Plan. In addition, the University is required to provide a copy of this plan to the responding authorities in the area.

Enclosed is an updated copy of the Contingency Plan. Please discard any previous versions of this document.

If you have any questions or comments regarding this document, please call me at 362-6816.

Sincerely,

Mike Kershaw

Mike Kershaw

Plan discarded upon receipt of revised plan

Campus Box 8229
660 S. Euclid Avenue
St. Louis, MO 63110
(314) 362-6816 FAX: (314) 362-1995

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. ~~West~~ East of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	65.261
P-32	0.871
S-35	0.359
C-14	0.529
I-125	0.104
P-33	0.041
Cl-36	0.004
Na-22	0.060
Ge-68	0.070
TOTAL ACTIVITY DISCHARGED:	67.276 mCi

RECEIVED
OCT 27 1998
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-26-98

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	5.838
P-32	1.210
S-35	0.265
C-14	0.026
I-125	0.115
P-33	0.028
TOTAL ACTIVITY DISCHARGED:	7.481 mCi

RECEIVED
OCT 27 1998
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-26-98

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL FACILITY INSPECTION REPORT

Company: Washington University School of Medicine

Premise Address: 660 S. Euclid Zip Code: 63110

Mailing Address: 660 S. Euclid Zip Code: 63110

Account #: 51122162-00 Current MSD category: 5

Inspection Contact Person: Mike Kershaw

Title: Haz. Materials Div. Mgr. Phone #: 362-6735

Others Present: NONE

Inspection Date: 6/9/98 Time of inspection: From 9:00 A To 4:00 P

Inspector: J. Goodall Reinspection ____ Initial Inspection ✓

References used: IUQ Date: 8/17/98 IDS Date: NONE Permit Date: NONE

NOTE: ALL ITEMS ARE TO BE COMPLETED BASED ON EVENTS SINCE LAST INSPECTION

Date of Last Inspection: NONE

1. HAS FIELD CONTACT CHANGED? Yes__ No ✓
New contact name and title:

2. HAS EMPLOYEE NUMBER CHANGED? Yes__ No ✓
New Number:

3. HAVE SHIFTS OR DAYS PER WEEK CHANGED? Yes ✓ No__
New Shifts: New Days per Week: 7

4. ARE THE LISTED SIC's ACCURATE & CORRECT? Yes ✓ No__
Note any changes & why:

5. ARE THERE ADDITIONAL ACCOUNT NUMBERS? Yes ✓ No__
List them, note any changes & reasons: 51122167-00, 90006372-01, 51122168-00, 51122176-01, 51122161-00

6. BATCH PROCESSES:

Description	New/ exist	Water used?	Frequency of discharge	How/where is water discharged(& which SP)?
Food preparation	Exist	yes	daily	Sewer SP002

Comments:

7. CONTINUOUS PROCESSES:

Description	New/ exist	Water used?	Frequency of discharge	How/where is water discharged(& which SP)?
Research Animal Care	Exist	yes	continuous daily	Sewer 001,002,003
Research Labs	Exist	yes	daily	Sewer 001,002,003

Comments:

8. CLEANUP/WASHDOWN:

Description	New/ exist	Water used?	Frequency of discharge	How/where is water discharged(& which SP)?
wet mopup of buildings	Exist	yes	cont. daily	Sewer 001,002,003

Comments:

MSD 043903

9. PRETREATMENT:

Description	New/ exist	Frequency of discharge	How/where is water discharged(& which SP)?
NEUTRALIZATION	EXIST	CONTINUOUS	SEWER 001,002,003,004
SILVER RECOVERY	EXIST	CONTINUOUS	SEWER 001,002,003,004

Comments: _____

10. FOR ITEMS 6, 7, 8 AND 9:
A. Is water use excessive? Yes__ No ✓
B. If yes to A, what needs to be done? _____
C. Method used to verify A (attach diagrams/records as needed): WATER USAGE APPEARS NORMAL FOR INSTITUTION & OPERATIONS OF THIS SIZE.

11. HAVE THERE BEEN ANY CHANGES IN PROCESSES OR RAW MATERIALS? Yes__ No ✓
A. If yes, what? _____
B. Affect which sample points? _____

12. HAVE THERE BEEN ANY CHANGES IN TYPES OF PRODUCTS PRODUCED? Yes__ No ✓
A. If yes, what? _____
B. Comments: _____

13. HAVE THERE BEEN ANY CHANGES IN WASTEWATER QUALITY OR QUANTITY? Yes__ No ✓
A. If yes, what? _____
B. Affect which sample points? _____
C. Is surcharge status affected (add,remove or change)? Yes__ No__
D. Is return factor status affected (add, remove or change)? Yes__ No__
E. Is SIU status affected (process discharge <> 25000 GPD)? Yes__ No__
F. If yes to C, D or E explain: _____

14. IS ANY WATER USED FOR COOLING? Yes ✓ No__

What does it cool	Contact or Non-Contact	Once-thru or Recirc	Discharges Where?	Which SP?
HVAC	NCCW	RECIRC	CT	001 & 002

15. ARE THERE ANY COOLING TOWERS? Yes ✓ No__
A. If yes, is the water treated or conditioned before or during use? Yes ✓ No__
B. What contaminants may be present? biocides
C. How many? _____ Capacity (tons): _____
D. Frequency & volume of blowdown: _____ Discharge to: SP 001 & 002
E. At which sample points? _____
F. Comments: _____

16. IS ANY WATER USED IN BOILERS? Yes ✓ No__
A. Is the water treated or conditioned before or during use? Yes ✓ No__
B. What contaminants may be present? O_2 SCAVENGERS, CAUSTIC
C. Frequency & volume of blowdown: _____ Discharge to: _____
D. At which sample points? _____
E. Comments: _____

17. IS ANY WATER USED IN AIR POLLUTION CONTROL DEVICES? Yes__ No ✓
A. What types of devices? _____
B. How is the water disposed? _____
C. What contaminants may be present? _____
D. Frequency & volume if discharged: _____ Discharge to: _____
E. At which sample points? _____
F. Comments: _____

18. ARE THERE, ON THE ROOF, ANY AIR POLLUTION CONTROL DEVICES OR EXHAUST FANS THAT DISCHARGE POLLUTANTS? Yes ✓ No__
A. Describe: Fume hoods from labs COAL fired boiler stack
B. What contaminants may be present? COAL dust
C. List any sample points/storm drain locations that would receive the stormwater: INLETS AT POWERHOUSE
D. Comments: _____

MSD 043904

19. ARE THERE ANY GREASE TRAPS OR OIL INTERCEPTORS? Yes ✓ No__
A. Food wastes? ✓ Affected sample points: 002
B. Petroleum wastes?____ Affected sample points:____
C. Frequency of cleaning: AS NEEDED
D. Are cleaning logs kept? Yes__ No ✓
E. How is oil/grease disposed? hauled off site

20. ARE ANY SOLVENTS USED? Yes ✓ No__
A. Which solvents? xylene, methanol, toluene, others
B. What used for? lab testing
C. How disposed? hauled off site

21. DOES COMPANY HAVE A SOLVENT MANAGEMENT PLAN? Yes__ No ✓
A. If yes, last time updated:____
B. Update needed? Yes__ No__
C. Ifyes to B, why?____
D. Is it part of another document? Yes__ No__
E. If yes, list document name:____
F. Is there a copy in MSD file? (Obtain copy) Yes__ No__

22. ARE ANY INFECTIOUS MATERIALS HANDLED? Yes ✓ No__
A. If yes, describe operations: Animal & human tissue & blood
B. How is waste disposed? hauled off for incineration

23. ARE ANY RADIOACTIVE MATERIALS HANDLED? Yes ✓ No__
A. Describe operations: Biomedical Research & Clinical (Nuclear)
B. NRC License No.: 24-00167-11
C. How is waste disposed? solids decayed & hauled
D. If to sewer, describe procs: 350 sinks for glassware, liquids contained & decayed.
E. Does company have authorization per Ord. 8472, Art. V.1.A? Yes ✓ No__
F. Date of authorization: 7/8/94 Annual amt approved: 320 mCi
G. Has company exceeded the approved quantity? Yes__ No ✓
H. If yes, explain:____

24. ARE THERE ANY X-RAY OR PHOTO OR FILM PROCESSING OPERATIONS? Yes ✓ No__
A. If yes, describe: X-ray developing & photo film developing
B. Are there silver recovery facilities? Yes ✓ No__
C. Affecting which sample points? 001, 002, 003, 004
D. Comments: fixer & developer are collected & treated at waste disposal
rinse water run thru metallic replace units in labs.

25. ARE ANY WASTES GENERATED WHICH ARE NOT DISPOSED TO THE SEWER?
(ALSO INCLUDE ANY WASTES PREVIOUSLY LISTED) Yes ✓ No__
A. If yes, what non-haz. wastes? infectious material, animal carcass, used oil, antifreeze
B. If yes, what hazardous wastes? lab reagent & solvents (spent)
C. How disposed? hauled off site
D. MDNR and/or EPA hazardous waste generator No.: 01591
E. If yes to B and no HW#, explain why:____

26. IS THERE ANY DISCHARGE OF HAZARDOUS WASTE SUBJECT TO REPORTING UNDER 40 CFR 403.12(p) WHICH WAS NOT PREVIOUSLY REPORTED TO MSD? Yes__ No ✓
A. If yes, describe:____

27. DOES THE COMPANY HAVE ANY UNDERGROUND STORAGE TANKS? Yes__ No ✓
A. How many?____ Capacities:____
B. What do they contain?____
C. Have there been any known leaks from these tanks? Yes__ No__
D. If yes to C, explain:____
E. Are all of the tanks registered with MDNR? Yes__ No__
F. If no to E, explain:____

28. DOES THE COMPANY HAVE ANY ABOVE GROUND STORAGE TANKS? Yes__ No ✓
A. How many?____ Capacities:____
B. What do they contain?____
C. Are they protected with spill containment facilities? Yes__ No__
D. If no to C, explain:____
E. If yes to C, how is accumulated stormwater disposed?____

29. COULD SPILLS OR LEAKS OF STORED CHEMICALS, WASTES OR PROCESS MATERIALS EASILY REACH SANITARY SEWERS OR STORM DRAINS? Yes__ No✓
A. If yes, what needs to be done?_____

30. DOES COMPANY HAVE WRITTEN SPILL PREVENTION, CONTINGENCY, POLLUTION PREVENTION, WASTE MINIMIZATION, ETC. PLANS? Yes✓ No__
A. If yes, list titles: Contingency Plan
B. Last time updated: 3/98
C. Is there a copy in MSD file? (Obtain copy) Received at insp. Yes__ No✓
D. If no to 30, is a plan needed? Yes__ No__
E. If yes to D, explain:_____

31. DOES COMPANY HAVE A WRITTEN SLUG DISCHARGE CONTROL PLAN? Yes__ No✓
A. If yes, is it fully contained in another document? Yes__ No__
B. List plan's title:_____
C. Last time updated:_____
D. Is there a copy in MSD file? (Obtain copy) Yes__ No__
E. If no to 31, Is a plan needed? Yes__ No✓
F. If yes to E, explain:_____

32. ARE EMERGENCY NOTIFICATION PROCEDURES POSTED? Yes✓ No__
A. Are MSD contacts listed? Yes✓ No__
B. If no to 32 or 32A, describe how handled:_____

33. HAVE THERE BEEN ANY PROBLEM DISCHARGES SINCE LAST INSPECTION? Yes__ No N/A
A. Upsets?_____ Bypasses of pretreatment facilities?_____
Spills?_____ Slug discharges?_____ Other?_____
B. Explain any marked:_____

34. IS THERE ANY PROCESS SUBJECT TO CATEGORICAL PRETREATMENT STANDARDS? Yes__ No✓
A. If yes, identify the CFR Part, Subpart & PSES/NS:_____
B. Is the wastewater discharged to the sewer? Yes__ No__
C. If yes, which sample points?_____
D. If no, what is done with the wastewater?_____
E. Method used to verify no disch.(attach diagrams/records as needed):_____
F. What pretreatment is used?_____
G. Is it adequate? Yes__ No__
H. Explain answer to G:_____
I. What date did this process begin?_____
J. Does date agree with PSES/NS? Yes__ No__
K. Comments:_____

35. IF YES TO ITEM 34, AND IF 34A = 413 or 433: NA✓
A. What metals are plated?_____
B. Is cyanide used/on-site? Yes__ No__
C. Is facility a job shop (owns ≤50% of material finished annually)? Yes__ No__
D. If yes to C, how was it verified?_____
E. If 413, what is daily process discharge volume?_____
F. If 413, how was volume verified?_____

36. IF YES TO ITEM 34, HAS THE COMPANY SUBMITTED A BMR? NA✓ Yes__ No__
A. If yes, date BMR received:_____
B. If yes, does it correctly reflect current conditions? Yes__ No__
C. If no to 36 or 36B, explain:_____

37. IF YES TO ITEM 34, HAS THE COMPANY SUBMITTED A 90 DAY COMPL. REP.? NA✓ Yes__ No__
A. If yes, date 90 Day Report received:_____
B. If yes, does it correctly reflect current conditions? Yes__ No__
C. If no to 37 or 37B, explain:_____

38. IS THERE ANY PROCESS SUBJECT TO CATEGORICAL PRETREATMENT STANDARDS BUT WHICH PRODUCES NO WASTEWATER? Yes__ No✓
   A. If yes, identify the CFR Part, Subpart & PSES/NS which would be applicable if process wastewater was produced: _____
   B. Explain the absence of process wastewater: _____
   C. What date did this process begin? _____
   D. Does date agree with PSES/NS? Yes__ No__

39. IS THERE ANY PROCESS FOR WHICH A CPS CATEGORY HAS BEEN IDENTIFIED BUT FOR WHICH CPS HAS BEEN REMANDED OR HAS NOT BEEN PROMULGATED? Yes__ No✓
   A. If yes, identify the CFR Part, Subpart & PSES/NS: _____
   B. What is done with the process wastewater? _____
   C. What date did this process begin? _____
   D. Does date agree with PSES/NS? Yes__ No__
   E. Comments: _____

40. DOES CATEGORICAL WASTEWATER COMBINE WITH NON-CAT. WW PRIOR TO SAMPLING? Yes__ No✓
   A. List the non-cat. WW components: _____
   B. At which points? _____
   C. Is the Combined Wastestream Formula (CWF) applicable? Yes__ No__
   D. If no, explain: _____
   E. If yes, what is the currently applied factor? _____
   F. If yes, is the correct factor currently applied? Yes__ No__
   G. If no, explain: _____

41. IS ANY WASTEWATER SUBJECT TO PRODUCTION OR MASS BASED STANDARDS? Yes__ No✓
   A. At which points? _____
   B. Since calculation of the current limits, has the long term average production rate or discharge volume changed by 20% or more? Yes__ No__
   C. If yes, explain: _____

42. IS ANY WASTEWATER SUBJECT TO "NON-CATEGORICAL" PRETREATMENT STDS? Yes__ No✓
   A. If yes, identify the CFR Part, Subpart & PSES/NS: _____
   B. Is the wastewater discharged to the sewer? Yes__ No__
   C. If yes, which sample points? _____
   D. If no, what is done with the wastewater? _____
   E. What date did this process begin? _____
   F. Does date agree with PSES/NS? Yes__ No__
   G. Comments: _____

43. HAS COMPANY EXCEEDED ORDINANCE DISCHARGE LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? Yes__ No N/A
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? (if yes, describe how)

   B. If unresolved, what is being done? _____
   C. Comments: _____

44. HAS COMPANY EXCEEDED CATEGORICAL PRETREATMENT LIMITS SINCE THE LAST INSPECTION OR WITHIN THE LAST 12 MONTHS? NA✓ Yes__ No__
   A. If yes:

Pollutant	When	Sample Points	Is problem resolved? (if yes, describe how)

   B. If unresolved, what is being done? _____
   C. Comments: _____

MSD 043907

45. IS COMPANY **REQUIRED** TO SELF-MONITOR ANY OF THEIR DISCHARGES? Yes__ No✓
A. If yes, requirement is contained in permit_____ or other document_____.
B. If other document, date & description:_____
C. How frequently are sampling & reports required?_____
D. Have reports been on-time, complete & signed by proper person? Yes__ No__
E. If no, explain:_____

46. DOES COMPANY DO NON-REQUIRED OR ADDITIONAL SELF-MONITORING ? Yes__ No✓
A. If yes, explain:_____

47. IS COMPANY COLLECTING THE APPROPRIATE TYPE OF SAMPLE (GRAB OR COMPOSITE) FOR EACH POLLUTANT MONITORED? Yes__ No N/A
A. If no, explain:_____

48. IS COMPANY USING 40 CFR 136 METHODS FOR ALL REPORTABLE ANALYSES? Yes__ No N/A
A. If no, explain:_____

49. DOES COMPANY EMPLOY CONTINUOUS MONITORING TECHNIQUES FOR pH? Yes__ No✓
A. At which sampling points?_____
B. Do charts show compliance with the frequency & duration limits? Yes__ No__
C. If no, explain:_____
D. If company has a permit, have excursion summaries been submitted? Yes__ No__
E. If no, explain:_____

50. IS COMPANY SUBMITTING THE RESULTS OF **ALL** REPORTABLE MONITORING? Yes__ No N/A
A. If no, explain:_____

51. IS COMPANY MAINTAINING ADEQUATE RECORDS? Yes✓ No__
A. If no, explain:_____

52. IS COMPANY UNDER **ANY** ENVIRONMENTAL ENFORCEMENT ORDERS OR REQUIREMENTS TO SUBMIT COMPLIANCE SCHEDULE REPORTS? Yes__ No✓
A. If yes, type and date:_____
B. Have the reports & actions been on-time & complete? Yes__ No__
C. If no, explain:_____

53. DOES COMPANY HAVE ANY ON-SITE "SPECIAL DISCHARGE" APPROVALS? Yes__ No✓
DOES COMPANY HAVE ANY HAULED WASTE APPROVALS? Yes__ No✓
A. If yes, is company in compliance with requirements? Yes__ No__
B. Approval date:_____ Length of approval:_____
C. Comments:_____

54. DOES COMPANY HAVE ANY DISCHARGES SUBJECT TO NPDES PERMITTING? Yes__ No✓
A. What is discharged?_____
B. Any corresponding MSD sample points:_____
C. If yes, does company have a permit? Number_____ Yes__ No__
D. Is there a copy in MSD file? (Obtain copy) Yes__ No__
E. If no to C, explain:_____

55. IS MSD CATEGORY CORRECT? Yes__ No✓
A. If no, explain: Industrial strength cleaners & sanitizer used in animal care facilities.
B. What should category be? 4

56. IS COMPANY AN SIU? Yes__ No✓
A. If yes, why?_____

57. WERE **ALL** SAMPLE POINTS OPENED AND INSPECTED? Yes✓ No__
A. If any SPs cannot be located or opened, explain:_____
B. If any SP descriptions need to be changed, explain:_____

58. REVIEW THE SAMPLE POINT MAP! Last map revision date: NONE
A. Are all sample points correctly located & identified? Yes__ No✓
B. Is the map correct and accurate in **all** its details? Yes__ No✓
C. If no to A or B, what changes are needed? map will be drawn, Sample points were located.

59. COMPLETE THIS TABLE FOR ALL CATEGORICAL DISCHARGE POINTS AND ALL MAJOR POINTS OF CONNECTION TO THE MSD SANITARY OR COMBINED SEWERS.

POINT:	1	2	3	4	5	6
Sample Point (MSD #):	001	002	003	004		
Applicable Cat. Std.:				Bldg 080		
If SP flows to a downstream SP, list it:						
Is **discharge** Batch (B) or Continuous (C)?	B__C✓	B__C✓	B__C✓	B__C✓	B__C__	B__C__
Oil or grease inter.?	Y__N✓	Y✓N__	Y__N✓	Y__N✓	Y__N__	Y__N__
Other Pretreatment? Describe:	Y✓N pH Adj. Ag Recov.	Y✓N pH Adj. Ag Recov.	Y✓N pH Adj Ag Recov	Y✓N pH Adj. Ag Recov	Y__N__	Y__N__
Process wastes? LAB WASTE	Y✓N__	Y✓N__	Y✓N__	Y__N✓	Y__N__	Y__N__
Plant & Equip washdn?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Sanitary Wastes?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Contact CW?	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__
Noncontact CW?	Y✓N__	Y✓N__	Y__N✓	Y__N✓	Y__N__	Y__N__
Boiler Blowdown?	Y__N✓	Y✓N__	Y__N✓	Y__N✓	Y__N__	Y__N__
Stormwater?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Other? Describe:	Y✓N Soft Regen	Y✓N Soft Regen	Y__N✓	Y__N✓	Y__N__	Y__N__
CWF factor correct?	Y__N N/A	Y__N N/A	Y__N N/A	Y__N N/A	Y__N__	Y__N__
Disch. Fact. Correct? If no, list new factor:	Y__N✓ 0.09	Y__N✓ 0.89	Y__N✓ 0.01	Y__N✓ 0.01	Y__N__	Y__N__
Is it possible to obtain representative sample?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Is SP safe/accessible?	Y✓N__	Y✓N__	Y✓N__	Y✓N__	Y__N__	Y__N__
Any problems with SP? If yes, describe below.	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__
Is the SP trapped?	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__
Is SP dry-justified?	Y__N✓	Y__N✓	Y__N✓	Y__N✓	Y__N__	Y__N__

A. For each sample point which has a process water flow from a categorical process:
SP:____ Specific operation:____
SP:____ Specific operation:____
SP:____ Specific operation:____

B. Describe in detail any sample point problems found:____

C. Are **all** connection points included in the above table? Yes__ No✓

D. If No, explain: A number of the buildings are sampled with the Barnes Hospital complex.

USE THE SPACE ON THIS PAGE FOR ANY OTHER COMMENTS OR OBSERVATIONS PERTINENT TO YOUR INSPECTION OF THIS FACILITY.

Remote buildings not included in complex.
4511 Forest Park (Bldg 64) AIDS clinic & Research
4488 Forest Park (Bldg 76) Clinic
4444 Forest Park (Bldg 66) Gene sequence Research, occupat. & phys therapy
4480 Clayton (Bldg 45) Human Resources

Buildings included in Barnes Jewish Hosp. complex
16, 17, 19, 20, 21, 22, 56, 86

MSD 043910

MSD ACCOUNT HISTORY SUMMARY DATE: 09/02/99 TIME: 11:00 SCRN: HMS

51122162-00 ¢WASHINGTON UNIVERSITY ACCT-STAT: ACTIVE
00660 S EUCLID AVE

DUE DATE	TYP	CCF"S	B	A	AMOUNT DUE	DATE PAID	AMOUNT PAID	PAY
09/08/98 07	BIL	12499	6		$93,927.43			
08/10/98 06	BIL	11572	6		$91,939.93	08/14/98	$12,164.97	NOR
07/06/98 05	BIL	9028	6		$9,493.77	07/17/98	$9,493.77	NOR
						07/16/98	$78,736.32	ADJ
06/08/98 04	BIL	9028	6		$9,493.77	06/11/98	$9,493.77	NOR
05/11/98 03	BIL	12051	6		$12,667.92	05/11/98	$12,667.92	NOR
04/06/98 02	BIL	12051	6		$25,335.84	04/06/98	$12,667.92	NOR
						03/20/98	$12,667.92	NOR
03/09/98 01	BIL	12051	6		$12,667.92			
02/09/98 12	BIL	15469	6		$16,256.82	02/05/98	$16,256.82	NOR
01/05/98 11	BIL	15469	6		$32,513.64	01/06/98	$16,256.82	NOR
						12/16/97	$16,256.82	NOR
12/08/97 10	BIL	15469	6		$16,256.82			
11/10/97 09	BIL	17857	6		$17,690.16	11/12/97	$17,690.16	NOR

PF2 - DETAIL HISTORY SCREEN PF7 - PAGE BACKWARD PF8 - PAGE FORWARD
CLEAR - RETURN TO MENU SCREEN ENTER - RETURN TO HEADER SCREEN

$$\frac{155502 \times 748}{360} = 323,100 \text{ GPD}$$

279,250
82,915
17,000
7,240
3,240

712,745

MSD ACCOUNT HISTORY SUMMARY DATE: 09/02/99 TIME: 11:00 SCRN: HMS

51122167-00 ¢WASHINGTON UNIVERSITY ACCT-STAT: ACTIVE
00628 S KINGSHIGHWAY BL

DUE DATE	TYP	CCF"S	B	A	AMOUNT DUE	DATE PAID	AMOUNT PAID	PAY
09/08/98 07	BIL	11308	6		$11,887.77			
08/10/98 06	BIL	11097	6		$23,332.44	08/17/98	$11,666.22	NOR
						08/06/98	$343.02-	ADJ
						08/06/98	$77.37-	ADJ
						08/06/98	$129.87-	ADJ
						08/06/98	$18.57-	ADJ
						08/06/98	$399.72-	ADJ
						08/06/98	$329.37-	ADJ
						08/06/98	$24.87-	ADJ
						08/06/98	$4,970.98-	ADJ
						08/06/98	$25.40-	ADJ
						08/06/98	$2,098.62-	ADJ
						08/06/98	$2,766.09-	ADJ
						08/06/98	$65.82-	ADJ

PF2 - DETAIL HISTORY SCREEN PF7 - PAGE BACKWARD PF8 - PAGE FORWARD
CLEAR - RETURN TO MENU SCREEN ENTER - RETURN TO HEADER SCREEN

$$\frac{134400 \times 748}{360} = 279,250 \text{ GPD}$$

MSD ACCOUNT HISTORY SUMMARY DATE: 09/02/99 TIME: 11:01 SCRN: HMS

90006372-01 ¢WASHINGTON UNIVERSITY ACCT-STAT: ACTIVE
04525 SCOTT AV

DUE DATE	TYP	CCF"S	B	A	AMOUNT DUE	DATE PAID	AMOUNT PAID	PAY
09/08/98 07	BIL	2330	6		$4,559.49	08/26/98	$2,098.62	NOR
08/10/98 06 S	BIL	1985	6		$2,098.62	08/06/98	$2,098.62	ADJ
08/10/98 06 V	BIL	1985	6		$.00			
07/06/98 05	BIL	1985	6		$2,098.62	07/13/98	$2,098.62	NOR
						06/16/98	$2,098.62	NOR
06/08/98 04	BIL	1985	6		$2,098.62	06/09/98	$2,098.62	NOR
05/11/98 03	BIL	3990	6		$4,203.87	05/12/98	$4,203.87	NOR
04/06/98 02	BIL	3990	6		$4,203.87	04/03/98	$4,203.87	NOR
03/09/98 01	BIL	3990	6		$9,237.24	03/16/98	$4,203.87	NOR
						02/17/98	$5,033.37	NOR
02/09/98 12	BIL	4780	6		$5,033.37			
01/05/98 11	BIL	4780	6		$10,066.74	01/05/98	$5,033.37	NOR
						12/17/97	$5,033.37	NOR
12/08/97 10	BIL	4780	6		$5,033.37			

PF2 - DETAIL HISTORY SCREEN PF7 - PAGE BACKWARD PF8 - PAGE FORWARD
CLEAR - RETURN TO MENU SCREEN ENTER - RETURN TO HEADER SCREEN

$39905 \times 748 = \frac{29849279}{360} = 82,915$ GPD

MSD ACCOUNT HISTORY SUMMARY DATE: 09/02/99 TIME: 11:01 SCRN: HMS

51122168-00 ¢WASHINGTON UNIVERSITY ACCT-STAT: ACTIVE
00630 S KINGSHIGHWAY BL

DUE DATE	TYP	CCF"S	B	A	AMOUNT DUE	DATE PAID	AMOUNT PAID	PAY
09/08/98 07	BIL	300	6		$658.74	08/26/98	$329.37	NOR
08/10/98 06 S	BIL	300	6		$329.37	08/06/98	$329.37	ADJ
08/10/98 06 V	BIL	300	6		$.00			
07/06/98 05	BIL	300	6		$329.37	07/13/98	$329.37	NOR
						06/16/98	$329.37	NOR
06/08/98 04	BIL	300	6		$329.37	06/09/98	$329.37	NOR
05/11/98 03	BIL	900	6		$959.37	05/12/98 *	$959.37	NOR
04/06/98 02	BIL	900	6		$749.37	04/03/98	$749.37	NOR
03/09/98 01	BIL	900	6		$210.00-			
02/09/98 12	BIL	1100	6		$1,169.37-			
01/05/98 11	BIL	1100	6		$2,338.74	01/15/98	$2,338.74	NOR
						01/09/98	$1,169.37	NOR
						12/17/97	$1,169.37	NOR
12/08/97 10	BIL	1100	6		$1,169.37			

PF2 - DETAIL HISTORY SCREEN PF7 - PAGE BACKWARD PF8 - PAGE FORWARD
CLEAR - RETURN TO MENU SCREEN ENTER - RETURN TO HEADER SCREEN

$8182 \times 748 = 6120136 / 360 = 17{,}000$ GPD

MSD ACCOUNT HISTORY SUMMARY DATE: 09/02/99 TIME: 11:01 SCRN: HMS

51122176-01 ¢WASHINGTON UNIVERSITY ACCT-STAT: ACTIVE
04510 PARKVIEW PL

DUE DATE	TYP	CCF"S	B	A	AMOUNT DUE	DATE PAID	AMOUNT PAID	PAY
09/08/98 07	BIL	114	6		$550.59	08/26/98	$416.52	NOR
08/10/98 06 S	BIL	383	6		$416.52	08/06/98	$416.52	ADJ
08/10/98 06 V	BIL	383	6		$.00			
07/06/98 05	BIL	383	6		$416.52	07/13/98	$416.52	NOR
						06/16/98	$416.52	NOR
06/08/98 04	BIL	383	6		$416.52	06/09/98	$416.52	NOR
05/11/98 03	BIL	330	6		$360.87	05/12/98	$360.87	NOR
04/06/98 02	BIL	330	6		$360.87	04/03/98	$360.87	NOR
03/09/98 01	BIL	330	6		$653.49	03/16/98	$360.87	NOR
						02/17/98	$292.62	NOR
02/09/98 12	BIL	265	6		$292.62			
01/05/98 11	BIL	265	6		$292.62	01/05/98	$292.62	NOR
12/08/97 10	BIL	265	6		$292.62	12/12/97	$292.62	NOR
11/10/97 09	BIL	55	6		$66.18	11/13/97	$66.18	NOR

PF2 - DETAIL HISTORY SCREEN PF7 - PAGE BACKWARD PF8 - PAGE FORWARD
CLEAR - RETURN TO MENU SCREEN ENTER - RETURN TO HEADER SCREEN

$$3486 \times 748 = \frac{2607528}{360} = 7240 \text{ GPD}$$

MSD ACCOUNT HISTORY SUMMARY DATE: 09/02/99 TIME: 11:02 SCRN: HMS

51122161-00 ¢WASHINGTON UNIVERSITY ACCT-STAT: ACTIVE
00700 S KINGSHIGHWAY BL

DUE DATE	TYP	CCF"S	B	A	AMOUNT DUE	DATE PAID	AMOUNT PAID	PAY
09/08/98 07	BIL	83	6		$178.89	08/21/98	$77.37	NOR
08/10/98 06	BIL	60	6		$.00	08/05/98	$77.37	ADJ
07/06/98 05	BIL	60	6		$77.37	07/13/98	$77.37	NOR
						06/16/98	$77.37	NOR
06/08/98 04	BIL	60	6		$77.37	06/09/98	$77.37	NOR
05/11/98 03	BIL	197	6		$200.62	05/12/98	$200.62	NOR
04/06/98 02	BIL	197	6		$20.60-			
03/09/98 01	BIL	197	6		$241.82-			
02/09/98 12	BIL	187	6		$463.04-			
01/05/98 11	BIL	187	6		$673.76-			
12/08/97 10	BIL	187	6		$884.48-			
11/10/97 09	BIL	73	6		$1,095.20-			
10/06/97 08	BIL	73	6		$1,179.20-			
09/08/97 07	BIL	73	6		$1,263.20-			

PF2 - DETAIL HISTORY SCREEN PF7 - PAGE BACKWARD PF8 - PAGE FORWARD
CLEAR - RETURN TO MENU SCREEN ENTER - RETURN TO HEADER SCREEN

$1561 \times 748 = \frac{1167628}{360} = 3240$ GPD

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - Bldgs. East of Euclid

Permit No:

Premise Address: 660 S. Euclid St. Louis MO 63110

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)
H-3	75.020
P-32	1.326
S-35	0.617
C-14	0.301
I-125	0.069
P-33	0.133
Cr-51	0.001
TOTAL ACTIVITY DISCHARGED:	77.467 mCi

RECEIVED
JUL 27 1998
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

[OJS] I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

[OJS] I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission 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 or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-24-98

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid

Permit No:

Premise Address: 660 S. Euclid St. Louis MO 63110

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)
H-3	6.517
P-32	0.766
S-35	0.307
C-14	0.073
I-125	0.121
P-33	0.007
TOTAL ACTIVITY DISCHARGED:	7.791 mCi

RECEIVED
JUL 27 1998
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

[DJS] I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

[DJS] I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission 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 or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-24-98

radrpt 6/94

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

FACILITIES MANAGEMENT OFFICE

ENVIRONMENTAL SAFETY OFFICE

January 28, 1998

James Goodall
Environmental Engineering Associate
Department of Environmental Compliance
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

Re: School of Medicine Building Addresses

Dear Mr. Goodall:

Enclosed is the list of buildings owned by Washington University School of Medicine that we faxed to you on January 23, 1998. We have tried to match our building addresses as closely as possible to the addresses listed in your database. Some addresses are not identical and for many of the School's buildings we could not find a match with your list. I hope this helps you identify the correct discharge locations. Please call us at 362-6816 if you have any questions.

Sincerely,

Bruce Backus
Environmental Health & Safety

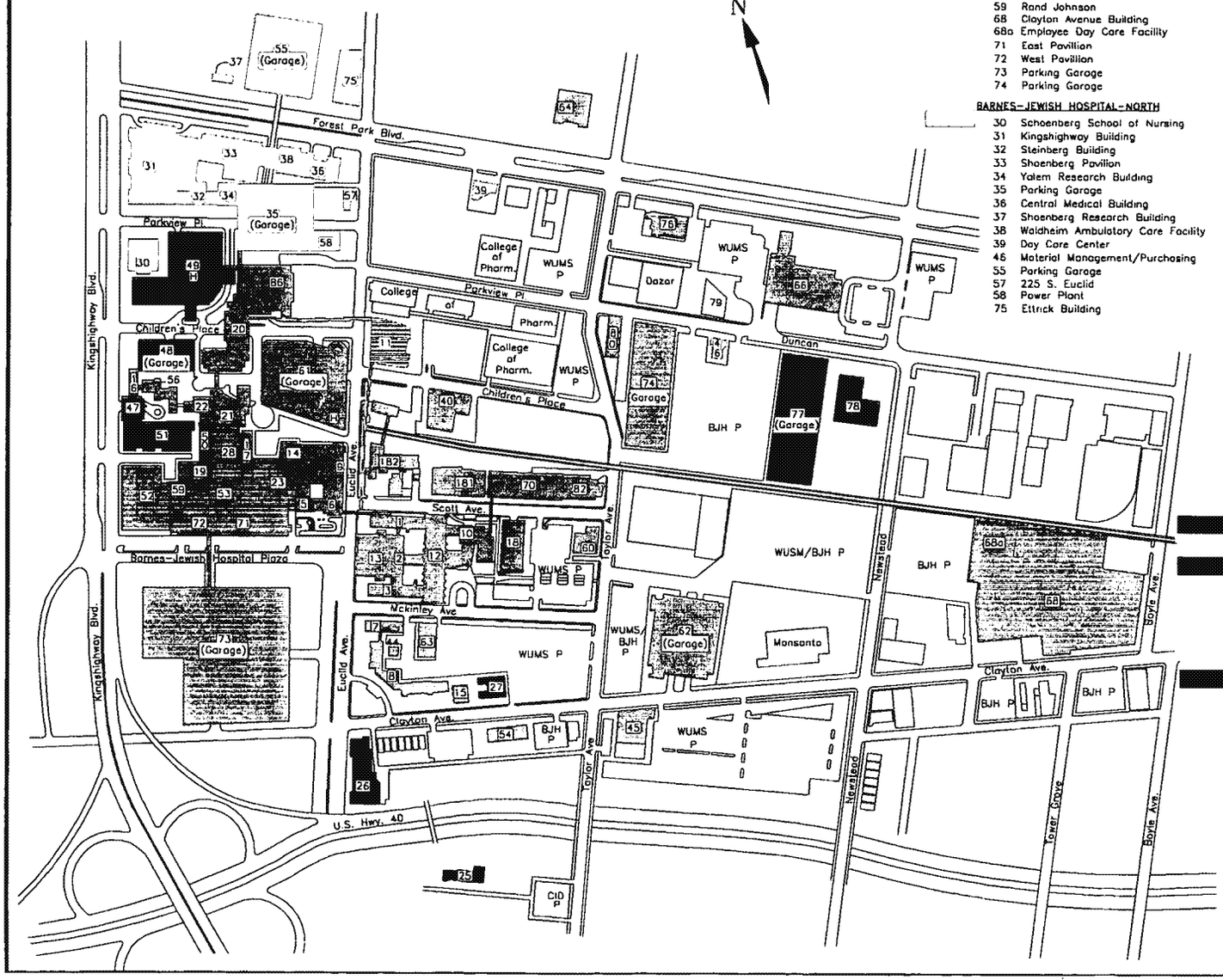
Enclosures

RECEIVED
JAN 29 1998
Environmental Compliance

Campus Box 8229
660 S. Euclid Avenue
St. Louis, MO 63110
(314) 362-6816 FAX: (314) 362-1995

RECEIVED
JAN 2 9 1998
mental Compliance

WASHINGTON UNIVERSITY MEDICAL CENTER



BARNES-JEWISH HOSPITAL-SOUTH

- 23 Peters Building
- 28 Barnes Service Building
- 52 Queeny Tower
- 53 Barnes
- 54 Barnes Lodge
- 59 Rand Johnson
- 68 Clayton Avenue Building
- 68a Employee Day Care Facility
- 71 East Pavillion
- 72 West Pavillion
- 73 Parking Garage
- 74 Parking Garage

BARNES-JEWISH HOSPITAL-NORTH

- 30 Schoenberg School of Nursing
- 31 Kingshighway Building
- 32 Steinberg Building
- 33 Shoenberg Pavilion
- 34 Yalem Research Building
- 35 Parking Garage
- 36 Central Medical Building
- 37 Shoenberg Research Building
- 38 Waldheim Ambulatory Care Facility
- 39 Day Care Center
- 46 Material Management/Purchasing
- 55 Parking Garage
- 57 225 S. Euclid
- 58 Power Plant
- 75 Ettrick Building

WASHINGTON UNIVERSITY MEDICAL CENTER

- 11 Eric P Newman Education Center

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

- 1 North Building
- 2 Cancer Research Building
- 3 South Building
- 4 Occupational Therapy Program
- 5 Maternity
- 6 McMillan
- 7 Biomedical Computing Laboratory
- 8 Shriner's
- 9 Irene Walter Johnson Rehabilitation
- 10 Olin Residence Hall
- 12 McDonnell Medical Sciences Building
- 13 Medical Library
- 14 West Building
- 15 Health Administration Program
- 16 School of Nursing
- 17 Renard
- 18 East McDonnell S.R.F.
- 19 Mallinckrodt Institute of Radiology
- 20 Clinical Sciences Research Building
- 21 Wohl Clinic
- 22 Wohl Hospital
- 40 Starz Building
- 44 Plant Maintenance Storage Garage
- 45 4480 Clayton
- 56 Nurses Residence
- 60 Library Annex
- 61 Parking Garage
- 62 Parking Garage
- 63 Interim Sp. Res. Facility
- 64 4511 Forest Park Medical Center
- 66 4444 Forest Park
- 70 East Building
- 76 4488 Forest Park
- 80 4500 Parkview
- 82 East Imaging
- 86 Clinical Sciences Research Building - NTA
- 181 Biotechnology Center
- 182 Euclid Power Plant

BARNARD HOSPITAL

- 50 Barnard Hospital

CHILDREN'S HOSPITAL

- 47 Spoehrer Children's Tower
- 48 Parking Garage
- 49 Children's Hospital
- 51 Children's Annex
- 77 Parking Garage
- 78 Child Development Center

CENTRAL INSTITUTE FOR THE DEAF

- 25 Clinic/Research Building
- 26 Central Institute for the Deaf
- 27 Residence Hall

SURFACE PARKING LOTS

BJH P	- Barnes-Jewish Hospital
CID P	- Central Institute
WUMS P	- Medical School
WUSM/BJH P	- Medical School & Barnes-Jewish
H	- Heliport

Washington
WASHINGTON UNIVERSITY IN ST. LOUIS
School of Medicine
OFFICE OF DESIGN & CONSTRUCTION
REV. 8/97
KVB

Washington University School of Medicine
Building List

RECEIVED
JAN 29 1998
Environmental Compliance

Bldg. #	Properties	Street Address	Metro. Sewer District listing
1	North Building	4580 Scott Ave.	
2	Cancer Research Bldg.	660 S. Euclid	660 S. Euclid
3	South Bldg.	4577 McKinley Ave.	
5	Maternity Hospital	4911 Barnes-Jewish Hosp. Plaza	
6	McMillan Hospital	517 S. Euclid Ave., 4901 BJH Plaza	
7	Inst. Of Biomed. Computing (IBC)	700 S. Euclid Ave.	700 S. Kinshighway (old address)
8	Shriner's Building	712-740 S. Euclid Ave.	
9	Irene Walter Johnson (IWJ)	509 S. Euclid Ave.	
10	Olin Residence Hall	4550 Scott Ave.	
12	McDonnell Medical Sciences Bldg.	4565 McKinley, 4566 Scott Ave.	
13	Bernard Becker Med. Library	660 S. Euclid Ave.	660 S. Euclid
14	West Bldg.	507 S. Euclid Ave.	
15	Health Admin. Program (HAP)	4747-49 Clayton Ave.	
16	BJC College of Nursing	416 S. Kingshighway Blvd.	(vacant; building will be removed)
17	Renard Hospital	4940 Children's Place	*4940 Audobon (old address) doesn't quite match list*
18	East McDonnell Spec. Research	4540 Scott Ave.	
19	Mallinckrodt Inst. Of Radiology	510 S. Kingshighway Blvd.	510 S. Kingshighway
20	Clinical Sciences Research Bldg.	4939 Children's Place	
21	Wohl Clinic	4950 Children's Place	*4950 Audobon (old address) doesn't really match*
22	Wohl Hospital	4960 Children's Place	*4960 Audobon (old address) doesn't really match*
40	Storz Building	4570 Children's Place	*4570 Audobon (old address) doesn't quite match*
44	Plant Maintenance Storage Garage	712 S. Euclid Ave.	
45	4480 Clayton	4480 Clayton	*4400-4420 Clayton??*
60	Library Annex	615 S. Taylor	615 S. Taylor
61	Euclid Parking Garage	4910 Children's Place	
62	Clayton Parking Garage	Clayton & Taylor	
63	Specialized Interim Research Facility	4560 McKinley Ave.	4560 McKinley

Bldg. #	Properties	Street Address	Metro. Sewer District listing
64	4511 Forest Park	4511 Forest Park	*4506 Forest??*
66	4444 Forest Park	4444 Forest Park	*4400 Forest Park?*
70	East Building	4525 Scott Ave.	4525 Scott Ave.
76	4488 Forest Park	4488 Forest Park	*4400 Forest Park?*
80	4500 Parkview	4500 Parkview	*4510 Parkview?*
82	East Imaging Center	4525 Scott Ave.	4525 Scott Ave. (See East Bldg.)
86	CSRB-NTA	4925 Children's Place	
89	CSRB-HHMI	4939 Children's Place	
92	Incinerator	500 S. Euclid Ave.	
181	Biotechnology Center	4559 Scott Ave.	
182	Euclid Power Plant	500 S. Euclid Ave.	

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Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

FACILITIES MANAGEMENT OFFICE

ENVIRONMENTAL SAFETY OFFICE

January 21, 1998

James E. Goodall
Environmental Engineering Associate
Department of Environmental Compliance
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: MSD Account 51122162-00

Dear Mr. Goodall:

As we discussed in our voicemail messages to one another, Washington University School of Medicine (WUSM) is requesting a time extension in complying with your letter dated December 15, 1997. I came on board as Director of Environmental Health and Safety at WUSM, effective January 2, 1998. I underwent a similar Industrial User Questionnaire (IUQ) review process several years ago at the University of Minnesota Medical School and it took six months to audit all laboratories, shops, and the physical plant to determine what, if any, chemicals were being discharged to sewer.

One question I have is to what extent do we need to review laboratory wastes, which may be disposed by sewer? WUSM training tells employees that no hazardous waste is to be disposed by sewer. Can we review laboratory activity simply to determine whether priority pollutants and/or hazardous wastes are disposed by sewer, or must we document all non-hazardous discharges also? The latter would greatly add to our administrative costs – there are approximately 1,500 laboratories in the medical school.

- IT WOULD BE BOTH HAZ. AND NON-HAZ.
- HE CAN SIMPLY CHECK WHAT IS ON SITE W/OUT FINDING SPECIFIC AMOUNTS DISCH'D.

My staff is currently separating your list of MSD accounts into WUSM and WU-Hilltop campus accounts. We are also sending you a color-coded map, which distinguishes WUSM buildings from other businesses.

I will be glad to meet with you to discuss timetables and the details you require. Please call me at 362-6816 if you have any questions or concerns. Thank you for your assistance.

Sincerely,

Bruce D. Backus
Director

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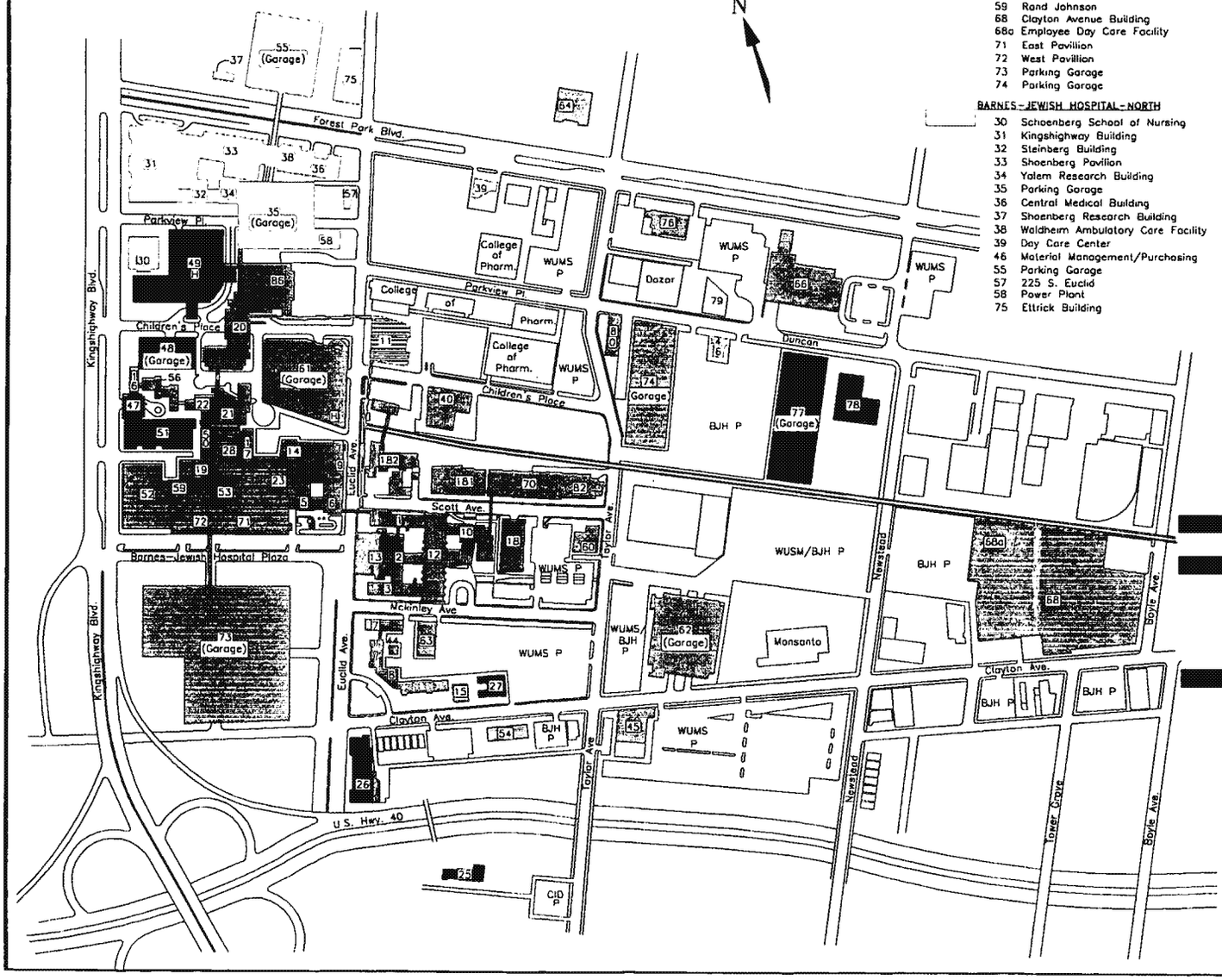
Enc. Map

c: Walt Davis, Assistant Dean for Facilities and Chief Facilities Officer, Facilities Management

Campus Box 8229
660 S. Euclid Avenue
St. Louis, MO 63110
(314) 362-6816 FAX: (314) 362-1995

WASHINGTON UNIVERSITY MEDICAL CENTER



BARNES-JEWISH HOSPITAL-SOUTH

- 23 Peters Building
- 28 Barnes Service Building
- 52 Queeny Tower
- 53 Barnes
- 54 Barnes Lodge
- 59 Rand Johnson
- 68 Clayton Avenue Building
- 68a Employee Day Care Facility
- 71 East Pavillion
- 72 West Pavillion
- 73 Parking Garage
- 74 Parking Garage

BARNES-JEWISH HOSPITAL-NORTH

- 30 Schoenberg School of Nursing
- 31 Kingshighway Building
- 32 Steinberg Building
- 33 Shoenberg Pavilion
- 34 Yalem Research Building
- 35 Parking Garage
- 36 Central Medical Building
- 37 Shoenberg Research Building
- 38 Waldheim Ambulatory Care Facility
- 39 Day Care Center
- 46 Material Management/Purchasing
- 55 Parking Garage
- 57 225 S. Euclid
- 58 Power Plant
- 75 Ettrick Building

WASHINGTON UNIVERSITY MEDICAL CENTER

- 11 Eric P Newman Education Center

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

- 1 North Building
- 2 Cancer Research Building
- 3 South Building
- 4 Occupational Therapy Program
- 5 Maternity
- 6 McMillan
- 7 Biomedical Computing Laboratory
- 8 Shriner's
- 9 Irene Walter Johnson Rehabilitation
- 10 Olin Residence Hall
- 12 McDonnell Medical Sciences Building
- 13 Medical Library
- 14 West Building
- 15 Health Administration Program
- 16 School of Nursing
- 17 Renard
- 18 East McDonnell S.R.F.
- 19 Mallinckrodt Institute of Radiology
- 20 Clinical Sciences Research Building
- 21 Wohl Clinic
- 22 Wohl Hospital
- 40 Starz Building
- 44 Plant Maintenance Storage Garage
- 45 4480 Clayton
- 56 Nurses Residence
- 60 Library Annex
- 61 Parking Garage
- 62 Parking Garage
- 63 Interim Sp. Res. Facility
- 64 4511 Forest Park Medical Center
- 66 4444 Forest Park
- 70 East Building
- 76 4488 Forest Park
- 80 4500 Parkveiw
- 82 East Imaging
- 86 Clinical Sciences Research Building - NTA
- 181 Biotechnology Center
- 182 Euclid Power Plant

BARNARD HOSPITAL

- 50 Barnard Hospital

CHILDREN'S HOSPITAL

- 47 Spoehrer Children's Tower
- 48 Parking Garage
- 49 Children's Hospital
- 51 Children's Annex
- 77 Parking Garage
- 78 Child Development Center

CENTRAL INSTITUTE FOR THE DEAF

- 25 Clinic/Research Building
- 26 Central Institute for the Deaf
- 27 Residence Hall

SURFACE PARKING LOTS

- BJH P – Barnes-Jewish Hospital
- CID P – Central Institute
- WUMS P – Medical School
- WUSM/BJH P – Medical School & Barnes-Jewish
- H – Heliport

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine
OFFICE OF DESIGN & CONSTRUCTION
REV 8/97
KVB

COVER SHEET

FAX

To: Jim Goodall
Fax #: 436-8753
Subject: Washington Univ. School of Medicine addresses
Date: January 22, 1998
Pages: 10, including this cover sheet.

COMMENTS:

Enclosed is a list of buildings owned by Washington University School of Medicine, their addresses, and the equivalent addresses from your own MSD records. I hope this will be of service to you. A color map of the campus is in the mail and this list of buildings will follow. Please call me at 362-6816 if you have any questions.

From the desk of...

Bruce Backus
Director
Environmental Health & Safety
660 S. Euclid Ave. Box 8229
St. Louis, MO 63110

(314) 362-6816
Fax: (314) 362-1995

Washington University School of Medicine
Building List

Bldg. #	Properties	Street Address	Metro. Sewer District listing
1	North Building	4580 Scott Ave.	
2	Cancer Research Bldg.	660 S. Euclid	660 S. Euclid
3	South Bldg.	4577 McKinley Ave.	
5	Maternity Hospital	4911 Barnes-Jewish Hosp. Plaza	
6	McMillan Hospital	517 S. Euclid Ave., 4901 BJH Plaza	
7	Inst. Of Biomed. Computing (IBC)	700 S. Euclid Ave.	700 S. Kinshighway (old address)
8	Shriner's Building	712-740 S. Euclid Ave.	
9	Irene Walter Johnson (IWJ)	509 S. Euclid Ave.	
10	Olin Residence Hall	4550 Scott Ave.	
12	McDonnell Medical Sciences Bldg.	4565 McKinley, 4566 Scott Ave.	
13	Bernard Becker Med. Library	660 S. Euclid Ave.	660 S. Euclid
14	West Bldg.	507 S. Euclid Ave.	
15	Health Admin. Program (HAP)	4747-49 Clayton Ave.	
16	BJC College of Nursing	416 S. Kingshighway Blvd.	(vacant; building will be removed)
17	Renard Hospital	4940 Children's Place	*4940 Audobon (old address) doesn't quite match list*
18	East McDonnell Spec. Research	4540 Scott Ave.	
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89	CSRB-HHMI	4939 Children's Place	
92	Incinerator	500 S. Euclid Ave.	
181	Biotechnology Center	4559 Scott Ave.	
182	Euclid Power Plant	500 S. Euclid Ave.	

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. East of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	72.295
P-32	1.213
S-35	0.664
C-14	0.335
I-125	0.134
P-33	0.133
Ca-45	0.030
Mn-54	0.050
Zn-65	0.050
TOTAL ACTIVITY DISCHARGED:	74.904 mCi

RECEIVED
APR 24 1998
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

[OJS] I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

[OJS] I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission 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 or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J. Szatkowski Date: 4-23-98

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid Ave.

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	7.449
P-32	0.643
S-35	0.383
C-14	0.011
I-125	0.165
P-33	0.023
TOTAL ACTIVITY DISCHARGED:	8.674 mC;

RECEIVED
APR 24 1998
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J. Szatkowski Date: 4-23-98

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldg. East of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	63.057
P-32	1.030
S-35	0.645
C-14	0.543
I-125	0.097
P-33	0.040
Ca-45	2.900
Mn-54	0.001
	RECEIVED
	JAN 27 1998
	Environmental Compliance
TOTAL ACTIVITY DISCHARGED:	68.313 mC;

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

[DJS] I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-26-98

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid Ave.

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	6.925
P-32	0.646
S-35	0.293
C-14	0.033
I-125	0.241
P-33	0.031
Cr-51	0.010
I-131	0.005
	RECEIVED
	JAN 27 1998
	Environmental Compliance
TOTAL ACTIVITY DISCHARGED:	8.184 mCi

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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[DJS] I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-26-98

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldg. East of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	63.997
P-32	0.984
S-35	0.621
C-14	1.543
I-125	0.404
P-33	0.071
Cr-51	0.052
TOTAL ACTIVITY DISCHARGED:	67.672 mCi

RECEIVED
OCT 22 1997
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-20-97

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid Ave.

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	7.342
P-32	0.847
S-35	0.282
C-14	0.015
I-125	0.290
P-33	0.023
I-131	0.050
Ca-45	0.020
TOTAL ACTIVITY DISCHARGED:	8.869 mCi

RECEIVED
OCT 22
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-20-97

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USE RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. East of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	60.857
P-32	1.508
S-35	0.480
C-14	1.051
I-125	0.209
P-33	0.070
Gd-153	0.011
TOTAL ACTIVITY DISCHARGED:	64.186 mCi

RECEIVED
JUL 25 1997
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-24-97

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USE RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	7.643
P-32	0.600
S-35	0.202
C-14	0.019
I-125	0.494
P-33	0.020
Cr-51	0.003
I-131	0.010
TOTAL ACTIVITY DISCHARGED:	8.991 mCi

RECEIVED
JUL 25 1997
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

DJS I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

DJS I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission 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 or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J. Szatkowski Date: 7-24-97

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USE RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - Bldg. East of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	60.954
P-32	0.914
S-35	0.792
C-14	0.123
I-125	0.217
P-33	0.072
Cr-51	0.010
Co-57	0.002
Gd-153	0.017
TOTAL ACTIVITY DISCHARGED:	63.101 mCi

RECEIVED APR 24 1997

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

DJS I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

DJS I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 4-22-97

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis, MO 63110

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)
H-3	8.874
P-32	0.610
S-35	0.197
C-14	0.030
I-125	0.337
P-33	0.021
Ca-45	0.010
Cr-51	0.010
TOTAL ACTIVITY DISCHARGED:	10.089 mCi

RECEIVED
APR 24 1997
Industrial Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

DJS I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 4-22-97

radrpt 6/94

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

December 15, 1997

Bruce Backus
Director of Environmental Safety
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
660 South Euclid
Box 8229
St. Louis, MO 63110

RE: MSD Account 51122162-00

Dear Mr. Backus:

As an industrial user of the Metropolitan St. Louis Sewer District, you are required to comply with the Federal Pretreatment Regulations in 40 CFR Part 403. These regulations have been promulgated by the United States Environmental Protection Agency to control the discharge of wastewater from industrial sources into publicly owned treatment works and to ensure the protection of our natural resources.

The District has incorporated the federal requirements into MSD Sewer Use Ordinance No. 8472. A copy of the ordinance is enclosed. All discharges from your property to the District's sewers must comply with the provisions of this ordinance.

Under the federal regulations the District is required to identify the character and volume of pollutants contributed by industrial users. Article VIII, Section One of Ordinance No. 8472 provides for a questionnaire to be completed by industrial users to obtain this information.

A copy of our Industrial User Questionnaire (IUQ) with instructions is enclosed. I have also enclosed a list of water accounts to aid you in determining water usage in your campus buildings. If you can identify the buildings, I can assist you in obtaining the consumption history for each of the accounts. You may skip Section G. Please complete and return the questionnaire to us within 30 days of receipt. An inspection of the facilities will be required following completion of the questionnaire.

We appreciate your cooperation and support in helping us comply with the federal regulations. Please call me at 436-8720 to discuss how we may coordinate the completion of both the questionnaire and the inspection.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

James E. Goodall

James E. Goodall
Environmental Engineering Associate

ph

Enclosures

pc: suspense file

Bldg 5

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs West of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	8.700
P-32	0.815
S-35	0.397
C-14	0.098
I-125	0.177
P-33	0.009
Ca-45	0.060
Cr-51	0.001
TOTAL ACTIVITY DISCHARGED:	10.257 mCi

RECEIVED
JAN 27 1997
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

DJS I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-24-97

radrpt 6/94

MSD 043939

BARNES-JEWISH HOSPITAL

216 South Kingshighway Boulevard
St. Louis, Missouri 63110

BJC HEALTH SYSTEM™

WV bch of mud.

October 25, 1996

Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

ATTN: Judith Kalna

Dear Ms. Kalna:

Enclosed are the **3rd Quarter 1996** Industrial User Radioactive Materials Discharge Report.

Please contact me at 362-7959, if you have any questions.

Sincerely,

Susan McCray Armstrong
Safety Engineer

RECEIVED
OCT 29 1996
Environmental Compliance

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs. West of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	6.415
P-32	1.104
S-35	0.429
C-14	0.034
I-125	0.136
P-33	0.001
Ca-45	0.020
In-111	0.001
TOTAL ACTIVITY DISCHARGED:	8.140 mCi

RECEIVED
OCT 29 1996
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-23-96

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine - bldgs east of Euclid

Permit No:

Premise Address: 660 S. Euclid Ave. St. Louis MO 63110

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)
H-3	75.172
P-32	1.178
S-35	1.167
C-14	1.231
I-125	0.117
P-33	0.070
Co-57	0.003
Gd-153	0.006
TOTAL ACTIVITY DISCHARGED:	78.944 mCi

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. Everyone must complete the information under item B and sign this report.

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-23-96

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. West of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	6.691
P-32	0.832
S-35	0.499
C-14	0.036
I-125	0.242
Ca-45	0.007
Cr-51	0.001
In-111	0.030
	RECEIVED
	JUL 25 1996
	DEPT. of ENVIRONMENTAL COMPLIANCE
TOTAL ACTIVITY DISCHARGED:	8.338 mCi

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

[DJS] I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

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Print or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J. Szatkowski Date: 7-24-96

radrpt 6/94

MET POLITAN ST. LOUIS SEWER D TRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. east of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	63.318
P-32	1.143
S-35	0.766
C-14	1.940
I-125	0.404
P-33	0.112
Cr-51	0.006
Co-57	0.024
	RECEIVED
	JUL 25 1996
	DEPT. of ENVIRONMENTAL COMPLIANCE
TOTAL ACTIVITY DISCHARGED:	67.713 mCi

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-24-96

radrpt 6/94

MSD 043944

MET POLITAN ST. LOUIS SEWER D TRICT
INDUSTRIAL U R RADIOACTIVE MATERIALS D CHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (6 bldgs West of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	7.642
P-32	1.100
S-35	0.463
C-14	0.006
I-125	0.081
Co-45	0.010
TOTAL ACTIVITY DISCHARGED:	9.302 mCi

RECEIVED
APR 25 1996
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 4-25-96

radrpt 6/94

MSD 043945

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. east of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	84.038
P-32	1.205
S-35	0.888
C-14	0.750
I-125	0.100
P-33	0.112
Ca-45	0.621
TOTAL ACTIVITY DISCHARGED:	87.714 mCi

RECEIVED
APR 25 1996
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 4-25-96

radrpt 6/94

MSD 043946

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. east of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	9.451
C-14	0.322
P-32	0.430
P-33	0.006
S-35	0.537
Cl-36	0.002
Ca-45	0.011
Ge-68	0.002
I-125	0.001
Gd-153	0.002
TOTAL ACTIVITY DISCHARGED:	10.764 mCi

RECEIVED
JAN 26 1995
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: [signature] Date: 1-26-96

radrpt 6/94

MET POLITAN ST. LOUIS SEWER DI RICT
INDUSTRIAL U ER RADIOACTIVE MATERIALS DI CHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. West of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	7.471
C-14	0.255
P-32	0.340
P-33	0.005
S-35	0.250
Ca-45	0.008
Cr-51	0.005
TOTAL ACTIVITY DISCHARGED:	8.334 mCi

RECEIVED
JAN 26 1995
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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DJS I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission 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 or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-26-96

radrpt 6/94

MSD 043948

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. west of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	11.786
C-14	0.275
P-32	0.837
P-33	0.001
S-35	0.572
Ca-45	0.015
Cr-51	0.005
Mn-54	0.014
I-125	0.232
TOTAL ACTIVITY DISCHARGED:	13.737 mCi

RECEIVED
OCT 10 1995
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

DJS I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

DJS I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-6-95

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldg. east of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
H-3	50.336
C-14	0.276
P-32	1.332
P-33	0.045
S-35	0.732
I-125	0.382
Ce-144	0.001
TOTAL ACTIVITY DISCHARGED:	53.104 mCi

RECEIVED
OCT 10 1995
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: [signature] Date: 10-6-95

radrpt 6/94

MET POLITAN ST. LOUIS SEWER D TRICT
INDUSTRIAL R RADIOACTIVE MATERIALS CHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldg. West of Euclid)

Permit No:

Premise Address: 660 South Euclid Ave. 63110

Reporting Period: ☐ (JAN-MAR) ☒ (APR-JUNE) ☐ (JULY-SEPT) ☐ (OCT-DEC)

RECEIVED JUL 07 1995 Environmental Co.

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

RADIONUCLIDE	ACTIVITY DISCHARGED (millicuries)
H-3	11.786
C-14	0.275
P-32	0.837
P-33	0.001
S-35	0.572
Ca-45	0.015
Cr-51	0.005
Mn-54	0.014
I-125	0.232
TOTAL ACTIVITY DISCHARGED:	13.737 mCi

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-5-95

radrpt 6/94

MSD 043951

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldg. East

RECEIVED
JUL 07 1995

Permit No:

Premise Address: 660 South Euclid Ave. 63110

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)
H-3	50.336
C-14	0.276
P-32	1.332
P-33	0.045
S-35	0.732
I-125	0.382
Ce-144	0.001
TOTAL ACTIVITY DISCHARGED:	53.104 mCi

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 7-5-95

radrpt 6/94

MSD 043952

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. West of Euclid)

Permit No:

Premise Address: 660 South Euclid Ave. 63110

Reporting Period: ☑ (JAN-MAR) ☐ (APR-JUNE) ☐ (JULY-SEPT) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

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P-33	0.001
S-35	0.572
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Cr-51	0.005
Mn-54	0.014
I-125	0.232
TOTAL ACTIVITY DISCHARGED:	13.737 mCi

RECEIVED
APR 13 1995
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J. Szatkowski Date: 4-11-95

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. East of Euclid)

Permit No:

Premise Address: 660 South Euclid Ave. 63110

Reporting Period: ☒ (JAN-MAR) ☐ (APR-JUNE) ☐ (JULY-SEPT) ☐ (OCT-DEC)

PART II: RECORD OF DISPOSAL OF RADIOACTIVE MATERIALS TO THE SEWER SYSTEM

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S-35	0.732
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Ce-144	0.001
TOTAL ACTIVITY DISCHARGED:	53.104 mCi

RECEIVED
APR 13 1995
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

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Print or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J. Szatkowski Date: 4-11-95

radrpt 6/94

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

File - Radiat - WU

February 6, 1995

Daniel Szatkowski
Assistant Radiation Safety Officer
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093

Dear Mr. Szatkowski:

Recently, the Metropolitan St. Louis Sewer District granted you approval to discharge certain levels of radioactivity to the District's sewers. This approval was given for an annual level of discharge. However, the starting basis for annual was not made explicit.

The approval for annual radioactive discharge levels is based on a calendar year. All approved discharges prior to January 1, 1995 will be considered part of the 1994 annual discharge level.

Please note that you must continue to limit your levels of radioactivity discharged to the District's sewers to the approved amount. The total discharge levels for each watershed were allocated based in part on your estimated needs.

If you have any questions, please call me at (314) 436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

ph

pc: Elizabeth Aton - Barnes Hospital
One Barnes Hospital Plaza, St. Louis, MO 63110

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

Division of Radiation Safety

January 9, 1995

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147

Dear Sir or Madam:

Please find the enclosed radioactive materials discharge reports for the Washington University facilities without Industrial Waste Water Discharge Permits. If I can be of further assistance, do not hestitate to contact me at 362-3479.

Sincerely,

Daniel J Szatkowski

Daniel Szatkowski
Assistant Radiation
Safety Officer

RECEIVED
JAN 12 1995
Environmental Compliance

Washington University School of Medicine
at Washington University Medical Center
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093
(314) 362-3476 FAX: (314) 362-4776
(Location: 724 S. Euclid Ave.)

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

Lemay

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. west of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
C-14	0.250
Cl-36	0.001
H-3	16.000
I-125	0.420
P-32	1.200
P-33	0.003
Rb-86	0.032
S-35	0.910
TOTAL ACTIVITY DISCHARGED:	18.816 mCi

RECEIVED
JAN 12 1995
Environmental Compliance

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-9-95

radrpt 6/94

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

Bissell

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. east of Euclid)

Permit No:

Premise Address: 660 S. Euclid Ave. 63110

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)
C-14	0.300
Cl-36	0.001
H-3	39.000
I-125	0.170
P-32	0.490
P-33	0.002
Rb-86	0.012
S-35	0.400
TOTAL ACTIVITY DISCHARGED:	40.375 mCi

RECEIVED
JAN 12 1995
Environmental Control

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

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Print or type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-9-95

radrpt 6/94

MSD 043958

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

File

October 19, 1994

Daniel J. Szatkowski
Assistant RSO
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
AT WASHINGTON UNIVERSITY MEDICAL CENTER
Campus Box 8053, 660 South Euclid Ave.
St. Louis, MO 63110-1093

Dear Mr. Szatkowski:

We have reviewed your letter dated October 12, 1994 requesting changes in the approved levels of radioactivity to be discharged from various facilities. These changes were requested based on needs at the facilities and to insure that the approved levels are not exceeded.

Since the requested changes all occur within the Lemay watershed and do not alter the total amount of radioactivity requested for approval to discharge, your request is granted. The changed facility amounts are as follows:

Facility Name	Receiving Plant	7/8/94 Approval Amount	10/19/94 Approval Amount
Barnes Hospital	Lemay	20 mCi	5.0 mCi
Children's Hospital	Lemay	40 mCi	15 mCi
Jewish Hospital	Lemay	40 mCi	5.0 mCi
Washington University Hilltop Campus	Lemay	40 mCi	15 mCi
Wash U. Medical School Bldgs west of Euclid	Lemay	20 mCi	120 mCi
		---	---
		160 mCi	160 mCi

The Industrial Wastewater Discharge Permits for Barnes Hospital and Jewish Hospital will be revised to reflect the changed levels.

Because of the changes in permitting and reporting requirements that is entailed in revising approved discharge levels, we

ask that users to see that discharge approval requests reflect both current and anticipated discharge needs. The intent should not be to make requests based solely on historical needs.

If you have any questions, please call me at (314) 436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas Mendoza

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

pc: Gunter Durdel - MSD
Elizabeth Aton - Barnes Hospital

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs. west of Euclid)

Permit No:

Premise Address: 660 S. Euclid Avenue 63110

OCT 20 1994

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)
C-14	0.250
Cl-36	0.001
H-3	16.000
I-125	0.420
P-32	1.200
~~Rb-86~~ P-33	0.003
Rb-86	0.032
S-35	0.910
TOTAL ACTIVITY DISCHARGED:	18.816 mCi

PART III: CERTIFICATION STATEMENTS

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Print or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J. Szatkowski Date: 10-18-94

radrpt 6/94

MET POLITAN ST. LOUIS SEWER RICT
INDUSTRIAL ER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine (bldgs east of Euclid)

Permit No:

Premise Address: 660 S. Euclid Avenue 63110

OCT 20 1994

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)
C-14	0.300
Cl-36	0.001
H-3	39.000
I-125	0.170
P-32	0.490
P-33	0.002
Rb-86	0.012
S-35	0.400
TOTAL ACTIVITY DISCHARGED:	40.375 mCi

PART III: CERTIFICATION STATEMENTS

Place your initials in the boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

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Print or type name of signing official: Daniel J. Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 10-18-94

radrpt 6/94

MSD 043962

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

Division of Radiation Safety

October 12, 1994

Douglas M. Mendoza, P.E.
Industrial Waste Engineer
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

Dear Mr. Mendoza:

Careful review of our 1993 radioactive materials drain discharge records signified the need to modify our agreement concerning such discharges to the District for treatment. The total amount of radioactivity allotted to Washington University and Its Affiliated Institutions per treatment plant remains unaffected, i.e., 160 millicuries to Lemay and 320 millicuries to Bissell Point. However, to ensure strict compliance with District codes, the following breakdown is submitted for approval. Please see the enclosed maps to identify the individual building names which are referenced by number.

Facility Name & Address	Receiving Plant	1994 Amount Approved	Annual Amount Requested
Barnes Hospital 1 Barnes Plaza 63110 (23,28,53,71,72)	Lemay	20 mCi	5.0 mCi
Children's Hospital 1 Children's Place 63110 (47,49,51)	Lemay	40 mCi	15 mCi
Jewish Hospital 216 S. Kingshighway 63110 (31,32,34,38)	Lemay	40 mCi	5.0 mCi
Washington Univ. - Hilltop 1 Brookings Drive 63130 (19,57,62,67,69,81)	Lemay	40 mCi	15 mCi

Washington University School of Medicine
at Washington University Medical Center
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093
(314) 362-3476 FAX: (314) 362-4776
(Location: 724 S. Euclid Ave.)

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WASHINGTON·UNIVERSITY·SCHOOL·OF·MEDICINE

Washington Univ.-Med. School 660 S. Euclid Avenue 63110 (bldgs. west of Euclid: 5,6,14,17,20,21,22,50)	Lemay	20 mCi	120 mCi
Washington Univ.-Med. School 660 S. Euclid Avenue 63110 (bldgs. east of Euclid: 1,2,3,12,18,64,66,70,80,25)	Bissell	320 mCi	320 mCi

Thank you for your prompt attention to this matter. If you have any questions, please call me at (314) 362-3479.

Sincerely,

Daniel J. Szatkowski

Daniel J. Szatkowski
Assistant RSO

Enclosure
cc: John Eichling, Ph.D.
Liz Aton

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Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

October 11, 1994

Daniel J. Szatkowski
Assistant RSO
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
AT WASHINGTON UNIVERSITY MEDICAL CENTER
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093

Dear Mr. Szatkowski:

We have reviewed your letter dated October 3, 1994 regarding the Radioactive Materials Discharge Reports which the District requires Washington University and its affiliated institutions to submit on a quarterly basis. In your letter, you stated that the quarterly reports would be estimates based on previous years' disposal records. If you became aware of any obvious errors, you would then submit corrections.

During our September 19, 1994 telephone conversation, you indicated that there are a large number of radioactive material disposal locations at the different facilities. Therefore, you wished to supply an estimate of the disposal with the actual total to be submitted annually. However, the intent of the reports is for the District to receive a record of the actual radioactive releases to individual sewers and specific watersheds on a more frequent than annual basis. Dividing past average annual discharges by four simply provides us with information we already possess, and does not supply any information on current release levels. We cannot effectively administer our State-approved Pretreatment Program without current and accurate data.

Thus, we must receive a record of the actual activity discharged for each radionuclide at the different facilities. If the researchers or their administrative staff do not already log the daily disposals onto databases or spreadsheets, a change to this procedure would facilitate compilation of the data. It would then be a simple matter of printing out reports which contain the necessary data for each facility.

We do not wish to place an undue burden on you or your staff. However, accurate data on and control of material released to the sewers, and ultimately to the environment, must be maintained by the District. If you have any questions, please call me at (314) 436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

rv
o:\envcom\dmmend\washura

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

Division of Radiation Safety

October 3, 1994

Douglas M. Mendoza, P.E.
Industrial Waste Engineer
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

Dear Mr. Mendoza:

I have received and reviewed your letter dated July 8, 1994 approving the discharge of radioactive materials from Washington University and Its Affiliated Institutions to the District for treatment. Based on our telephone discussion 9/19/94, I am writing to inform you of the effort which will be made to comply with the District's quarterly reporting requirement. As requested, the quarterly reports will be submitted at the same time as the required wastewater self-monitoring reports for Barnes Hospital and Jewish Hospital. For the other facility names listed on your approval letter, the quarterly reports will be submitted directly to the District's Department of Environmental Compliance from the Radiation Safety Office at Washington University.

The quarterly radioactive materials drain discharge report will be an estimate based on previous years disposal records. The quarterly report will reflect 25 percent of the previous years total. If during the course of the year, it becomes obvious that these estimates are in error, then corrections will be submitted in a timely manner.

The Radiation Safety Office compiles a drain disposal summary on an annual basis. Due to the very large community of researchers at Washington University, it takes some time to complete this summary. Every effort will be made to provide you with the most accurate information available at each quarterly reporting deadline. Your understanding is appreciated. Please, feel free to contact me at any time if you have questions or concerns at 362-3479.

Sincerely,

Daniel J. Szatkowski

Daniel J. Szatkowski
Assistant RSO

cc: John Eichling, Ph.D.
Liz Aton

Washington University School of Medicine
at Washington University Medical Center
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093
(314) 362-3476 FAX: (314) 362-4776
(Location: 724 S. Euclid Ave.)

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OCT 4 1994
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Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

July 8, 1994

Daniel Szatkowski
Assistant Radiation Safety Officer
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093

Dear Mr. Szatkowski:

We have reviewed your letter dated March 18, 1994 requesting approval to discharge small quantities of radioactive material to the District for treatment. You indicated that Washington University School of Medicine anticipates a need to discharge approximately 500 millicuries per year from the facilities listed below.

As you were previously informed, District Ordinance 8472 limits the aggregate of all radioactive materials discharged from all users to the sewers tributary to each of the District's treatment plants to one curie per year. The facilities listed below discharge wastewater to the District's Bissell Point or Lemay Treatment Plant.

Based on the total level of requests received for discharges to these treatment plants, we can approve discharges of radioactive material in the quantities listed below.

Facility Name & Address	Receiving Plant	Wastewater Permit?	Amount Approved
Barnes Hospital 1 Barnes Hosp Plaza 63110	Lemay	yes	20 mCi
Children's Hospital 1 Children's Place 63110	Lemay	no	40 mCi
Jewish Hospital 216 S. Kingshighway 63110	Lemay	yes	40 mCi
Washington U. - Hilltop 1 Brookings Drive 63130	Lemay	no	40 mCi
Washingon U. Med. School 660 S. Euclid Ave. 63110 (bldgs west of Euclid: 5,6,14,17,20,21,22)	Lemay	no	20 mCi

Facility Name & Address	Receiving Plant	Wastewater Permit?	Amount Approved
Washington U. Med. School 660 S. Euclid Ave. 63110 (bldgs east of Euclid: 1,2,3,12,64,70,80,181, Blue Cross bldg)	Bissell	no	320 mCi

Please note that all radioactive material discharged to the sewer system must be readily soluble, or readily dispersible biological material, in water. Should additional requests for discharge of radioactive material be received from users in the future, the level of radioactive material approved for discharge from the facilities listed above may be modified.

Under 10 CFR 20.2108, each Nuclear Regulatory Commission licensee is required to maintain records of the disposal of NRC licensed radioactive materials. Under 19 CSR 20-10.060, each Missouri Department of Health licensee is required to maintain records of the disposal of MDH licensed radioactive materials. District Ordinance 8472, Article VIII, Section Twelve provides for the District to require the submittal of reports to ensure compliance with the provisions of the Ordinance and with applicable State and Federal regulations.

As a condition of the District's approval of your request for discharge of radioactive material to the sewer system, a completed copy of the attached report must be submitted to the District on a quarterly basis from each facility. The quarters shall be January through March, April through June, July through September, and October through December. The reports shall be due by the 28th day of the month following the end of the quarter. You are required to certify compliance with both state and federal regulations. The first reports due shall cover the period July 1, 1994 through September 30, 1994 and are due by October 28, 1994.

For those facilities listed above with Industrial Wastewater Discharge Permits, they will be modified to incorporate this approval and the reporting requirements. The reports are to be submitted at the same time as the required wastewater self-monitoring reports. For those facilities listed above without permits, you must mail the reports to the following address:

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
10 East Grand Avenue
St. Louis, MO 63147

Two separate reports must be submitted for Washington University Medical School: one for those buildings west of Euclid and discharging to the Lemay Treatment Plant, and one for those buildings east of Euclid and discharging to the Bissell Point Treatment Plant.

All previous approvals to Washington University School of Medicine or any of the facilities listed above to discharge radioactive material to the District are superseded. This approval is not intended to relieve Washington University School of Medicine or any of the facilities listed above of any requirements set forth under applicable state or federal regulations. In addition, all provisions of District Ordinance 8472 must continue to be met.

If you have any questions, please call me at (314) 436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

Enclosure

pc Gunter Durdel - MSD
Elizabeth Aton - Barnes Hospital
One Barnes Hospital Plaza, St. Louis, MO 63110

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: _____

Permit No: _____

Premise Address: _____

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 boxes under item A which apply to you. **Everyone must complete the information under item B and sign this report.**

A. CERTIFICATION OF COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

☐ I certify that to the best of my knowledge and belief, all requirements of 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Missouri Department of Health have been met for the period covered by this report.

☐ I certify that to the best of my knowledge and belief, all requirements of 10 CFR Part 20.2003 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission 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 or type name of signing official: _____

Title: _____ Telephone: _____

Signature: _____ Date: _____

radrpt 6/94

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

Division of Radiation Safety

March 18, 1994

Douglas M. Mendoza, P.E.
Industrial Waste Engineer
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913
(314) 436-8710

Dear Mr. Mendoza:

This letter is in response to your letter dated March 9, 1994. Washington University and Its Affiliated Institutions, which operate under USNRC Materials License number 24-00167-11, requests authorization from the Executive Director of the Metropolitan St. Louis Sewer District to discharge 500 millicuries per year to the District's sewer system. All radioactive material discharges are readily soluble in water or are readily dispersible biological material and satisfy the concentration limits set by federal regulations. The following table clearly shows the information which you requested as items 1, 2, 3, and 4 of your letter.

Table 1. Brief Description of Radioactive Isotopes

Isotopes used and discharged	half-life	emitted radiation	activity to be discharged
H-3	12.35 years	Beta E_{ave}= 6keV	340 mCi
C-14	5730 years	Beta E_{ave}= 49keV	40 mCi
P-32	14.29 days	Beta E_{ave}=695keV	30 mCi
S-35	87.44 days	Beta E_{ave}= 49keV	30 mCi
I-125	59.6 days	Gamma E= 35keV	30 mCi
I-131	8.021 days	Gamma E=364keV	10 mCi
Any byproduct material with atomic number between 3-93 inclusive, except as specifically listed above		*information available upon request for specific waste discharges*	20 mCi
		TOTAL	500 mCi

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MAR 21 1994
Environmental Compliance

Washington University School of Medicine
at Washington University Medical Center
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093
(314) 362-3476 FAX: (314) 362-4776
(Location: 724 S. Euclid Ave.)

As you are aware, the response to item 5 of your letter is quite lengthy. Please, review your letter dated December 14, 1993 for details. For simplicity, the following table shows a brief summary of the discharge locations.

Table 2. Radioactive Material Discharge Locations

Facility Name	Requested Amount	Watershed
Barnes,Children's,Jewish	100 mCi/year	Lemay
Wash. U. Hilltop Campus	60 mCi/year	Lemay
Wash. U. Medical Campus	20 mCi/year	Lemay
Wash. U. Medical Campus	320 mCi/year	Bissell Point

I hope this information is helpful in your reevaluation of our previous approval. If additional information should be necessary, please do not hesitate to contact me.

Sincerely,

Daniel J Szatkowski

Daniel J Szatkowski
Assistant Radiation
Safety Officer

RECEIVED
MAR 21 1994
Environmental Compliance

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

March 9, 1994

Daniel Szatkowski
WASHINGTON UNIVERSITY MEDICAL CENTER
4566 Scott Avenue
St. Louis, MO 63110

Dear Mr. Szatkowski:

A recent review of District records shows that on December 14, 1993, the District granted your facility permission to discharge 500 millicuries per year of radioactive material to the District's sewer system. We are currently reappraising our radioactive discharge approval program and reevaluating all previous approvals.

The Nuclear Regulatory Commission, under 10 CFR 20.2003, permits the discharge of small quantities of radionuclides into sanitary sewage systems within the limits specified in the regulation, provided such materials are readily soluble or are readily dispersible biological materials. The District believes that low level radioactive materials discharged to the sewer system by numerous small sources may be concentrated within the District's wastewater treatment processes and possibly pose a hazard for our employees, adversely affect our sludge disposal options, and possibly adversely impact the District's ability to comply with state and federal environmental regulations.

District Ordinance No. 8472, Article V, Section 1.A.13 regulates the discharge of radioactive material by prohibiting the discharge of any radioactive material to the District's sewers except those wastes authorized under applicable State and Federal regulations and specifically authorized by the Director. The ordinance further limits the aggregate of radioactive wastes discharged from all sources to any treatment plant to one curie per year. An excerpt of this section of the ordinance is enclosed.

If you wish to continue to discharge radioactive material to the District's sewer system, you must obtain approval from us. Your request must contain at least the following information:

1. A list itemizing the isotopes used and those to be discharged.

2. Decay rates (half-life) for those isotopes to be discharged.

3. Information concerning the form of radiation emitted by each isotope (i.e. alpha, beta, gamma).

4. The total level of radiation to be discharged, along with a list of the radiation level corresponding to each isotope.

5. The discharge locations of the radioactive materials within your facility and the connection points to the District's sewers for these discharge locations.

6. Verification that the material is readily soluble or is readily dispersible biological material.

7. Copies of your radioactive materials licenses.

You may include information previously provided to the District, if it is still current. However, you must submit all the information listed above.

Please note that radioactive discharges approved by the District are grouped by treatment plant. Thus, we must consider the contribution from all sources in a treatment plant's watershed when determining whether or not to accept additional radioactive wastes.

Rather than discharging such wastes to the sewer system, you may wish to investigate concentration of radioactive wastes with shipment to an approved low-level radioactive waste disposal site. For short-lived radionuclides, you might consider storage for at least ten half-lives to allow sufficient decay to background levels prior to disposal to the sewer.

If you have elected to pursue continued discharge to the District's sewers, please submit your request by April 18, 1994. We also ask that you notify us by this date if you have elected to dispose of your radioactive wastes by other means. 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

Enclosure

file-industry
radiation

EXCERPT FROM MSD ORDINANCE 8472

ARTICLE V, SECTION ONE, SUBSECTION A.13

EFFECTIVE 8-14-91

Section One - Prohibited Substances.

A. No person shall discharge or cause to be discharged into any sanitary or combined sewer any of the following substances:

13. Any radioactive material, except those wastes which are authorized for disposal into sanitary sewers under applicable State and Federal regulations and as specifically authorized by the Director. The aggregate of all radioactive materials discharged from all users to the sewers tributary to each of the District's treatment plants shall be limited to one (1) curie per year. 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 dispersible in water.

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

File Radiation

December 14, 1993

Daniel Szatkowski
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
Campus Box 8053, 660 S. Euclid Avenue
St. Louis, MO 63110-4776

Dear Mr. Szatkowski:

We have reviewed your letter dated November 12, 1993 regarding your request for approval to discharge radioactive wastewater to the District for treatment. Our meeting on December 2, 1993 also provided much useful information regarding your request.

As I mentioned to you, the Bissell Point Treatment Plant watershed and Lemay Treatment Plant watershed boundary runs through the Barnes/Jewish/Wash U. Med. School complex. During our meeting you informed me of the distinct buildings which would be discharging radioactive wastewater, along with information regarding approximate levels of radioactivity to be discharged from them. With this information, I was able to determine which discharges would discharge to each watershed.

The Barnes Hospital, Children's Hospital, Jewish Hospital and Washington University Hilltop Campus discharges all flow to the Lemay Treatment Plant. For your information, we consider Children's Hospital to be part of the Barnes Hospital complex. We have approved your request for these facilities as follows:

Facility	Approved Discharge	Watershed
Barnes Hospital	20 millicuries/year	Lemay
Children's Hospital	40 millicuries/year	Lemay
Jewish Hospital	40 millicuries/year	Lemay
Wash. U. Hilltop	60 millicuries/year	Lemay

For Washington University School of Medicine, you requested 340 millicuries/year. However, this facility is divided between the Bissell Point and Lemay watersheds. The enclosed list and map show the location of the buildings listed below and your comments regarding their discharges. We have split your request of 340 millicuries/year and approved it as follows:

Washington University School of Medicine

Building Numbers	Approved Discharge	Watershed
1, 2, 3, 12, 64, 70, 80, 181, Blue Cross	320 millicuries/year	Bissell Pt.
5, 6, 14, 17, 20, 21, 22	20 millicuries/year	Lemay

If you have any questions, please call me at (314) 436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

Enclosures

file-radiation

SUPPLEMENTARY INFORMATION REGARDING RADIOACTIVE WASTEWATER DISCHARGE REQUEST FROM 12/2/93 MEETING

WASHINGTON UNIVERSITY
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
BARNES HOSPITAL
CHILDREN'S HOSPITAL (Part of Barnes Complex)
JEWISH HOSPITAL

Request covers 275 total discharge locations within the buildings listed below:

WASH U. SCHOOL OF MEDICINE 340 millicuries requested

Bldg	Name	Comments
1	North Building	lot of labs
2	Cancer Research Building	lot of labs
3	South Building	lot of labs
5	Maternity Hospital	
6	McMillan Hospital	
12	McDonnell Sciences Building	lot of labs
14	West Building	
17	Renard Hospital	
20	Clinical Sciences Research Bldg	
21	Wohl Clinic	
22	Wohl Hospital	
64	4511 Forest Park Medical Center	
70	East Building	
80	4500 Parkview	waste disposal facility 300 of 340 millicuries
181	School of Dental Medicine	
---	Blue Cross Building	

BARNES HOSPITAL COMPLEX (incl. CHILDRENS) 60 millicuries requested (20=Barnes, 40=Childrens)

Bldg	Name	Comments
BARNES		
23	Peters Building	blood bank, clinical (hematology, etc) chemistry
28	Barnes Service Building	only 1 sink
72	West Pavilion	Barnes Nuclear Medicine, only 1 sink
CHILDRENS		
49	Children's Hospital	floors 2, 10 & 11
51	Children's Annex	

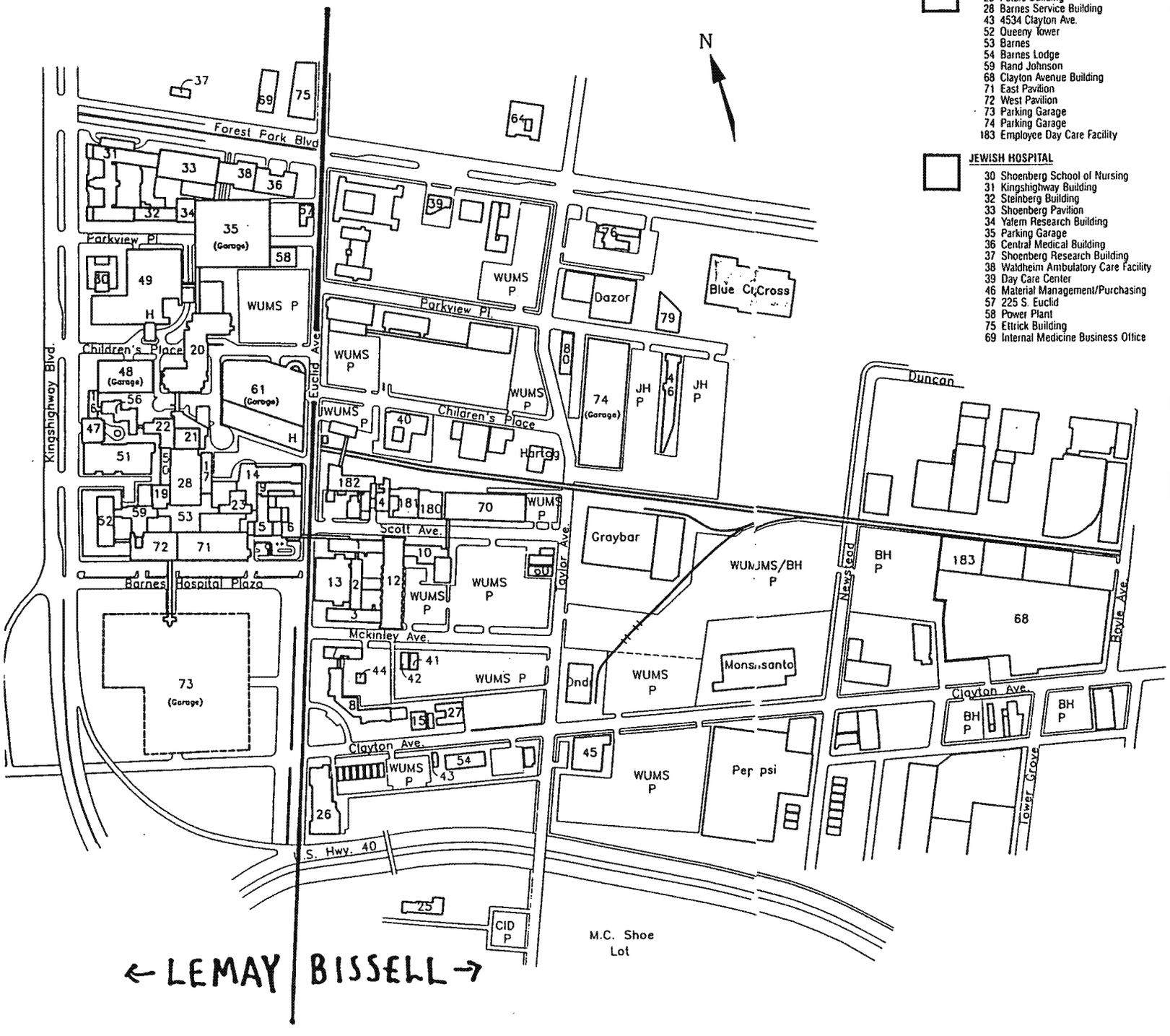
JEWISH HOSPITAL 40 millicuries requested

Bldg	Name	Comments
31	Kingshighway Building	1 lab in basement
32	Steinberg Building	just a few sinks
34	Yalem Research Building	primary source

WASHINGTON UNIVERSITY HILLTOP CAMPUS 60 millicuries

Bldg	Name	Comments
19	Busch Laboratory	biology
62	McMillan Laboratory	chemistry
67	Monsanto Laboratory	biology
69	Natural Sciences Building	biology
81	Rebstock Hall	biology - just a few sinks
103	Urbauer Hall	radiochemistry

WASHINGTON UNIVERSITY MEDICAL CENTER



BARNES HOSPITAL

23 Peters Building
28 Barnes Service Building
43 4534 Clayton Ave.
52 Queeny Tower
53 Barnes
54 Barnes Lodge
59 Rand Johnson
68 Clayton Avenue Building
71 East Pavilion
72 West Pavilion
73 Parking Garage
74 Parking Garage
183 Employee Day Care Facility

JEWISH HOSPITAL

30 Shoenberg School of Nursing
31 Kingshighway Building
32 Steinberg Building
33 Shoenberg Pavilion
34 Yalem Research Building
35 Parking Garage
36 Central Medical Building
37 Shoenberg Research Building
38 Waldheim Ambulatory Care Facility
39 Day Care Center
46 Material Management/Purchasing
57 225 S. Euclid
58 Power Plant
75 Ettrick Building
69 Internal Medicine Business Office

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

1 North Building
2 Cancer Research Building
3 South Building
4 Occupational Therapy Program
5 Maternity Hospital
6 McMillan Hospital
7 Biomedical Computing Laboratory
8 Shriner's Building
9 Irene Walter Johnson Rehabilitation
10 Olin Residence Hall
12 McDonnell Sciences Building
13 Medical Library
14 West Building
15 Health Administration Program
16 School of Nursing
17 Renard Hospital
19 Mallinckrodt Institute of Radiology
20 Clinical Sciences Research Building
21 Wohl Clinic
22 Wohl Hospital
40 Storz Building
41 Personnel
42 Personnel
44 Plant Maintenance Storage Garage
45 4480 Clayton
56 Nurses Residence
60 Library Annex
61 Parking Garage
64 4511 Forest Park Medical Center
70 East Building
76 4488 Forest Park
79 4455 Duncan
80 4500 Parkview
182 Euclid Power Plant

CHILDREN'S HOSPITAL

47 Spoehrer Children's Tower
48 Parking Garage
49 Children's Hospital
51 Children's Annex

CENTRAL INSTITUTE FOR THE DEAF

25 Clinic/Research Building
26 Central Institute for the Deaf
27 Residence Hall

BARNARD HOSPITAL

50 Barnard Hospital

WASHINGTON UNIVERSITY SCHOOL OF DENTAL MEDICINE

180 Wohl Research Laboratory
181 School of Dental Medicine — PART OF WASH. U. MED. SCHOOL

SURFACE PARKING LOTS

BH P — Barnes Hospital
JH P — Jewish Hospital
CID P — Central Institute
WUMS P — Medical School
WUMS/BH P — Medical School & Barnes

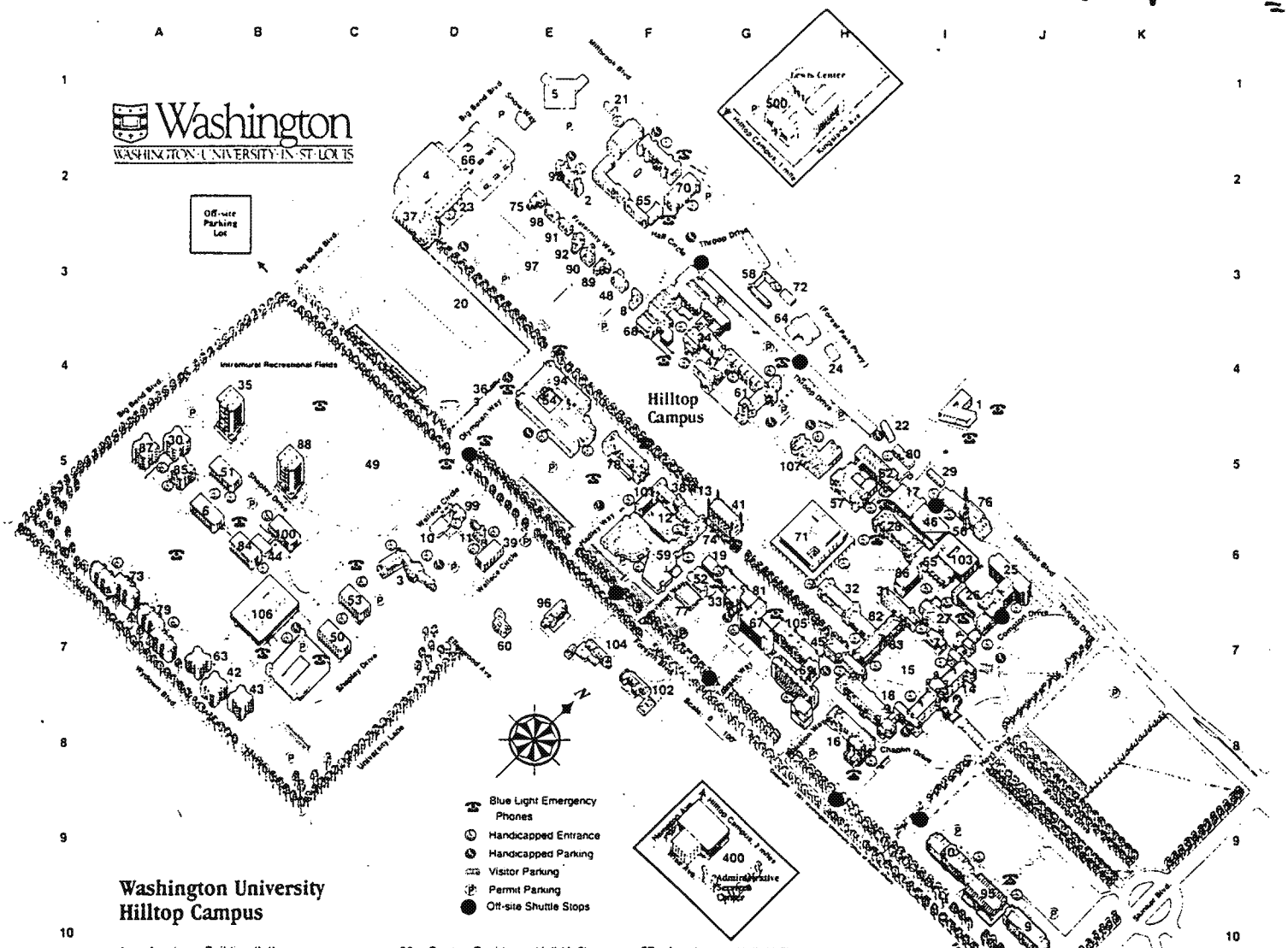
HELIPORTS

H — Heliport

REV 3.92
DAO

BLUE CROSS - PART OF WASH. U. MED. SCHOOL

LEMAY



Washington University Hilltop Campus

1. Academy Building (I-4)
400. Administrative Services Center (H-10)
2 Alpha Epsilon Pi, fraternity (E-2)
3. Alumni House (C-6)
4. Athletic Complex (D-2)
5. Baer Memorial (E-1)
6. Beaumont Residence Hall (A-6)
7. Beaumont Pavilion (I-7)
8. Beta Theta Pi, fraternity (F-3)
9. Bixby Hall (J-10)
10. Blewett Annex (D-6)
11. Blewett Hall (D-6)
12. Bowles Plaza (F-6)
13. Brizzi Plaza (G-5)
14. Brookings Hall (I-7)
15. Brookings Quadrangle (I-7)
16. Brown Hall (H-8)
17. Bryan Hall (I-5)
18. Busch Hall (H-8)
19. Busch Laboratory (G-6)
20. Bushyhead Track (D-3)
21. Campus Police Headquarters (F-1)
22. Campus Post Office (I-5)
23. George Capps Plaza (D-2)
24. Carpenter Shop (H-4)
25. Compton Hall (J-6)
26. Crow Hall (I-6)
27. Cupples I Hall (I-7)
28. Cupples II Hall (I-6)
29. Cyclotron (I-5)
30. Dauten Residence Hall (A-5)
31. Duncker Hall (H-6)
32. Eads Hall (H-6)
33. Eisendrath Garden (G-7)
34. Eliot Hall (G-4)
35. Eliot Residence Hall (B-4)
36. Francis Field (D-4)
37. Francis Gymnasium (D-2)
38. Garden Place (F-5)
39. Gaylord Music Library (D-6)
40. Givens Hall (I-9)
41. Graham Chapel (G-6)
42. "H" Residence Hall (B-7)
43. Herbert F. Hitzeman, Jr. Residence Hall (B-8)
44 Housing Office (B-6)
45. January Hall (H-7)
46. Harold D. Jolley Hall (I-6)
47. Kalachek Memorial (G-4)
48. Kappa Sigma, fraternity (F-3)
49. Kelly Baseball Field (C-5)
50. Koenig Residence Hall (C-7)
51. Lee Residence Hall (B-5)
500. Lewis Center (725 Kingsland, University City) (G-1)
52. Life Sciences Building (G-6)
53. Liggett Residence Hall (C-6)
54 Lopata Courtyard (E-4)
55. Lopata Hall (I-6)
56. Lopata Plaza (I-6)
57. Louderman Hall (H-5)
58. Maintenance Center (G-3)
59. Mallinckrodt Student Center and Edison Theatre (F-6)
60. McCarthy House (D-7)
61. McMillan Hall (G-4)
62. McMillen Laboratory (H-5)
63. Chester Myers Residence Hall (A-7)
64. Millbrook Building (H-4)
65. Millbrook Square (F-2)
66. Millstone Pool (D-2)
67. Monsanto Laboratory (G-7)
68. Mudd Law Building (F-3)
69. Natural Sciences Building (under construction) (H-7)
70. Nursery School (F-2)
71. Olin Library (G-6)
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94. Simon Hall (E-4)
95. Steinberg Hall and Gallery of Art (I-10)
96. Stix International House (E-7)
97. Tao Tennis Center (E-3)
98. Theta Xi, fraternity (E-2)
99. Tietjens Hall (D-5)
100. Umrath Residence Hall (B-6)
101. Umrath Hall (F-5)
102. University House (F-7)
103. Urbauer Hall (I-6)
104. Whittemore House (F-7)
105. Wilson Hall (H-7)
106. Wohl Student Center (B-7)
107. Ann W. Olin Women's Building (H-5)

SEP 29 1993
Environmental Compliance

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

RECEIVED
NOV 16 1993
Environmental Compliance

Division of Radiation Safety

November 12, 1993

Douglas M. Mendoza
Industrial Waste Engineer
Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710

Dear Mr. Mendoza:

I am providing this information in response to your letter dated October 7, 1993 requesting specific locations and levels of radioactive discharges to the sanitary sewer.

1. I request 340 millicuries per year for Washington University School of Medicine located at 660 South Euclid Avenue.

2. I request 20 millicuries per year for Barnes Hospital located at One Barnes Hospital Plaza.

3. I request 40 millicuries per year for the Jewish Hospital of St. Louis located at 216 South Kingshighway Boulevard.

4. I request 40 millicuries per year for St. Louis Children's Hospital located at One Children's Place.

5. I request 60 millicuries per year for Washington University Hilltop Campus at One Brookings Drive.

These five requests total 500 mCi per year for Washington University and its Affiliated Institutions. I expect this information is sufficient for you to identify the affected sewer tributaries and water treatment plants. If additional information is still required, please contact me at (314) 362-3479. Thank you for your cooperation in this matter.

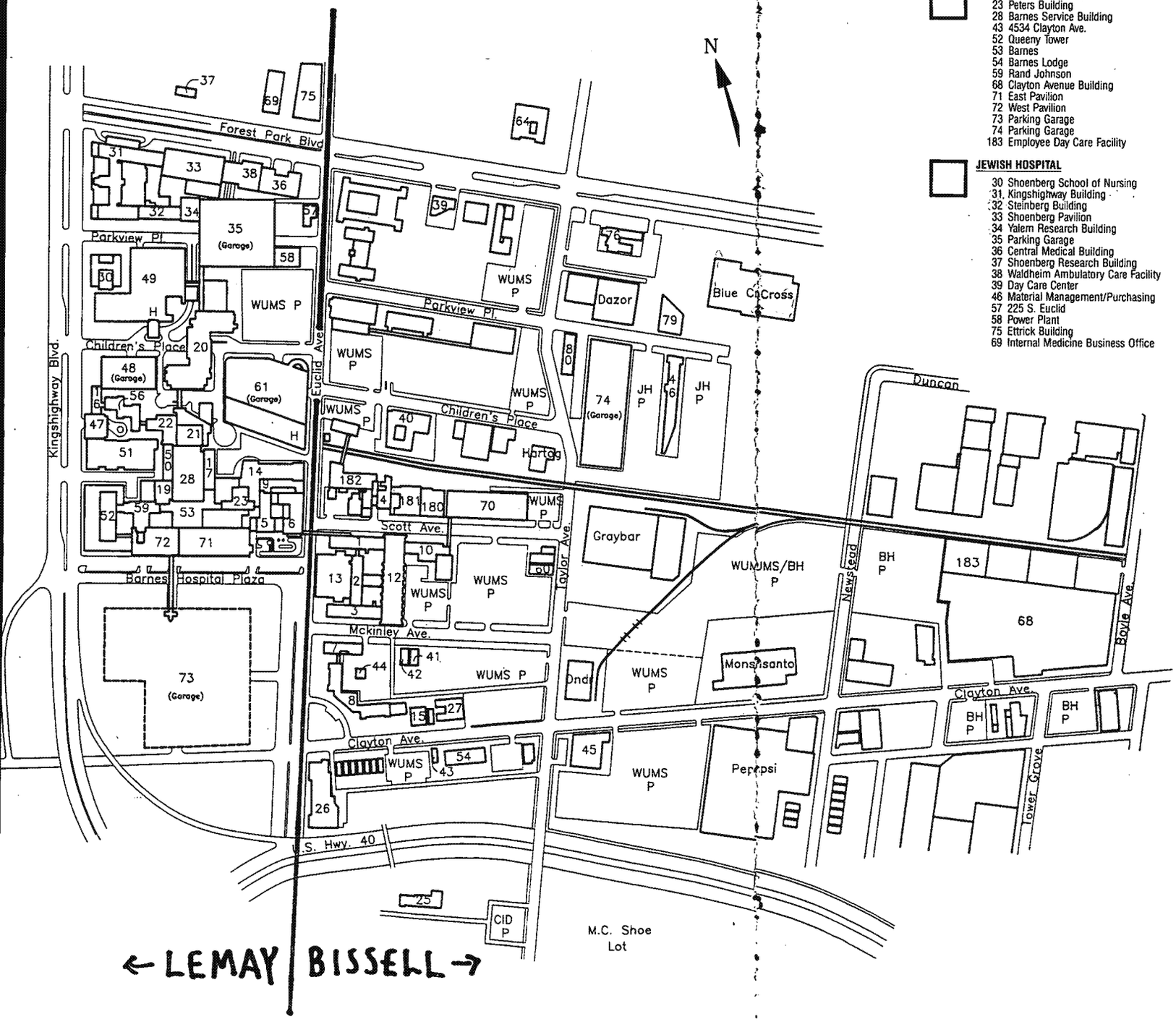
Sincerely,

Daniel J. Szatkowski

Daniel J. Szatkowski
Assistant RSO
362-3479
724 S. Euclid @ Clayton NE corner
2246 (2nd floor).

Washington University School of Medicine
at Washington University Medical Center
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093
(314) 362-3476 FAX: (314) 362-4776
(Location: 724 S. Euclid Ave.)

WASHINGTON UNIVERSITY MEDICAL CENTER



BARNES HOSPITAL

23 Peters Building
28 Barnes Service Building
43 4534 Clayton Ave.
52 Queeny Tower
53 Barnes
54 Barnes Lodge
59 Rand Johnson
68 Clayton Avenue Building
71 East Pavilion
72 West Pavilion
73 Parking Garage
74 Parking Garage
183 Employee Day Care Facility

JEWISH HOSPITAL

30 Shoenberg School of Nursing
31 Kingshighway Building
32 Steinberg Building
33 Shoenberg Pavilion
34 Yalem Research Building
35 Parking Garage
36 Central Medical Building
37 Shoenberg Research Building
38 Waldheim Ambulatory Care Facility
39 Day Care Center
46 Material Management/Purchasing
57 225 S. Euclid
58 Power Plant
75 Ettrick Building
69 Internal Medicine Business Office

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

1 North Building
2 Cancer Research Building
3 South Building
4 Occupational Therapy Program
5 Maternity Hospital
6 McMillan Hospital
7 Biomedical Computing Laboratory
8 Shriner's Building
9 Irene Walter Johnson Rehabilitation
10 Olin Residence Hall
12 McDonnell Sciences Building
13 Medical Library
14 West Building
15 Health Administration Program
16 School of Nursing
17 Renard Hospital
19 Mallinckrodt Institute of Radiology
20 Clinical Sciences Research Building
21 Wohl Clinic
22 Wohl Hospital
40 Storz Building
41 Personnel
42 Personnel
44 Plant Maintenance Storage Garage
45 4480 Clayton
56 Nurses Residence
60 Library Annex
61 Parking Garage
64 4511 Forest Park Medical Center
70 East Building
76 4488 Forest Park
79 4455 Duncan
80 4500 Parkview
182 Euclid Power Plant

CHILDREN'S HOSPITAL

47 Spoehrer Children's Tower
48 Parking Garage
49 Children's Hospital
51 Children's Annex

CENTRAL INSTITUTE FOR THE DEAF

25 Clinic/Research Building
26 Central Institute for the Deaf
27 Residence Hall

BARNARD HOSPITAL

50 Barnard Hospital

WASHINGTON UNIVERSITY SCHOOL OF DENTAL MEDICINE

180 Wohl Research Laboratory
181 School of Dental Medicine — PART OF WASH. U. MED. SCHOOL

SURFACE PARKING LOTS

BH P — Barnes Hospital
JH P — Jewish Hospital
CID P — Central Institute
WUMS P — Medical School
WUMS/BH P — Medical School & Barnes

HELIPORTS

H — Heliport

REV: 3/92
DAO

BLUE CROSS - PART OF WASH. U. MED. SCHOOL

NUMBERS YOU FREQUENTLY CALL:

Name	Area & Phone Number	Notes

NUMBERS YOU FREQUENTLY CALL:

Name	Area & Phone Number	Notes

MSD 043983

LEMAY

Washington University Hilltop Campus

1. Academy Building (I-4)
400. Administrative Services Center (H-10)
2 Alpha Epsilon Pi, fraternity (E-2)
3. Alumni House (C-6)
4. Athletic Complex (D-2)
5. Baer Memorial (E-1)
6. Beaumont Residence Hall (A-6)
7. Beaumont Pavilion (I-7)
8. Beta Theta Pi, fraternity (F-3)
9. Bixby Hall (J-10)
10. Blewett Annex (D-6)
11. Blewett Hall (D-6)
12. Bowles Plaza (F-6)
13. Brizzi Plaza (G-5)
14. Brookings Hall (I-7)
15. Brookings Quadrangle (I-7)
16. Brown Hall (H-8)
17. Bryan Hall (I-5)
18. Busch Hall (H-8)
19. Busch Laboratory (G-6)
20. Bushyhead Track (D-3)
21. Campus Police Headquarters (F-1)
22. Campus Post Office (I-5)
23. George Capps Plaza (D-2)
24. Carpenter Shop (H-4)
25. Compton Hall (J-6)
26. Crow Hall (I-6)
27. Cupples I Hall (I-7)
28. Cupples II Hall (I-6)
29. Cyclotron (I-5)
30. Dauten Residence Hall (A-5)
31. Duncker Hall (H-6)
32. Eads Hall (H-6)
33. Eisendrath Garden (G-7)
34. Eliot Hall (G-4)
35. Eliot Residence Hall (B-4)
36. Francis Field (D-4)
37. Francis Gymnasium (D-2)
38. Garden Place (F-5)
39. Gaylord Music Library (D-6)
40. Givens Hall (I-9)
41. Graham Chapel (G-6)
42. "H" Residence Hall (B-7)
43. Herbert F. Hitzeman, Jr. Residence Hall (B-8)
44. Housing Office (B-6)
45. January Hall (H-7)
46. Harold D. Jolley Hall (I-6)
47. Kalachek Memorial (G-4)
48. Kappa Sigma, fraternity (F-3)
49. Kelly Baseball Field (C-5)
50. Koenig Residence Hall (C-7)
51. Lee Residence Hall (B-5)
500. Lewis Center (725 Kingsland, University City) (G-1)
52. Life Sciences Building (G-6)
53. Liggett Residence Hall (C-6)
54. Lopata Courtyard (E-4)
55. Lopata Hall (I-6)
56. Lopata Plaza (I-6)
57. Louderman Hall (H-5)
58. Maintenance Center (G-3)
59. Mallinckrodt Student Center and Edison Theatre (F-6)
60. McCarthy House (D-7)
61. McMillan Hall (G-4)
62. McMillen Laboratory (H-5)
63. Chester Myers Residence Hall (A-7)
64. Millbrook Building (H-4)
65. Millbrook Square (F-2)
66. Millstone Pool (D-2)
67. Monsanto Laboratory (G-7)
68. Mudd Law Building (F-3)
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SUPPLEMENTARY INFORMATION REGARDING RADIOACTIVE WASTEWATER DISCHARGE REQUEST FROM 12/2/93 MEETING

B= Bissell Point
L= Lemay

WASHINGTON UNIVERSITY
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
BARNES HOSPITAL
CHILDREN'S HOSPITAL (Part of Barnes Complex)
JEWISH HOSPITAL

Request covers 275 total discharge locations within the buildings listed below:

WASH U. SCHOOL OF MEDICINE 340 millicuries requested

	Bldg	Name	Comments
B	1	North Building	lot of labs
B	2	Cancer Research Building	lot of labs
B	3	South Building	lot of labs
L	5	Maternity Hospital	
L	6	McMillan Hospital	
B	12	McDonnell Sciences Building	lot of labs
L	14	West Building	
L	17	Renard Hospital	
L	20	Clinical Sciences Research Bldg	
L	21	Wohl Clinic	
L	22	Wohl Hospital	
B	64	4511 Forest Park Medical Center	
B	70	East Building	
B	80	4500 Parkview	waste disposal facility 300 of 340 millicuries
B	181	School of Dental Medicine	
B	---	Blue Cross Building	

BARNES HOSPITAL COMPLEX (incl. CHILDRENS) 60 millicuries requested (20=Barnes, 40=Childrens)

	Bldg	Name	Comments
	BARNES		
L	23	Peters Building	blood bank, clinical (hematology, etc) chemistry
L	28	Barnes Service Building	only 1 sink
L	72	West Pavilion	Barnes Nuclear Medicine, only 1 sink
	CHILDRENS		
L	49	Children's Hospital	floors 2, 10 & 11
L	51	Children's Annex	

JEWISH HOSPITAL 40 millicuries requested

	Bldg	Name	Comments
L	31	Kingshighway Building	1 lab in basement
L	32	Steinberg Building	just a few sinks
L	34	Yalem Research Building	primary source

WASHINGTON UNIVERSITY HILLTOP CAMPUS 60 millicuries

	Bldg	Name	Comments
L	19	Busch Laboratory	biology
L	62	McMillan Laboratory	chemistry
L	67	Monsanto Laboratory	biology
L	69	Natural Sciences Building	biology
L	81	Rebstock Hall	biology - just a few sinks
L	103	Urbauer Hall	radiochemistry

Metropolitan
St. Louis Sewer
District

Department of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

October 7, 1993

Daniel J. Szatkowski
Assistant RSO
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
at WASHINGTON UNIVERSITY MEDICAL CENTER
Campus Box 8053, 660 S. Euclid Avenue
St. Louis, Mo 63110-1093

Dear Mr. Szatkowski:

We have reviewed your letter dated September 27, 1993 requesting approval to discharge radioactive wastes from Washington University and its Affiliated Institutions. You provided an estimate of expected discharge levels and discharge locations.

Unfortunately, the locations specified coincide with the watershed boundary between the District's Bissell Point and Lemay watersheds. We will need more definitive information regarding the discharge locations before we can answer your request.

Please provide us with radioactive discharge levels for each specific building. A map showing the clearly marked locations of each of the buildings should be included.

Once we receive this information we will continue with your request. If you have any questions, please contact me at (314) 436-8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza
Industrial Waste Engineer

tp

file: radiation

Washington
WASHINGTON·UNIVERSITY·IN·ST·LOUIS
School of Medicine

Division of Radiation Safety

September 27, 1993

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
10 East Grand
St. Louis, MO 63147
(314) 436-8710

Dear Mr. Mendoza:

In agreement with the Metropolitan St. Louis Sewer District's ordinance number 8472, article V, section one, paragraph 13, Washington University and its Affiliated Institutions request authorization from the Executive Director of the Metropolitan St. Louis District for an annual sanitary sewer discharge of radioactivity not to exceed 500 millicuries. The United States Nuclear Regulatory Commission issued Materials License Number 24-00167-11 with expiration date December 31, 1993 to Washington University Medical School. A copy of this materials license is attached for your convenience.

The licensed activities at Washington University and its Affiliated Institutions which utilize the sanitary sewer for the disposal of radioactive materials can be described in two categories. All wastes identified in the following categories are readily soluble or dispersible in water and satisfy the concentration limits established by federal regulations. Records of all drain discharges are kept on file at the Division of Radiation Safety offices located at 724 South Euclid Avenue.

Category 1 includes aqueous based liquid waste discharged from W.U.M.S. Radiation Safety Waste Facility located at 4500 Parkview Place. An annual limit of 300mCi total radioactivity is requested for this specific location. These discharges allow the university to economically dispose of long-lived radionuclides (half-life longer than 90 days) in concentrations not to exceed 0.05 uCi/ml and short-lived radionuclides (half-life shorter than 90 days) in concentrations not to exceed 0.0005 uCi/ml.

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Washington University School of Medicine
at Washington University Medical Center
Campus Box 8053, 660 S. Euclid Ave.
St. Louis, MO 63110-1093
(314) 362-3476 FAX: (314) 362-4776
(Location: 724 S. Euclid Ave.)

Category 2 includes radioactive contaminated rinse water discharged from individual clinical and research laboratories. The W.U.M.S. Radiation Safety Office has granted approval for approximately 275 specific locations for this purpose located throughout the Washington University Hilltop Campus, Washington University Medical Campus, Barnes Hospital, St. Louis Children's Hospital, Jewish Hospital, The Central Institute For the Deaf, and Barnard Hospital. Campus maps have been attached for your convenience. An annual limit of 200mCi total radioactivity is requested to allow our researchers to wash and reuse contaminated labware.

TABLE I Likely scenario of radioactivity discharged annually to the sanitary sewer from licensed activities at Washington University and its Affiliated Institutions. All units in millicuries.

RADIONUCLIDE	CATEGORY 1 (waste water)	CATEGORY 2 (rinse water)	TOTAL
H-3	240	100	340
C-14	20	20	40
P-32	10	20	30
S-35	10	20	30
I-125	10	20	30
I-131	0	10	10
Any byproduct material with Atomic Number 3-83 inclusive except as specifically listed above	10	10	20
TOTAL	**300mCi**	**200mCi**	**500mCi**

Sincerely,

Daniel J. Szatkowski

Daniel J. Szatkowski
Assistant RSO

cc: John Eichling, Ph.D.

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NRC Form 374
(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 31

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Washington University Medical School ATTN: Radiation Safety Officer P.O. Box 8053 2. 4566 Scott Avenue St. Louis, MO 63110	In accordance with application dated April 27, 1988 3. License number 24-00167-11 is amended in its entirety to read as follows:
	4. Expiration date: December 31, 1993
	5. Docket or Reference No.: 030-02271

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Any byproduct material identified in 10 CFR 35.100	A. Any radiopharmaceutical identified in 10 CFR 35.100	A. As needed
B. Any byproduct material identified in 10 CFR 35.200	B. Any radiopharmaceutical identified in 10 CFR 35.200	B. As needed
C. Any byproduct material identified in 10 CFR 35.300	C. Any radiopharmaceutical identified in 10 CFR 35.300	C. As needed
D. Any byproduct material identified in 10 CFR 35.400	D. Any brachytherapy source identified in 10 CFR 35.400	D. As needed
E. Any byproduct material identified in 10 CFR 35.500	E. Sealed sources identified in 10 CFR 35.500	E. As needed
F. Any byproduct material identified in 10 CFR 31.11	F. Prepackaged Kits	F. As needed

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SEP 29 1993
Environmental Compliance

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 24-00167-11
Docket or Reference number: 030-02271
Amendment No. 31

G. Any byproduct material with Atomic Numbers 3-83, inclusive	G. Any	G. Not to exceed 1 curie per radionuclide. Total possession limit not to exceed 10 curies except as specifically listed below: Hydrogen-3 20 curies Sulfur-35 6 curies Phosphorus-32 2 curies Iodine-125 3 curies
H. Americium-241	H. Sealed sources	H. 20 millicuries
I. Actinium-227	I. Any	I. 1 millicurie
J. Neptunium-237	J. Any	J. 1 millicurie
K. Curium-242	K. Any	K. 1 millicurie
L. Curium-243	L. Any	L. 1 millicurie
M. Curium-244	M. Any	M. 1 millicurie
N. Californium-249	N. Plated sources	N. 10 microcuries
O. Californium-252	O. Plated sources	O. 1 millicurie
P. Any byproduct material	P. Activated Rock Samples	P. 10 millicuries
Q. Uranium-233	Q. Sealed sources	Q. 10 microcuries
R. Americium-244	R. Sealed sources	R. 10 microcuries
S. Thorium-228	S. Sealed sources	S. 20 millicuries
T. Uranium (depleted in Uranium-235)	T. Cadmium plated metal	T. 200 kilograms
U. Cesium-137	U. Sealed sources	U. 200 millicuries
V. Cesium-137	V. Sealed sources (Amersham Corp. Model CDC. SP1)	V. 36 sources not to exceed 14 millicuries each

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 24-00167-11
Docket or Reference number: 030-02271

Amendment No. 31

W. Cesium-137	W. Sealed sources (Amersham Corp. Model CDCK)	W. 22 sources per device, total activity not to exceed 875 millicuries per device. Total possession not to exceed 44 sources.
X. Iridium-192	X. Seeds encased in nylon ribbon (Manufactured labeled, packaged, and distributed in accordance with a specific license issued pursuant to Section 32.74 of 10 CFR Part 32 or a specific license issued to a manufacturer by an Agreement State pursuant to equivalent State regulations)	X. 45 ribbons (15 seeds per ribbon) not to exceed 712 millicuries total
Y. Cesium-137	Y. Sealed sources (Amersham Corp. Model CDC. SP1)	Y. 18 sources per device not to exceed 14 millicuries each. Total possession not to exceed 36 sources

9. Authorized Use

A. Medical use described in 10 CFR 35.100.

B. Medical use described in 10 CFR 35.200.

C. Medical use described in 10 CFR 35.300.

D. Medical use described in 10 CFR 35.400.

E. Medical use described in 10 CFR 35.500 in devices which have been evaluated and approved for licensing purposes by the U.S. Nuclear Regulatory Commission or an Agreement State.

F. In vitro studies.

G. through S. Research and Development as defined in Section 30.4(q) of 10 CFR Part 30. Medical research, diagnosis and therapy.

T. Shielding in a linear accelerator.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 31

U. To be used for licensee instrument calibration.

V. To be used in a Nucletron Corporation Selectron-LDR Model SEL-106 remote afterloading brachytherapy unit for intracavitary and intraluminal treatment of cancer.

W. To be used in two (2) Nucletron Corporation MicroSelectron-LDR Model SEL-4000 remote afterloading brachytherapy units for intracavitary and interstitial treatment of cancer.

X. To be used in a Nucletron Corporation MicroSelection-LDR Model SEL 4000 remote afterloading brachytherapy unit for intracavitary and interstitial treatment of cancer.

Y. To be used in two (2) Nucletron Corporation Seldctron-LDR Model SEL-103 remote afterloading brachytherapy units for intracavitary and intraluminal treatment of cancer.

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at Washington University and Washington University Medical Center, St. Louis, Missouri. Licensed material listed in Subitems V. through Y. shall be used at the Barnes Hospital facilities specified in letter dated September 9, 1987.

11. A. Licensed material shall be used by, or under the supervision of, individuals designated by the Radiation Safety Committee, Carlos A. Perez, M.D., Chairman.

    B. Physicians designated to use licensed material in or on humans shall meet the appropriate training and experience criteria in 10 CFR Part 35, Subpart J.

    C. The Radiation Protection Officer for the activities authorized by this license is John Eichling, Ph.D.

12. A. (1) Each sealed source acquired from another person and containing licensed material, other than hydrogen-3, with a half-life greater than 30 days and in any form other than gas shall be tested for contamination and/or leakage before use. In the absence of a certificate from a transferor indicting that a test has been made within 6 months before the transfer, a sealed source received from another person shall not be put into use until tested.

    (2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source is exempt from such leak tests when the source contains 100 microcuries or less of beta and/or gamma emitting materials or 10 microcuries or less of alpha emitting material.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 31

12. (Continued)

(3) Except for alpha sources, the periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage before any use or transfer to another person unless they have been leak tested within 6 months before the date of use or transfer.

B. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to use or transfer as a sealed source. If the inspection or test reveals any construction defects or 0.005 microcurie or greater of contamination, the source shall not be used or transferred as a sealed source until it has been repaired, decontaminated and retested.

C. Each sealed source containing licensed material, other than hydrogen-3, with a half-life greater than 30 days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed 6 months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed 3 months.

D. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission. Records may be disposed of following Commission inspection.

E. If the test required by Subsection A. or C. of this condition reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, Illinois 60137, ATTN: Chief, Nuclear Materials Safety Branch, describing the equipment involved, the test results, and the corrective action taken.

13. A. Access to the rooms housing the Nucletron Corporation afterloading brachytherapy units shall be controlled by a door at each entrance.

B. The entrance to the irradiation room shall be equipped with an electrical interlock system that will cause the source to return to the shielded position immediately upon opening of the entrance door. The interlock system shall be connected in such a manner that the source cannot be placed in the irradiation position until the entrance door is closed and the source "on-off" control is reset at the control panel.

13. (Continued)

C. Electrical interlocks on the entrance door to the irradiator room shall be tested for proper operation at least once a month. Records of test results shall be maintained for inspection by the Commission.

D. In the event of malfunction of the door interlock, the irradiation device shall be locked in the "off" condition and not used, except as may be necessary for repair or replacement of the interlock system, until the interlock system is shown to be functioning properly.

14. Prior to initiation of a treatment program, and subsequent to each source exchange for the Nucletron Corporation afterloading brachytherapy units, radiation surveys and tests shall be performed in accordance with the following:

A. A radiation survey shall be made of:

(1) The irradiator source housing, with the source in the shielded position. The maximum radiation levels at 10 centimeters from the surface of the main source safe shall not exceed 1 milliroentgens per hour.

(2) All areas adjacent to the treatment room with source in the "irradiation" position. The survey shall clearly establish:

(a) That radiation levels in restricted areas are not likely to cause personnel exposure in excess of the limits specified in Section 20.101, Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standard for Protection Against Radiation" (10 CFR 20).

(b) That quantities of radiation in unrestricted areas do not exceed the limits specified in Section 20.105(b) 10 CFR 20.

B. Records of the survey results shall be maintained for inspection by the Commission.

15. The following shall be performed only by persons specifically authorized by the Commission or an Agreement State to perform such services:

A. Installation and replacement of the cesium-137 sources contained in the Nucletron Corporation afterloading brachytherapy units.

B. Any maintenance or repair operations on the Nucletron Corporation afterloading brachytherapy units listed in Item 9., Subitems X., Y., Z. and A.A. involving work on the source safe the source driving unit, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 31

16. Installation, replacement and/or exchange of the iridium-192 ribbons contained in the Nucletron Corporation afterloading brachytherapy unit shall be performed by Eric Slessinger in accordance with the manufacturer's instructions.

17. Licensed material shall not be used in or on human beings or in field applications where activity is released except as provided otherwise by specific condition of this license

18. Experimental animals administered licensed materials or their products shall not be used for human consumption.

19. Sealed sources containing licensed material shall not be opened.

20. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 2 years from the date of each inventory.

21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Application dated April 27, 1988 (with enclosures); and

    B. Letters with attachments dated September 9, 1987, April 18, 1988, May 11, 1988, October 24, 1988 and November 23, 1988.

For the U.S. Nuclear Regulatory Commission

Date: 12/16/88

By John R. Madera
Materials Licensing Section, Region III

NRC Form 374A
(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 32

Washington University Medical School
ATTN: Radiation Safety Officer
P.O Box 8053
4566 Scott Avenue
St. Louis, MO 63110

In accordance with letter dated January 11, 1989, License Number 24-00167-11 is amended as follows:

Subitems 6.T., 7.T. and 8.T. are amended to read:

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
T. Uranium (depleted in Uranium-235)	T. Cadmium plated metal	T. 700 kilograms

For the U.S. Nuclear Regulatory Commission

Date: 2/10/89

By [signature]
Materials Licensing Section, Region III

NRC Form 374A
(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 33

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Washington University Medical School
ATTN: Radiation Safety Officer
P. O. Box 8053
4566 Scott Avenue
St. Louis, MO 63110

In accordance with letter dated November 6, 1989, License Number 24-00167-11 is amended as follows:

Subitems 6.N., 7.N., 8.N., 6.V., 7.V. and 8.V. are amended to read:

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
N. Californium-249	N. Plated sources	N. 15 microcuries
V. Cesium-137	V. Sealed sources (Amersham Corp. Model CDC.SP1)	V. 36 sources not to exceed 15 millicuries each

Conditions 10. and 21. are amended to read:

Condition 22. is added:

10. Licensed material shall be used only at the licensee's facilities located at Washington University and Washington University Medical Center (Barnes Hospital, Central Institute for the Deaf, Children's Hospital, Jewish Hospital, Mallinckrodt Institute of Radiology and the Schools of Dentistry and Medicine), St. Louis, Missouri.

21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Application dated April 27, 1988 (with enclosures); and

    B. Letters with attachments dated September 9, 1987, April 18, 1988, May 11, 1988, October 24, 1988, November 23, 1988, and letter dated November 6, 1989.

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MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 33

22. The licensee shall maintain records of information important to safe and effective decommissioning at Washington University and Washington University Medical Center per the provisions of 10 CFR 30.35(g) until this license is terminated by the Commission.

For the U.S. Nuclear Regulatory Commission

Date: DEC 12 1989

By William J. Olson
Materials Licensing Section, Region III

NRC Form 374A
(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 34

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Washington University Medical School
ATTN: Radiation Safety Officer
P. O. Box 8053
4566 Scott Avenue
St. Louis, MO 63110

In accordance with letter dated September 4, 1990, License Number 24-00167-11 is amended as follows:

Condition 21. is amended to read:

21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Applications dated April 27, 1988 (with enclosures); and

    B. Letters with attachments dated September 9, 1987, April 18, 1988, May 11, 1988, October 24, 1988, November 23, 1988, November 6, 1989, and September 4, 1990.

For the U.S. Nuclear Regulatory Commission

Original Signed
By William J. Adam, Ph.D.
Materials Licensing Section, Region III

Date: September 14, 1990

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NRC Form 374A
(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

License number 24-00167-11

Docket or Reference number 030-02271

Amendment No. 35

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Washington University Medical School
P.O. Box 8053
4566 Scott Avenue
St. Louis, MO 63110

In accordance with letter dated March 30, 1990, License No. 24-00167-11 is amended as follows:

Conditions 15. and 21. are amended to read:

15. The following shall be performed in accordance with the procedures outlined in the attachment to letter dated March 30, 1990, only by Conrad Granda, Anthony Abkemeier, Richard Guthrie or by persons specifically authorized by the Commission or an Agreement State to perform such services:

    A. Installation and replacement of the cesium-137 sources contained in the Nucletron Corporation afterloading brachytherapy units.

    B. Any maintenance or repair operations on the Nucletron Corporation afterloading brachytherapy units listed in Item 9., Subitems X., Y., Z. and AA. involving work on the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.

21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Applications dated April 27, 1988 (with enclosures); and

    B. Letters with attachments dated September 9, 1987, April 18, 1988, May 11, 1988, October 24, 1988, November 23, 1988, November 6, 1989, September 4, 1990, and March 30, 1990 (with attached letter and procedures dated February 7, 1990, except Item G(4), in-house certification program).

For the U.S. Nuclear Regulatory Commission

Date: November 26, 1990

Original Signed
By John R. Madera
Materials Licensing Section, Region III

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(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 36

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Washington University Medical School
4566 Scott Avenue
St. Louis, MO 63110

In accordance with letter dated November 2, 1990, License No. 24-00167-11 is amended as follows:

Condition 21. is amended to read:

21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Application dated April 27, 1988 (with attachments), and

    B. Letters with attachments dated September 9, 1987, April 18, 1988, May 11, 1988, October 24, 1988, November 23, 1988, November 6, 1989, September 4, 1990, March 30, 1990 (with attached letter and procedures dated February 7, 1990, except Item 8(4), In-house certification program) and November 2, 1990.

For the U.S. Nuclear Regulatory Commission

Date: January 3, 1991

Original Signed
By John R. Madera
Materials Licensing Section, Region III

5

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(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 37

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Washington University Medical School
4566 Scott Avenue
St. Louis, MO 63110

In accordance with letter dated February 1, 1991, License No. 24-00167-11 is amended as follows:

Condition 21. is amended to read:

21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Application dated April 27, 1988 (with attachments), and

    B. Letters with attachments dated September 9, 1987, April 18, 1988, May 11, 1988, October 24, 1988, November 23, 1988, November 6, 1989, September 4, 1990, March 30, 1990 (with attached letter and procedures dated February 7, 1990, except Item G(4), in-house certification program) November 2, 1990, February 1, 1991 (with attachments), and March 14, 1991.

For the U.S. Nuclear Regulatory Commission

Date: 3/18/91

By John R. Made
Materials Licensing Section, Region III

NRC Form 374A
(5-84)

U.S. NUCLEAR REGULATORY COMMISSION

License number
24-00167-11

Docket or Reference number
030-02271

Amendment No. 38

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Washington University Medical School
4566 Scott Avenue
St. Louis, MO 63110

In accordance with letter dated January 15, 1991, License Number 24-00167-11 is amended as follows:

Items 6., 7., 8. and 9. are amended to read:

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
Z. Iridium-192	Z. Sealed sources (BYK Mallinckrodt, Model CI LBV)	Z. Two sources not to exceed 10 curies each

9. Authorized Use

Z. One source to be used in a Nucletron Corporation MicroSelectron-HDR remote afterloading brachytherapy unit for interstitial and intracavitary radiotherapy. One source in its shipping container to be in possession of the licensee as necessary for replacement of the source in the irradiation device.

CONDITIONS

Conditions 14. and 21. are amended to read:

14. Prior to initiation of a treatment program, and subsequent to each source exchange for the Nucletron Corporation afterloading brachytherapy units, radiation surveys and tests shall be performed in accordance with the following:

A. (1) (a) For MicroSelectron-LDR units, a radiation survey shall be made of the irradiator source housing, with the source in the shielded position. The maximum radiation levels at 10 centimeters from the surface of the main source safe shall not exceed 1 milliroentgens per hour.

(b) For MicroSelectron-HDR units, a radiation survey shall be made of the irradiator source housing, with the source in the shielded position. The maximum radiation levels at 100 centimeters from the surface of the source head shall not exceed 0.25 milliroentgens per hour.

(2) For all Nucletron Corporation afterloading brachytherapy units, a radiation survey shall be made of all areas adjacent to the treatment room with source in the "irradiation" position. The survey shall clearly establish:

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 24-00167-11

Docket or Reference number: 030-02271

Amendment No. 38

(a) That radiation levels in restricted areas are not likely to cause personnel exposure in excess of the limits specified in Section 20.101, Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standard for Protection Against Radiation" (10 CFR 20).

(b) That quantities of radiation in unrestricted areas do not exceed the limits specified in Section 20.105(b) 10 CFR 20.

B. Records of the survey results shall be maintained for inspection by the Commission.

21. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Application dated April 27, 1988 (with attachments); and

B. Letters with attachments dated September 9, 1987, April 18, 1988, May 11, 1988, October 24, 1988, November 23, 1988, November 6, 1989, September 4, 1990, March 30, 1990 (with attached letter and procedures dated February 7, 1990, except Item G(4), in-house certification program) November 2, 1990, February 1, 1991 (with attachments), March 14, 1991, January 15, 1991 (with attachments) and March 22, 1991 (with attachments).

Condition 23. is added:

23. The following shall be performed only by persons specifically authorized by the Commission or an Agreement State to perform such services.

A. Installation and replacement of sources contained in the MicroSelectron-HDR irradiation device.

B. Any maintenance or repair operations on the MicroSelectron-HDR irradiation device involving work on the source head, the source driving unit, or other mechanism that could expose the source, reduce the shielding around the source, or compromise the safety of the unit and result in increased radiation levels.

For the U.S. Nuclear Regulatory Commission

Date: April 5, 1991

By [signature]
Materials Licensing Section, Region III

ACCOUNT NUMBER: **10243530-00**

COMPANY NAME: **WASHINGTON UNV MEDICAL**

MAPS

FROM 09-02-98 THRU 01-02-09

IUQ'S

FROM 08-31-98 THRU 07-06-07

X	CORRESPONDANCE LOCATED IN ARCHIVE FILE S

FOR MSD USE ONLY		Category
Account Number:	5112216 2-00	(SIU)
TA:	BISSELL	NONSIU
TS:	Old Mill Creek	CIU
Reviewer:	JEG	NONTOX
Date:	7/6/07	(TOXIC)
		SUR
		NOPROC
		MULTI

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL USER QUESTIONNAIRE

Note to Signing Official: In accordance with Title 40 of the Code of Federal Regulations Part 403, Section 403.14, information and data provided in this questionnaire, which identifies the nature and frequency of discharge, shall be available to the public without restriction. Requests for confidential treatment of other information shall be governed by procedures specified in 40 CFR Part 2. Should a discharge permit be required for your facility, the information in this questionnaire will be used to develop the permit.

SECTION A - GENERAL INFORMATION

1. Company Name: Washington University School of Medicine
2. Mailing Address: 660 South Euclid Avenue Campus Box 8229
   City: St. Louis State Missouri Zip Code 63110
3. Premise Address: 660 South Euclid Avenue
   City: St. Louis State Missouri Zip Code 63110
4. Person Authorized to Sign Reporting Documents (see note after Section H):
   Name: Michael J. Koch, CHMM
   Title: Environmental Manager Phone Number 362-6735
5. Check One: (●) Existing Discharge ( ) Proposed Discharge
   If proposed, indicate discharge start date: _____
6. Shift Information:
   a. Number of shifts per work day: 2 and work days per week: 7
   b. Average number of employees per shift: 1st 6000 2nd 400 3rd _____ Total: _____
   c. Shift start times: 1st 9:00 am (HH:MM AM/PM) 2nd 6:00 pm (HH:MM AM/PM) 3rd _____ (HH:MM AM/PM)

SECTION B - PRODUCT OR SERVICE INFORMATION

1. Briefly describe the primary manufacturing or service activities at the premise address and list the applicable SIC number for each activity:

	PRIMARY ACTIVITY	SIC NUMBER
a.	Research - Biomedical	8733
b.	Education - Graduate Medical snd Research Training	8221
c.	Animal Care - Research Animal Housing	0279
d.		
e.		
f.		

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DIVISION OF ENVIRONMENTAL COMPLIANCE

MSD 044006

Company Name: WASH. U. School of MEDICINE
Premise Address: 660 S. Euclid

SECTION B - PRODUCT OR SERVICE INFORMATION (Continued)

2. Are primary activities generally batch or continuous processes ? (●) batch ( ) continuous

3. Principal raw materials used: Laboratory Chemicals / Reagents

4. Principal products produced: None

5. Check all activities which are conducted at your premise in addition to the primary activities described in B.1 above Indicate the SIC number, if known. Do not check activities which are already included in B.1.

ACTIVITY (with related 40 CFR Part)	SIC NO.	ACTIVITY (with related 40 CFR Part)	SIC NO.
☐ a. Adhesive and Sealants Mfg.		☐ nn. Nonferrous Metals Mfg. (421)	
☐ b. Aluminum Forming (467)		☐ oo. Oil and Gas Extraction (435)	
☐ c. Asbestos Mfg. (427)		☐ pp. Ore Mining and Dressing (440)	
☐ d. Battery Mfg. (461)		☐ qq. Organic Chem/Plastics/Synthetic Fibers Mfg (414)	
☐ e. Carbon Black Mfg. (458)		☐ rr. Paint Formulating (446)	
☐ f. Cement Mfg. (411)		☒ ss. Painting, Finishing or Paint Stripping	
☐ g. Centralized (non-Haz.) Waste Treatment (437)		☒ tt. Parts Washing	
☐ h. Coal Mining (434)		☐ uu. Paving and Roofing Mat'ls (Tars & Asphalt) (443)	
☐ i. Coil Coating (465)		☐ vv. Pesticide Chem Mfg/Formulating/Packaging (455)	
☐ j. Concentrated Animal Feeding Operations (412)		☐ ww. Petroleum Refining (419)	
☐ k. Concentrated Aquatic Animal Production (451)		☐ xx. Pharmaceutical Mfg. (439)	
☐ l. Copper Forming (468)		☐ yy. Phosphate Mfg. (422)	
☐ m. Dairy Products Processing (405)		☒ zz. Photographic Processing (459)	
☐ n. Drum Reconditioning		☐ aaa. Plastic Molding and Forming (463)	
☐ o. Electrical and Electronic Components (469)		☐ bbb. Porcelain Enameling (466)	
☐ p. Electroplating (413)		☐ ccc. Printing and Publishing	
☐ q. Explosives Mfg. (457)		☐ ddd. Pulp, Paper and Paperboard Mfg. (430)	
☐ r. Ferroalloy Mfg. (424)		☐ eee. Q.C. Laboratory	
☐ s. Fertilizer Mfg. (418)		☐ fff. R & D Laboratory	
☒ t. Food Preparation		☐ ggg. Radioactive Materials Processing	
☐ u. Fruit and Vegetable Processing (407)		☐ hhh. Repair Shop, Garage	
☐ v. General Offices		☐ iii. Rubber and Rubber Products Mfg. (428)	
☐ w. Glass Mfg. (426)		☐ jjj. Seafood Processing (408)	
☐ x. Grain Milling (406)		☐ kkk. Soap and Detergent Mfg. (417)	
☐ y. Gum and Wood Chemical Mfg. (454)		☐ lll. Solvent Recycling	
☐ z. Haz. Waste Treatment, Storage or Disposal		☐ mmm. Steam Electric Power Generation (423)	
☐ aa. Health Care or Hospital (460)		☐ nnn. Sugar Processing (409)	
☐ bb. Industrial Laundry		☐ ooo. Textile Mills (410)	
☐ cc. Ink Formulating (447)		☐ ppp. Timber Products Mfg. (429)	
☐ dd. Inorganic Chemicals Mfg. (415)		☐ qqq. Transportation Equipment Cleaning (442)	
☐ ee. Iron and Steel Mfg. (420)		☐ rrr. Transportation Services	
☐ ff. Leather Tanning and Finishing (425)		☐ sss. Used Oil Reclamation	
☒ gg. Machine Shop		☐ ttt. Vehicle/Equipment Washing	
☐ hh. Machinery Mfg. or Rebuilding (438)		☐ uuu. Warehousing	
☐ ii. Meat Processing (432)		☐ vvv. Waste Combustors (444)	
☐ jj. Metal Finishing (433)		☐ www. Waste Recycling	
☐ kk. Metal Molding and Casting (464)		☐ xxx. Others (Describe)	
☐ ll. Mineral Mining and Processing (436)		☐ yyy. Others (Describe)	
☐ mm. Nonferrous Metals Forming/Metal Powders (471)		☐ zzz. Others (Describe)	

6. Are your activities subject to seasonal variation? If "Yes," explain and indicate the month(s) of peak activity:

( ) Yes (●) No

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DIVISION OF
ENVIRONMENTAL COMPLIANCE

MSD 044007

Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION C - WATER CONSUMPTION AND WASTEWATER DISCHARGES

1. Raw Water Source(s):
   - [x] City of St. Louis Water Div.
   - [ ] Missouri American Water Co.
   - [ ] Other municipal source _____
   - [ ] Hauled by contractor
   - [ ] Surface water
   - [ ] Private well
   - [ ] Other (describe) _____

2. Water Bill Addressee: Washington University School of Medicine 660 S. Euclid Ave, Campus Box 8229 St. Louis, MO 63110

3. Water Service Account Numbers: _____

4. List past twelve months water usage from:

				Water Bills	Other Sources
1st 3 mo period	7/1/2005	through	9/30/2005	3,216,663 Ccf	Ccf
2nd 3 mo period	10/1/2005	through	12/31/2005	3,216,663 Ccf	Ccf
3rd 3 mo period	1/1/2006	through	3/31/2006	3,216,663 Ccf	Ccf
4th 3 mo period	4/1/2006	through	6/30/2006	3,216,663 Ccf	Ccf

Water Bills and Other Sources Total: _____ Ccf = 0 GPD-calendar = 0 GPD-work

5. Describe any treatment or conditioning process performed on the raw water before use (list regeneration/reject water volume in 6h below):
Acid Neutralization, Silver Recovery

6. Identify all water uses within your facility:

Water Uses	Estimated Average Daily Use (Gal per workday)
a. Sanitary	98,431
b. Irrigation & lawn watering	2,000
c. Non-contact cooling water	189,364
d. Contact cooling water	0
e. Process water	354,687
f. Plant & equipment washdown	12,590
g. Boiler	110,815
h. Regeneration/reject water	0
i. Other uses	36,279
j. Total of USES (6a through 6h):	

(6a through 6i must equal total at item 4)

7. Identify all water losses and wastewater discharges from your facility:

Water Uses	Estimated Average Daily Loss/Discharge (Gal per workday)
a. Municipal sewer	623,200
b. Watercourse, storm drain, surface	1,515
c. Haulers	0
d. Evaporation	179,451
e. Contained in product	0
f. Total of LOSSES & DISCHARGES:	

(7a through 7e must equal total at 6j)

8. For each activity you listed in Sections B.1 and B.5, list the average water usage and average wastewater discharge per workday. Attach additional sheets, if needed. (Total Avg. Water Use must equal total for 6e)

Item No	Activity	Type of Discharge: Cont	Batch	None	Avg. Water Use (GPD)	Avg. Discharge to Mun Sewer (GPD)	Date when activity first commenced at this facility
B.1 (a)	Research - Biomedical	●	○	○	49,783	49,783	Day of opening
B.1 (b)	Education - Graduate classes	●	○	○	20,489	20,489	Day of opening
B.1 (c)	Animal Care - Animal Housing	●	○	○	271,741	271,741	Day of opening
B.5 (t)	Food Preparation	●	○	○	9,762	9,762	Day of opening
B.5 (gg)	Machine Shop	●	○	○	522	522	Day of opening
B.5(tt)	Parts Washing	○	○	●	0	0	Day of opening
B.5(zz)	Photographic Processing (459)	●	○	○	2,188	2,188	Day of opening
B.5(ss)	Painting, Finishing or Paint Stripping	●	○	○	202	202	Day of opening
				Total:			

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DIVISION OF ENVIRONMENTAL COMPLIANCE

SEE REVISED pg 3
Rec'd 7/17/07

Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION C - WATER CONSUMPTION AND WASTEWATER DISCHARGES

1. Raw Water Source(s):
   - [x] City of St. Louis Water Div.
   - [ ] Missouri American Water Co.
   - [ ] Other municipal source _____
   - [ ] Hauled by contractor
   - [ ] Surface water
   - [ ] Private well
   - [ ] Other (describe) _____

2. Water Bill Addressee: Washington University School of Medicine 660 S. Euclid Ave, Campus Box 8229 St. Louis, MO 63110

3. Water Service Account Numbers: _____

4. List past twelve months water usage from:

				Water Bills	Other Sources
1st 3 mo period	7/1/2005	through	9/30/2005	57,007 Ccf	Ccf
2nd 3 mo period	10/1/2005	through	12/31/2005	82,931 Ccf	Ccf
3rd 3 mo period	1/1/2006	through	3/31/2006	81,480 Ccf	Ccf
4th 3 mo period	4/1/2006	through	6/30/2006	66,683 Ccf	Ccf

Water Bills and Other Sources Total: 288,101 Ccf = 590,950 GPD-calendar = 590,950 GPD-work

5. Describe any treatment or conditioning process performed on the raw water before use (list regeneration/reject water volume in 6h below):
   Acid Neutralization, Silver Recovery

6. Identify all water uses within your facility:

Water Uses	Estimated Average Daily Use (Gal per workday)
a. Sanitary	98,431
b. Irrigation & lawn watering	1,515
c. Non-contact cooling water	178,002
d. Contact cooling water	0
e. Process water	159,967
f. Plant & equipment washdown	12,590
g. Boiler	104,166
h. Regeneration/reject water	36,279
i. Other uses	0
j. Total of USES (6a through 6h):	590,950

(6a through 6i must equal total at item 4)

7. Identify all water losses and wastewater discharges from your facility:

Water Uses	Estimated Average Daily Loss/Discharge (Gal per workday)
a. Municipal sewer	444,754
b. Watercourse, storm drain, surface	1,515
c. Haulers	0
d. Evaporation	144,681
e. Contained in product	0
f. Total of LOSSES & DISCHARGES:	590,950

(7a through 7e must equal total at 6j)

8. For each activity you listed in Sections B.1 and B.5, list the average water usage and average wastewater discharge per workday. Attach additional sheets, if needed. (Total Avg. Water Use must equal total for 6e)

Item No	Activity	Type of Discharge: Cont	Batch	None	Avg. Water Use (GPD)	Avg. Discharge to Mun Sewer (GPD)	Date when activity first commenced at this facility
B.1 (a)	Research - Biomedical	●	○	○	46,796	46,796	
B.1 (b)	Education - Graduate classes	●	○	○	19,260	19,260	
B.1 (c)	Animal Care - Animal Housing	●	○	○	81,954	81,954	
B.5 (t)	Food Preparation	○	●	○	9,176	9,176	
B.5 (gg)	Machine Shop	○	●	○	522	522	
B.5(tt)	Parts Washing	○	○	●	0	0	
B.5(zz)	Photographic Processing (459)	○	●	○	2,057	2,057	
B.5(ss)	Painting, Finishing or Paint Stripping	○	●	○	202	202	
				Total:	159,967	159,967	

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Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION D - SEWER CONNECTION INFORMATION

1. Attach a scale drawing of your premise, which shows (for permit renewals, highlight any changes since last application):
   a. All buildings, structures, alleys, streets and other pertinent features.
   b. All sewers and drains, including all connections, inlets, manholes, vents and other access or control structures. Identify each sewer as sanitary, storm or combined and indicate its size.
   c. A sampling point for each connection to the public sewer.
   d. A sampling point for each discharge from a federally regulated categorical process.
   e. A sampling point for each discharge to a separate storm sewer or watercourse.

2. List each sampling point identified in 1c, d and e above and each connection for which there is no sampling point. Assign a sequential reference number to each location, starting with No. 1. Attach additional sheets, if needed.

Reference Number	Sewer Size (inches)	Description of sewer sampling point or connection. (Vent, manhole, valve, other appurtenance. Indicate size & location)	Upstream to other point? Yes	No	List Ref. No.	Total avg flow per workday(GPD)
1	10"	SP001 - MH 30'N, 10'W of NE CRNR of BLDG 27	○	●	001	12,672
2	30"	SP003 - MH N of BLDG 14 in Drive (6' S of O2 Tanks)	○	●	003	70,529
3	16"	SP005 - MH 200' W if Taylor on S side of Scott Ave. in St.	○	●	005	692,701
4	6"	SP006 - 6" Clay Pipe 13'N, 9'E of SE CRNR of BLDG 80	○	●	006	3,512
5	10"	SP007 - MH E of BLDG 63, 11' N, 2' E of SE CRNR if BLDG	○	●	007	24,751
6			○	○		
7			○	○		

Grand Total Average Flow per Workday: 0

SECTION E - WASTEWATER INFORMATION

1. For each point listed in Section D.2 above, list the wastewater discharge corresponding to each water usage listed in Section C.6. Attach additional sheets, if needed.

Type of Wastewater	Discharge Quantity (GPD-workday) for each sampling point or connection listed in D.2							Facility Total (See instr.)
	1	2	3	4	5	6	7	
	upstream to	upstream to	upstream to	upstream to	upstream to	upstream to	upstream to	
a. Sanitary	2,019	26,187	64,878	549	4,798			0
c. Non-contact cooling water	4,520	9,378	174,987	0	412			0
d. Contact cooling water	0	0	0	0	0			0
e. Process (From C.8)								0
Food Preparation	0	0	9,762	0	0			0
Machine Shop	0	0	522	0	0			0
Parts Washing	0	0	0	0	0			0
Photographic Processing (4	0	546	1,642	0	0			0
Research	1,733	20,547	22,723	0	4,780			0
Education	3,383	6,156	10,471	0	479			0
Animal Care	0	5,156	260,904	0	5,547			0
								0
f. Plant & equipment washdown	468	2,179	1,996	485	7,462			0
g. Boiler blowdown	0	0	110,815	0	0			0
h. Regeneration/reject water	0	0	0	0	0			0
i. Other	246	0	32,761	2,478	794			0
Totals (Same as D.2):								0

2. If any of the above points discharge to a watercourse or to a separate storm sewer, complete the following:

NPDES Outfall Number							
NPDES Permit Number							

3. Do any of the above sampling points also convey stormwater from your premise ?

Yes	Yes	Yes	Yes	Yes		

4. Do you pretreat any of the wastes discharged through any of the above points ?

Yes	Yes	Yes	Yes	Yes		

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See Revised pg 4
Rec'd 7/17/07 JEB

MSD 044010

Company Name: Wash U. School of Medicine
Premise Address: 660 S. Euclid

SECTION D - SEWER CONNECTION INFORMATION

1. Attach a scale drawing of your premise, which shows (for permit renewals, highlight any changes since last application):
   a. All buildings, structures, alleys, streets and other pertinent features.
   b. All sewers and drains, including all connections, inlets, manholes, vents and other access or control structures. Identify each sewer as sanitary, storm or combined and indicate its size.
   c. A sampling point for each connection to the public sewer.
   d. A sampling point for each discharge from a federally regulated categorical process.
   e. A sampling point for each discharge to a separate storm sewer or watercourse.

2. List each sampling point identified in 1c, d and e above and each connection for which there is no sampling point. Assign a sequential reference number to each location, starting with No. 1. Attach additional sheets, if needed.

Reference Number	Sewer Size (inches)	Description of sewer sampling point or connection. (Vent, manhole, valve, other appurtenance. Indicate size & location)	Upstream to other point? Yes	No	List Ref. No.	Total avg flow per workday(GPD)
1	10"	SP001 - MH 30'N, 10'W of NE CRNR of BLDG 27	○	●		14,839
2	30"	SP003 - MH N of BLDG 14 in Drive (6' S of O2 Tanks)	○	●		64,103
3	16"	SP005 - MH 200' W if Taylor on S side of Scott Ave. in St.	○	●		341,328
4	6"	SP006 - 6" Clay Pipe 13'N, 9'E of SE CRNR of BLDG 80	○	●		1,034
5	10"	SP007 - MH E of BLDG 63, 11' N, 2' E of SE CRNR if BLDG	○	●		23,450
6			○	○		
7			○	○		

Grand Total Average Flow per Workday: 444,754

SECTION E - WASTEWATER INFORMATION

1. For each point listed in Section D.2 above, list the wastewater discharge corresponding to each water usage listed in Section C.6. Attach additional sheets, if needed.

Type of Wastewater	Discharge Quantity (GPD-workday) for each sampling point or connection listed in D.2							Facility Total (See instr.)
	1	2	3	4	5	6	7	
	upstream to __	upstream to __	upstream to __	upstream to __	upstream to __	upstream to __	upstream to __	
a. Sanitary	2,019	26,187	64,878	549	4,798			98,431
c. Non-contact cooling water	3,250	6,120	88,038	0	413			97,821
d. Contact cooling water	0	0	0	0	0			
e. Process (From C.8)								
Food Preparation	0	0	9,176	0	0			9,176
Machine Shop	0	0	522	0	0			522
Parts Washing	0	0	0	0	0			0
Photographic Processing (4:	671	546	840	0	0			2,057
Research	1,733	18,128	22,155	0	4,780			46,796
Education	3,180	5,787	9,843	0	450			19,260
Animal Care	0	5,156	71,251	0	5,547			81,954
Painting, Finishing or Paint :	0	0	202	0	0			202
f. Plant & equipment washdown	468	2,179	1,996	485	7,462			12,590
g. Boiler blowdown	0	0	39,666	0	0			39,666
h. Regeneration/reject water	3,518	0	32,761	0	0			36,279
i. Other								
Totals (Same as D.2):	14,839	64,103	341,328	1,034	23,450			444,754

2. If any of the above points discharge to a watercourse or to a separate storm sewer, complete the following:

NPDES Outfall Number							
NPDES Permit Number							

3. Do any of the above sampling points also convey stormwater from your premise ?

Yes	Yes	Yes	Yes	Yes		

4. Do you pretreat any of the wastes discharged through any of the above points ?

Yes	Yes	Yes	Yes	Yes		

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Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION E - WASTEWATER INFORMATION (Continued)

5. Describe the type of wastewater pretreatment you employ prior to each point for which you marked "Yes" in E.4

Ref. No.	Pretreatment System Description
	SP001, SP003, SP005, SP006, - Silver Recovery Units (Photo Processing Equipment)
	SP005 has a grease trap for the cafeteria (service performed on a quarterly basis)
	SP003, SP005, SP006, SP007 have Neutralization Tanks

6. Does your facility have a written:

a.	Spill control plan ?	◉ Yes	○ No	c.	Solvent management plan ?	◉ Yes	○ No
b.	Waste minimization plan ?	○ Yes	◉ No	d.	Slug discharge control plan ?	○ Yes	◉ No

7. If any wastewater analyses have been performed on the wastewater discharges from your facility attach copies of the most recent data. Be sure to specify the locations from which the samples were collected. Attach sketches, plans, drawings, etc. as necessary. Permit renewal applications, only, may skip this item.

8. Priority Pollutant Information: Check one of the four boxes by each listed chemical to indicate whether it is: "Suspected Absent", "Known Absent", "Suspected Present" or "Known Present" ON YOUR PREMISE. Any chemical which is used in your manufacturing or service activity or is generated as a product or as a by-product should be marked "Known Present." Some pollutants are known by other names. Refer to the instruction booklet for synonyms for those pollutants which have an asterisk (*):

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

Item No	PRIORITY POLLUTANT	SA	KA	SP	KP
1.	asbestos (fibrous)	○	○	○	◉
2.	cyanide (total)	○	○	○	◉
3.	antimony (total)	◉	○	○	○
4.	arsenic (total)	○	○	○	◉
5.	beryllium (total)	◉	○	○	○
6.	cadmium (total)	○	○	◉	○
7.	chromium (total)	○	○	○	◉
8.	copper (total)	○	○	○	◉
9.	lead (total)	○	○	○	◉
10.	mercury (total)	○	○	○	◉
11.	nickel (total)	○	○	○	◉
12.	selenium (total)	○	○	○	◉
13.	silver (total)	○	○	○	◉
14.	thallium (total)	○	○	○	◉
15.	zinc (total)	○	○	○	◉
16.	acenaphthene	○	○	◉	○
17.	acenaphthylene	○	○	◉	○
18.	acrolein	○	○	○	◉
19.	acrylonitrile	○	○	◉	○
20.	aldrin	◉	○	○	○
21.	anthracene	○	○	◉	○
22.	benzene	○	○	○	◉
23.	benzidine	○	○	○	◉
24.	benzo (a) anthracene *	◉	○	○	○
25.	benzo (a) pyrene	○	○	◉	○
26.	benzo (b) fluoranthene	◉	○	○	○
27.	benzo (g,h,i) perylene *	◉	○	○	○
28.	benzo (k) fluoranthene *	◉	○	○	○
29.	alpha-BHC	◉	○	○	○
30.	beta-BHC	◉	○	○	○
31.	delta-BHC	◉	○	○	○
32.	gamma-BHC *	◉	○	○	○
33.	bis (2-chloroethyl) ether *	○	○	○	◉
34.	bis (2-chloroethoxy) methane *	○	○	◉	○
35.	bis (2-chloroisopropyl) ether *	○	○	◉	○

Item No	PRIORITY POLLUTANT	SA	KA	SP	KP
36.	Reserved				
37.	bis (2-ethylhexyl) phthalate	◉	○	○	○
38.	bromodichloromethane *	○	○	◉	○
39.	bromoform *	◉	○	○	○
40.	bromomethane *	○	○	◉	○
41.	4-bromophenylphenyl ether	◉	○	○	○
42.	butylbenzyl phthalate	◉	○	○	○
43.	carbon tetrachloride *	○	○	○	◉
44.	chlordane	◉	○	○	○
45.	4-chloro-3-methylphenol *	○	○	◉	○
46.	chlorobenzene	○	○	○	◉
47.	chloroethane *	○	○	◉	○
48.	2-chloroethylvinyl ether	○	○	◉	○
49.	chloroform *	○	○	○	◉
50.	chloromethane *	○	○	◉	○
51.	2-chloronaphthalene	◉	○	○	○
52.	2-chlorophenol *	○	○	◉	○
53.	4-chlorophenylphenyl ether	◉	○	○	○
54.	chrysene *	◉	○	○	○
55.	4, 4'-DDD *	◉	○	○	○
56.	4, 4'-DDE *	◉	○	○	○
57.	4, 4'-DDT *	◉	○	○	○
58.	dibenzo (a,h) anthracene *	◉	○	○	○
59.	dibromochloromethane	○	○	◉	○
60.	1, 2-dichlorobenzene *	○	○	○	◉
61.	1, 3-dichlorobenzene *	○	○	○	◉
62.	1, 4-dichlorobenzene *	○	○	○	◉
63.	3, 3'-dichlorobenzidine	○	○	○	◉
64.	Reserved				
65.	1, 1-dichloroethane *	○	○	○	◉
66.	1, 2-dichloroethane *	○	○	○	◉
67.	1, 1-dichloroethene *	○	○	○	◉
68.	trans-1, 2-dichloroethene *	○	○	○	◉
69.	2, 4-dichlorophenol	○	○	○	◉
70.	1, 2-dichloropropane *	○	○	○	◉

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MSD 044012

Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION E - WASTEWATER INFORMATION (Continued)

Priority Pollutant Information (Continued)

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

Item No	PRIORITY POLLUTANT	SA	KA	SP	KP
71.	(cis and trans) 1, 3-dichloropropene *	○	○	○	●
72.	dieldrin	●	○	○	○
73.	diethylphthalate *	●	○	○	○
74.	2, 4-dimethylphenol *	○	○	●	○
75.	dimethyl phthalate	●	○	○	○
76.	di-n-butyl phthalate	●	○	○	○
77.	di-n-octyl phthalate *	●	○	○	○
78.	4, 6-dinitro-2-methylphenol *	●	○	○	○
79.	2, 4-dinitrophenol	○	○	●	○
80.	2, 4-dinitrotoluene	○	○	●	○
81.	2, 6-dinitrotoluene	○	○	●	○
82.	1, 2-diphenylhydrazine *	○	○	○	●
83.	endosulfan I *	●	○	○	○
84.	endosulfan II *	●	○	○	○
85.	endosulfan sulfate	●	○	○	○
86.	endrin	●	○	○	○
87.	endrin aldehyde	●	○	○	○
88.	ethylbenzene	○	○	●	○
89.	fluoranthene	●	○	○	○
90.	fluorene *	●	○	○	○
91.	heptachlor	●	○	○	○
92.	heptachlor epoxide	●	○	○	○
93.	hexachlorobenzene *	●	○	○	○
94.	hexachlorobutadiene	●	○	○	○
95.	hexachlorocyclopentadiene *	●	○	○	○
96.	hexachloroethane *	●	○	○	○
97.	indeno (1, 2, 3-cd) pyrene *	●	○	○	○
98.	isophorone *	●	○	○	○
99.	methylene chloride *	○	○	○	●

Item No	PRIORITY POLLUTANT	SA	KA	SP	KP
100.	naphthalene	○	○	●	○
101.	nitrobenzene	○	○	○	●
102.	2-nitrophenol	○	○	○	●
103.	4-nitrophenol *	○	○	○	●
104.	N-nitrosodimethylamine *	○	○	●	○
105.	N-nitrosodi-n-propylamine *	●	○	○	○
106.	N-nitrosodiphenylamine	●	○	○	○
107.	PCB-1016 *	●	○	○	○
108.	PCB-1221 *	●	○	○	○
109.	PCB-1232 *	●	○	○	○
110.	PCB-1242 *	●	○	○	○
111.	PCB-1248 *	●	○	○	○
112.	PCB-1254 *	●	○	○	○
113.	PCB-1260 *	●	○	○	○
114.	pentachlorophenol	●	○	○	○
115.	phenanthrene	●	○	○	○
116.	phenol	○	○	○	●
117.	pyrene	●	○	○	○
118.	2, 3, 7, 8-tetrachlorodibenzo-p-dioxin *	○	○	○	●
119.	1, 1, 2, 2-tetrachloroethane *	○	○	○	●
120.	tetrachloroethene *	○	○	○	●
121.	toluene *	○	○	○	●
122.	toxaphene	○	○	●	○
123.	1, 2, 4-trichlorobenzene	○	○	●	○
124.	1, 1, 1-trichloroethane *	○	○	●	○
125.	1, 1, 2-trichloroethane *	○	○	●	○
126.	trichloroethene *	○	○	○	●
127.	Reserved				
128.	2, 4, 6-trichlorophenol	○	○	●	○
129.	vinyl chloride *	●	○	○	○

9. For priority pollutants in E.8, which are indicated "Known Present" or "Suspected Present", list and provide the following information for each: (Attach additional sheets, if needed.)

Item No.	PRIORITY POLLUTANT	HOW USED (for KP) or WHY SUSPECTED (for SP)	ANNUAL USAGE for KP(lbs)	LOSS TO SEWER for KP(lbs)
121.	•toluene*	All Priority Pollutants Are Present in Small Amounts	<250	Trace
2.	•cyanide (total)	for Bio-medical Research Purposes	<5	Trace
4.	•arsenic (total)		<20	Trace
7.	•chromium (total)		<50	Trace
9.	•lead (total)		<200	Trace
10.	•mercury (total)		<50	Trace
13.	•silver (total)		<100	Trace
22.	•benzene		<10	Trace
43.	•carbon tetrachloride*		<10	Trace
49.	•chloroform*		<100	Trace
99.	•methylene chloride*		<500	Trace
100.	•naphthalene		<10	Trace
116.	•phenol		<250	Trace
1.	•asbestos (fibrous)		<1	Trace

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Company Name: WASH. U. School of MEDICINE
Premise Address: 660 S. Euclid

SECTION F - NON-SEWERED WASTES

1. **Do you generate any liquid wastes or sludges, as described in item 2 below, which are not disposed in the sewer system?**

(●) Yes ( ) No

If "Yes" complete items 2 and 3 below. Note: Be sure to include wastewaters listed in Section C.7.c.
If "No" skip remainder of this section.

2. **Information on non-sewered waste:**

Type of Waste	Estimated Quantity Disposed/yr	Units	Store On-Site	Dispose On-Site	Dispose Off-Site
☒ Acids and/or Alkalies	800	Gallons	☒	☐	☒
☒ Equipment Oils and/or Grease	1,250	Gallons	☒	☐	☒
☒ Infectious Waste	398,000	Pounds	☒	☐	☒
☐ Inks/ Dyes			☐	☐	☐
☒ Kitchen/Food Service Grease	1,280	Pounds	☒	☐	☒
☒ Organic Compounds	3,520	Gallons	☒	☐	☒
☒ Paints or Paint Sludges	4,280	Pounds	☒	☐	☒
☐ Pesticides			☐	☐	☐
☐ Pretreatment Sludges			☐	☐	☐
☒ Radioactive Waste	1,500	Pounds	☒	☐	☒
☒ Solvents/Thinners	500	Pounds	☒	☐	☒
☒ Other Laboratory Chemicals / Reagents	127,000	Pounds	☒	☐	☒
☐ Other			☐	☐	☐
☐ Other			☐	☐	☐

3. **List your USEPA and/or MDNR Hazardous Waste generator numbers:**

USEPA MOT3000010857 MDNR 001591

SECTION G - INDUSTRIAL WASTE SURCHARGE INFORMATION

1. Provide the following analytical information for each sampling point or each connection to the public sewer only if your water usage exceeds 80 Ccf per month (1,995 Gal per calendar day). Representative samples of the wastewater in each sewer must be collected and analyzed for the listed parameters. Report the daily average concentrations in mg/l for each point. Permit renewal applications, only, may skip Section G regardless of water usage volume.

Parameter	Sewer Reference Numbers (Refer to Section D.2) If more than 7, attach additional sheets						
	1	2	3	4	5	6	7
Date Sampled							
Sample Start Time (eg. HH:MM PM)							
Sample End Time (eg. HH:MM PM)							
Type of Sample							
Flow (GPD)							
Biochemical Oxygen Demand (5 day)							
Chemical Oxygen Demand							
Total Suspended Solids							
Collected By (Name of organization):							
Analyzed By (Name of organization):							

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MSD 044014

Company Name: Wash. U. School of Medicine
Premise Address: 660 S. Euclid

SECTION H - CERTIFICATION AND SIGNATURE

1. The following individual may be contacted regarding the information contained in this questionnaire:

Name of Contact Person: Michael J. Koch, CHMM

Title: Environmental Manager Phone Number 362-6735

2. "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."

Name of Signing Official: Michael J. Koch, CHMM

Title: Environmental Manager Phone Number 362-6735

Signature: [signature] Date: 6/27/2007

This certification, along with any other reporting documents, must be signed by an individual described as follows: a responsible corporate officer if the user is a corporation; a general partner if the user is a partnership; the proprietor if the user is a sole proprietorship; a duly authorized representative of the individual just described, if that individual submits a written authorization which specifies a person or position within the company, having responsibility for the overall operation of the facility from which the discharge originates, such as a plant manager, or overall responsibility for environmental matters at the company.

List attachments included with this questionnaire:

Water Usage (MSD IUQ) 6-2007.xls

1st QTR 2007 (MSD) test results

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MSD 044015

Washington Universtiy School of Medicine

Fiscal Year Ending:

							4,625,412
							25,743,092
							252,835,976
							1,282,001
							9,034,060
							132,417,362
Total Potable Water	**446,964,849**	**462,293,216**	**431,328,919**	**398,546,024**	**343,377,033**	**433,254,122**	**419,294,027**

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MSD 044017

Sample Point		Yearly Averages	Daily Averages	
001		4,625,412	12,672	
003		25,743,092	70,529	
005		252,835,976	692,701	
006		1,282,001	3,512	
007		9,034,060	24,751	804,166
Effluent Managed by Barnes (SP009, SP011)				
1		132,417,362	362,787	
2		629,288	1,724	
3		451,330	1,237	
4		1,402,480	3,842	
5		10,977,844	30,076	
6		65,153	179	
				399,845
Managed by WUSM	Totals:	293,520,541	804,166	
	Quarterly Average	3,216,663		

Entire Facility Results

Water uses within the Medical School	GPD (est)	Water Losses and wastewater discharges from Medical School	GPD (est)
Sanitary	98,431	Municipal Sewer	623,200
Irrigation and Lawn Watering	2,000	Watercourse, storm drain, surface	1,515
Non-Contact Cooling Water	189,364	Haulers	0
Contact Cooling Water	0	Evaporation	179,451
Process Water	354,687	Contained in product	0
Plant and Equipment washdown	12,590		
Boiler	110,815	Total	804,166
Regeneration / Rejected Water	0		
Other uses	36,279		
Total	804,166		

Activity	Process Water GPD
Research	49,783
Education	20,489
Animal Care	271,741
Food Preparation	9,762
Machine Shop	522
Parts Washing	0
Photographic Processing	2,188
Painting, Finishing, or Paint Stripping	202
Total	354,687

	Total (GPD)	SP001	SP003	SP005	SP006	SP007
Sanitary	98,431	2,019	26,187	64,878	549	4,798
Irrigation and Lawn Watering	2,000	303	247	1,038	0	412
Non-Contact Cooling Water	189,364	4,520	9,378	174,987	0	479
Contact Cooling Water	0	0	0	0	0	0
Process Water	354,687	5,116	32,538	306,226	0	10,806
Plant and Equipment washdown	12,590	468	2,179	1,996	485	7,462
Boiler	110,815	0	0	110,815	0	0
Regeneration / Rejected Water	0	0	0	0	0	0
Other uses	36,279	246	0	32,761	2,478	794

		SP001	SP003	SP005	SP006	SP007
Research	49,783	1,733	20,547	22,723	0	4,780
Education	20,489	3,383	6,156	10,471	0	479
Animal Care	271,741	0	5,289	260,904	0	5,547
Food Preparation	9,762	0	0	9,762	0	0
Machine Shop	522	0	0	522	0	0
Parts Washing	0	0	0	0	0	0
Photographic Processing	2,188	0	546	1,642	0	0
Painting, Finishing, or Paint Stripping	202	0	0	202	0	0

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Chemical, Metallurgical, Mechanical, Nondestructive, Environmental Testing, Analyses and Field Service.

APR 17 2007

April 4, 2007
Lab No. 07E-0414
Invoice No. 79007
P.O. No.29399V
Page 1 of 1

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: Michael Koch

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 03/27/07, 8:05 AM
WASTE WATER COMPOSITE, PT. 001, 03/27/07, 8:05 AM – 3:15 PM
WASTE WATER GRAB, PT. 003, 03/26/07, 9:25 AM
WASTE WATER COMPOSITE, PT. 003, 03/26-27/07, 9:30 AM – 9:30 AM
WASTE WATER GRAB, PT. 005, 03/27/07, 7:50 AM
WASTE WATER COMPOSITE, PT. 005, 03/27/07, 7:50 AM – 3:05 PM
WASTE WATER GRAB, PT. 006, 03/26/07, 9:50 AM
WASTE WATER COMPOSITE, PT. 006, 03/26-27/07, 10:00 AM –10:00 AM
WASTE WATER GRAB, PT. 007, 03/27/07, 8:00 AM
WASTE WATER COMPOSITE, PT. 007, 03/27/07, 8:00 AM – 3:10 PM

UNITS: mg/L except as otherwise noted

ANALYTE	001	003	005	006	007	MQL	METHOD NUMBER
Biological Oxygen Demand (C)	32	81	83	ND	32	10	405.1
Chemical Oxygen Demand (C)	82	198	196	20	66	10	410.4
Total Suspended Solids (C)	56	135	100	17	50	5	160.2
pH (Std. pH Units) (G)	7.70	7.94	7.77	8.91	7.99	-----	150.1
Oil & Grease (G)	6	7	6	11	ND	5	1664
Temperature, °C (G)	24	20	18	16	23	-----	170.1
Silver (C)	ND	ND	ND	ND	ND	0.05	200.7

MQL: Minimum Quantitative Limit
ND: None Detected Above MQL

G - Grab
C - Composite

Identification of tested specimens provided by the client.

SR/ tlv

Steve Root, Manager
Environmental Testing

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AN OFFICIAL COPY OF TEST REPORT WILL BE PROVIDED BY THIS LABORATORY ON REQUEST.
NOT OFFICIAL WITHOUT THE RAISED SEAL OF ST. LOUIS TESTING LABORATORIES, INC.
SEE REVERSE FOR CONDITIONS

FOR MSD USE ONLY	
Account Number: 51122162 - 00	Category: SIU CIU SUR HIFL NOTXWST TXWST NOPRFL MULTI
TA:	
TS:	FG (Reviewer) 8/19/02 (Date)

METROPOLITAN ST. LOUIS SEWER DISTRICT
OFFICE OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL USER QUESTIONNAIRE

Note to Signing Official: In accordance with Title 40 of the Code of Federal Regulations Part 403, Section 403.14, information and data provided in this questionnaire, which identifies the nature and frequency of discharge, shall be available to the public without restriction. Requests for confidential treatment of other information shall be governed by procedures specified in 40 CFR Part 2. Should a discharge permit be required for your facility, the information in this questionnaire will be used to develop the permit.

SECTION A - GENERAL INFORMATION

1. Company Name: Washington University School of Medicine
2. Mailing Address: 660 South Euclid, Box 8229
   St. Louis, Missouri Zip Code: 63110
3. Premise Address:
   Zip Code:
4. Person Authorized to Sign Reporting Documents:
   Name and Title: Michael T. Kershaw, Hazardous Materials Division Manager, Environmental Health & Safety Tel. No.: (314) 362-6816
5. Check One: ☒ Existing Discharge
   ☐ Proposed Discharge If proposed, indicate discharge start date:
6. Shift Information:
   a. Number of shifts per work day: 3 and work days per week: 7
   b. Average number of employees per shift: 1st 6650 2nd 240 3rd 255 Total: 7145
   c. Shift start times: 1st 8:00 a.m. 2nd 4:30 p.m. 3rd 11:30 p.m.

SECTION B - PRODUCT OR SERVICE INFORMATION

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1. Briefly describe the primary manufacturing or service activities at the premise address and list the applicable SIC number for each activity:

	PRIMARY ACTIVITY	SIC NUMBER
a.	Reasearch - Bio-medical	8733
b.	Education - Graduate Medical & Research Training	8221
c.	Animal Care - Research Animal Housing	0279
d.		

MSD 044019

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 5112216 2-00

SECTION B - PRODUCT OR SERVICE INFORMATION (Continued)

2. Are primary activities generally batch or continuous processes ? [X] batch [] continuous
3. Principal raw materials used: Laboratory Chemicals / Reagents
4. Principal products produced: None
5. Check all activities which are conducted at your premise in addition to the primary activities described in B.1 above. Indicate the SIC number, if known. Do not check activities which are already included in B.1.

ACTIVITY	SIC NO.	ACTIVITY	SIC NO.
[] Adhesive and Sealants Mfg.		[] Mineral Mining and Processing	
[] Aluminum Forming		[] Nonferrous Metals Forming	
[] Asbestos Mfg.		[] Nonferrous Metals Mfg.	
[] Battery Mfg.		[] Organic Chem., Plastics & Synthetic Fibers Mfg.	
[] Builder's Paper and Roofing Felt Mfg.		[] Paint Formulating	
[] Carbon Black Mfg.		[] Painting, Finishing or Paint Stripping	
[] Cement Mfg.		[X] Parts Washing	
[] Coil Coating		[] Paving and Roofing Materials	
[] Copper Forming		[] Pesticide Chem. Mfg., Formulating, Packaging	
[] Dairy Products Processing		[] Petroleum Refining	
[] Drum Reconditioning		[] Pharmaceutical Mfg.	
[] Electrical and Electronic Components		[] Phosphate Mfg.	
[] Electroplating		[X] Photographic Processing	
[] Explosive Mfg.		[] Plastic Molding and Forming	
[] Feedlots		[] Porcelain Enameling	
[] Ferroalloy Mfg.		[] Printing and Publishing	
[] Fertilizer Mfg.		[] Pulp, Paper and Paperboard Mfg.	
[X] Food Preparation		[] Q.C. Laboratory	
[] Fruit and Vegetable Processing		[] R & D Laboratory	
[] General Offices		[] Radioactive Materials Processing	
[] Glass Mfg.		[] Repair Shop, Garage	
[] Grain Milling		[] Rubber and Rubber Products Mfg.	
[] Gum and Wood Chemical Mfg.		[] Seafood Processing	
[] Hazardous Waste Treatment, Storage or Disposal		[] Soap and Detergent Mfg.	
[] Health Care or Hospital		[] Solvent Recycling	
[] Industrial Laundry		[] Steam Electric Power Generation	
[] Ink Formulating		[] Sugar Processing	
[] Inorganic Chemicals Mfg.		[] Textile Mills	
[] Iron and Steel Mfg.		[] Timber Products Mfg.	
[] Leather Tanning and Finishing		[] Transportation Equipment Cleaning	
[X] Machine Shop		[] Transportation Services	
[] Machinery Mfg. or Rebuilding		[] Used Oil Reclamation	
[] Meat Processing		[] Vehicle/Equipment Washing	
[] Metal Finishing		[] Warehousing	
[] Metal Molding and Casting		[] Waste Recycling	
		[] Others (Describe)	

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6. Are your activities subject to seasonal variation? [] Yes [X] No
If "Yes," explain and indicate the month(s) of peak activity:

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 51122162-00

SECTION C - WATER CONSUMPTION AND WASTEWATER DISCHARGES

1. Raw Water Source(s):
   - [X] City of St. Louis Water Div.
   - [] St. Louis County Water Co.
   - [] Other municipal source _____
   - [] Hauled by contractor
   - [] Surface water
   - [] Private well
   - [] Other (describe) _____

2. Water Bill Addressee: Washington University School of Medicine, 660 S. Euclid, St. Louis MO 63110
3. Water Service Account Numbers: 51122167-00, 51122162-00, 90006372-01
4. List past twelve months water usage from:

									[X] Water Bills	[] Other Sources
1st 3 mo period	05	Mo	2002	Yr	through	07	Mo	2002	Yr	87,876 Ccf	_____ Ccf
2nd 3 mo period	02	Mo	2002	Yr	through	04	Mo	2002	Yr	139,156 Ccf	_____ Ccf
3rd 3 mo period	11	Mo	2001	Yr	through	01	Mo	2002	Yr	120,553 Ccf	_____ Ccf
4th 3 mo period	08	Mo	2001	Yr	through	10	Mo	2001	Yr	101,404 Ccf	_____ Ccf

5. Describe any treatment or conditioning process performed on the raw water before use: _____

6. Identify all water uses within your facility:

Water Uses	Estimated Average Daily Use (Gallons per day)
a. Sanitary	143,850
b. Irrigation & lawn watering	2,000
c. Non-contact cooling water	212,350
d. Contact cooling water	NA
e. Process water	354,076
f. Plant & equipment washdown	5,000
g. Boiler	287,642
h. Other uses _____	44,594
i. Total of USES (6a through 6h):	1,049,512

7. Identify all water losses and wastewater discharges from your facility:

Water Losses & Discharges	Estimated Average Daily Loss/Discharge (Gallons per Day)
a. Municipal sewer	815,968
b. Watercourse, storm drain, ground	2,000
c. Haulers	0
d. Evaporation	231,544
e. Contained in product	0
f. Total of LOSSES & DISCHARGES: (7a through 7e must equal total at 6i)	1,049,512

8. For each activity you listed in Sections B.1 and B.5, list the average water usage and average wastewater discharge. Attach additional sheets, if needed.

Item No.	Activity	Type of Discharge: Cont	Batch	None	Avg. Water Use (GPD)	Avg. Discharge to Mun Sewer (GPD)	Date when activity first commenced at this facility
	Research labs	X	X	[]	62,883	62,883	
	Food Prep	[]	X	[]	3,675	3,675	
	Animal Care	X	[]	[]	289,824	289,824	
		[]	[]	[]			
		[]	[]	[]			
		[]	[]	[]			

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MSD 044021

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 51122162-00

SECTION D - SEWER CONNECTION INFORMATION

1. Attach a scale drawing of your premise, which shows:
   a. All buildings, structures, alleys, streets and other pertinent features.
   b. All sewers and drains, including all connections, inlets, manholes, vents and other access or control structures. Identify each sewer as sanitary, storm or combined and indicate its size.
   c. A sampling point for each connection to the public sewer.
   d. A sampling point for each discharge from a federally regulated categorical process.
   e. A sampling point for each discharge to a separate storm sewer or watercourse.

2. List each sampling point identified in 1.c, d and e above and each connection for which there is no sampling point. Assign a sequential reference number to each location, starting with No. 1. Attach additional sheets, if needed.

Reference Number	Sewer Size (inches)	Description of sewer sampling point or connection (Vent, manhole, valve, tank or other appurtenance. Indicate size and location)	Total Daily Average Flow (GPD)
1	10"	MH in alley 200' W of Taylor (Between Clayton & McKinley	72,605
2	21"	MH 300' W of Taylor on Scott Avenue	695,200
3	9"	MH in Courtyard N of Blg 14 (West Blg.)	29,750
4	8"	Vent From Blg. 80 East of Building 10"	19,550
5			

SECTION E - WASTEWATER INFORMATION

1. For each point listed in D.2 above, list the wastewater discharge corresponding to each water usage listed in Section C.6. Attach additional sheets, if needed.

Type of Wastewater	Discharge Quantity (GPD) for each sampling point or connection listed in D.2					Facility Total (See instr.)
	1 (001)	2 (005)	3 (003)	4 (006)	5	
a. Sanitary	13,650	120,266	23,569	500		157,985
b. Irrigation & lawn watering						
c. Non-contact cooling water	20,150	181,350				201,500
d. Contact cooling water						
e. Process (From C.8)						
Food Prep		4,778				4,778
Research lab's	6,305	53,365	5,681			65,351
Animal Care	25,805	229,210				255,015
f. Plant & equipment washdown	650	4,938	500	19,050		25,138
g. Boiler blowdown		65,023				65,023
h. Other (Soft Resin)	6,045	36,270				42,315
Regeneration waste (C.5)						
Totals (Same as D.2):	72,605	695,200	29,750	19,550		817,105

2. If any of the above points discharge to a watercourse or to a separate storm sewer, complete the following:

NPDES Outfall Number					
NPDES Permit Number					

3. Do any of the above sampling points also convey stormwater from your premise ?
   [X] Yes [ ] No [X] Yes [ ] No [X] Yes [ ] No [X] Yes [ ] No [X] Yes [ ] No

4. Do you pretreat any of the wastes discharged through any of the above points ?
   [X] Yes [ ] No [X] Yes [ ] No [X] Yes [ ] No [X] Yes [ ] No [X] Yes [ ] No

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MSD 044022

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 5112216 2-00

SECTION E - WASTEWATER INFORMATION (Continued)

5. Describe the type of wastewater pretreatment you employ prior to each point for which you marked "Yes" in E.4:

Point No.	Pretreatment System Description
002	Grease Traps
001,002	Neutralization Tanks
001,002	Silver (photo-fixer) Recovery Tanks

6. Does your facility have:
   a. A spill control plan ? [X] Yes [ ] No
   b. A waste minimization plan ? [X] Yes [ ] No
   c. A solvent management plan ? [X] Yes [ ] No
   d. A slug discharge control plan ? [ ] Yes [X] No

7. If any wastewater analyses have been performed on the wastewater discharges from your facility attach copies of the most recent data. Be sure to specify the locations from which the samples were collected. Attach sketches, plans, drawings, etc. as necessary.

8. Priority Pollutant Information: Check one of the four boxes by each listed chemical to indicate whether it is: "Suspected Absent," "Known Absent," "Suspected Present" or "Known Present" ON YOUR PREMISE. Any chemical which is used in your manufacturing or service activity or is generated as a product or as a by-product should be marked "Known Present." Some pollutants are known by other names. Refer to the instruction booklet for those pollutants which have an asterisk (*).

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

Item No.	PRIORITY POLLUTANT	SA	KA	SP	KP
1.	asbestos (fibrous)	[ ]	[ ]	[ ]	[X]
2.	cyanide (total)	[ ]	[ ]	[ ]	[X]
3.	antimony (total)	[ ]	[X]	[ ]	[ ]
4.	arsenic (total)	[ ]	[ ]	[ ]	[X]
5.	beryllium (total)	[ ]	[X]	[ ]	[ ]
6.	cadmium (total)	[ ]	[X]	[ ]	[ ]
7.	chromium (total)	[ ]	[ ]	[ ]	[X]
8.	copper (total)	[ ]	[X]	[ ]	[ ]
9.	lead (total)	[ ]	[X]	[ ]	[ ]
10.	mercury (total)	[ ]	[ ]	[ ]	[X]
11.	nickel (total)	[ ]	[X]	[ ]	[ ]
12.	selenium (total)	[ ]	[X]	[ ]	[ ]
13.	silver (total)	[ ]	[ ]	[ ]	[X]
14.	thallium (total)	[ ]	[X]	[ ]	[ ]
15.	zinc (total)	[ ]	[X]	[ ]	[ ]
16.	acenaphthene	[ ]	[X]	[ ]	[ ]
17.	acenaphthylene	[ ]	[X]	[ ]	[ ]
18.	acrolein	[X]	[ ]	[ ]	[ ]
19.	acrylonitrile	[ ]	[X]	[ ]	[ ]
20.	aldrin	[ ]	[X]	[ ]	[ ]
21.	anthracene	[ ]	[X]	[ ]	[ ]
22.	benzene	[ ]	[ ]	[ ]	[X]
23.	benzidine	[X]	[ ]	[ ]	[ ]
24.	benzo (a) anthracene *	[ ]	[X]	[ ]	[ ]
25.	benzo (a) pyrene	[ ]	[X]	[ ]	[ ]
26.	benzo (b) fluoranthene	[ ]	[X]	[ ]	[ ]
27.	benzo (g,h,i) perylene *	[ ]	[X]	[ ]	[ ]
28.	benzo (k) fluoranthene *	[ ]	[X]	[ ]	[ ]
29.	alpha-BHC	[ ]	[X]	[ ]	[ ]
30.	beta-BHC	[ ]	[X]	[ ]	[ ]
31.	delta-BHC	[ ]	[X]	[ ]	[ ]
32.	gamma-BHC *	[ ]	[X]	[ ]	[ ]
33.	bis (2-chloroethyl) ether *	[ ]	[X]	[ ]	[ ]
34.	bis (2-chloroethoxy) methane *	[ ]	[X]	[ ]	[ ]
35.	bis (2-chloroisopropyl) ether *	[ ]	[X]	[ ]	[ ]
36.	Reserved				
37.	bis (2-ethylhexyl) phthalate	[ ]	[X]	[ ]	[ ]
38.	bromodichloromethane *	[ ]	[X]	[ ]	[ ]
39.	bromoform *	[ ]	[X]	[ ]	[ ]
40.	bromomethane *	[ ]	[X]	[ ]	[ ]
41.	4-bromophenylphenyl ether	[ ]	[X]	[ ]	[ ]
42.	butylbenzyl phthalate	[ ]	[X]	[ ]	[ ]
43.	carbon tetrachloride *	[ ]	[ ]	[ ]	[X]
44.	chlordane	[ ]	[X]	[ ]	[ ]
45.	4-chloro-3-methylphenol *	[ ]	[X]	[ ]	[ ]
46.	chlorobenzene	[ ]	[X]	[ ]	[ ]
47.	chloroethane *	[ ]	[X]	[ ]	[ ]
48.	2-chloroethylvinyl ether	[ ]	[X]	[ ]	[ ]
49.	chloroform *	[ ]	[ ]	[ ]	[X]
50.	chloromethane *	[ ]	[X]	[ ]	[ ]
51.	2-chloronaphthalene	[ ]	[X]	[ ]	[ ]
52.	2-chlorophenol *	[ ]	[X]	[ ]	[ ]
53.	4-chlorophenylphenyl ether	[ ]	[X]	[ ]	[ ]
54.	chrysene *	[ ]	[X]	[ ]	[ ]
55.	4, 4'-DDD *	[ ]	[X]	[ ]	[ ]
56.	4, 4'-DDE *	[ ]	[X]	[ ]	[ ]
57.	4, 4'-DDT *	[ ]	[X]	[ ]	[ ]
58.	dibenzo (a,h) anthracene *	[ ]	[X]	[ ]	[ ]
59.	dibromochloromethane	[ ]	[X]	[ ]	[ ]
60.	1, 2-dichlorobenzene *	[ ]	[X]	[ ]	[ ]
61.	1, 3-dichlorobenzene *	[ ]	[X]	[ ]	[ ]
62.	1, 4-dichlorobenzene *	[ ]	[X]	[ ]	[ ]
63.	3, 3'-dichlorobenzidine	[ ]	[X]	[ ]	[ ]
64.	Reserved				
65.	1, 1-dichloroethane *	[ ]	[X]	[ ]	[ ]
66.	1, 2-dichloroethane *	[ ]	[X]	[ ]	[ ]
67.	1, 1-dichloroethene *	[ ]	[X]	[ ]	[ ]
68.	trans-1, 2-dichloroethene *	[ ]	[X]	[ ]	[ ]
69.	2, 4-dichlorophenol	[ ]	[X]	[ ]	[ ]
70.	1, 2-dichloropropane *	[ ]	[X]	[ ]	[ ]

Continued on next page

RECEIVED AUG 19 2002 WASTEWATER COMPLIANCE

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 51122162-00

SECTION E - WASTEWATER INFORMATION (Continued)

Priority Pollutant Information (Continued)

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

Item No.	PRIORITY POLLUTANT	SA	KA	SP	KP
71.	(cis & trans) 1, 3-dichloropropene *	[]	X	[]	[]
72.	dieldrin	[]	X	[]	[]
73.	diethylphthalate *	[]	X	[]	[]
74.	2, 4-dimethylphenol *	[]	X	[]	[]
75.	dimethyl phthalate	[]	X	[]	[]
76.	di-n-butyl phthalate	[]	X	[]	[]
77.	di-n-octyl phthalate *	[]	X	[]	[]
78.	4, 6-dinitro-2-methylphenol *	[]	X	[]	[]
79.	2, 4-dinitrophenol	[]	[]	X	X
80.	2, 4-dinitrotoluene	[]	[]	X	X
81.	2, 6-dinitrotoluene	[]	[]	X	[]
82.	1, 2-diphenylhydrazine *	[]	X	[]	[]
83.	endosulfan I *	[]	X	[]	[]
84.	endosulfan II *	[]	X	[]	[]
85.	endosulfan sulfate	[]	X	[]	[]
86.	endrin	[]	X	[]	[]
87.	endrin aldehyde	[]	X	[]	[]
88.	ethylbenzene	[]	X	[]	[]
89.	fluoranthene	[]	X	[]	[]
90.	fluorene *	[]	X	[]	[]
91.	heptachlor	[]	X	[]	[]
92.	heptachlor epoxide	[]	X	[]	[]
93.	hexachlorobenzene *	[]	X	[]	[]
94.	hexachlorobutadiene	[]	X	[]	[]
95.	hexachlorocyclopentadiene *	[]	X	[]	[]
96.	hexachloroethane *	[]	X	[]	[]
97.	indeno (1, 2, 3-cd) pyrene *	[]	X	[]	[]
98.	isophorone *	[]	X	[]	[]
99.	methylene chloride *	[]	[]	[]	X
100.	naphthalene	[]	[]	[]	X
101.	nitrobenzene	[]	X	[]	[]
102.	2-nitrophenol	[]	X	[]	[]
103.	4-nitrophenol *	[]	X	[]	[]
104.	N-nitrosodimethylamine *	[]	X	[]	[]
105.	N-nitrosodi-n-propylamine *	[]	X	[]	[]
106.	N-nitrosodiphenylamine	[]	X	[]	[]
107.	PCB-1016 *	[]	X	[]	[]
108.	PCB-1221 *	[]	X	[]	[]
109.	PCB-1232 *	[]	X	[]	[]
110.	PCB-1242 *	[]	X	[]	[]
111.	PCB-1248 *	[]	X	[]	[]
112.	PCB-1254 *	[]	X	[]	[]
113.	PCB-1260 *	[]	X	[]	[]
114.	pentachlorophenol	[]	X	[]	[]
115.	phenanthrene	[]	X	[]	[]
116.	phenol	[]	[]	[]	X
117.	pyrene	[]	X	[]	[]
118.	2, 3, 7, 8-tetrachlorodibenzo-p-dioxin *	[]	X	[]	[]
119.	1, 1, 2, 2-tetrachloroethane *	[]	X	[]	[]
120.	tetrachloroethene *	[]	X	[]	[]
121.	toluene *	[]	[]	[]	X
122.	toxaphene	[]	X	[]	[]
123.	1, 2, 4-trichlorobenzene	[]	X	[]	[]
124.	1, 1, 1-trichloroethane *	[]	X	[]	[]
125.	1, 1, 2-trichloroethane *	[]	X	[]	[]
126.	trichloroethene *	[]	X	[]	[]
127.	Reserved				
128.	2, 4, 6-trichlorophenol	[]	X	[]	[]
129.	vinyl chloride *	[]	X	[]	[]

9. For priority pollutants in E.8, which are indicated "Known Present," list and provide the following information for each: (Attach additional sheets, if needed.)

ITEM No.	PRIORITY POLLUTANT	HOW USED	ANNUAL USAGE (lbs)	LOSS TO SEWER (lbs)
1	Asbestos	Thermal System Insulation	0	Trace
2	Cyanide	Bio-medical Research	<5	Trace
4	Arsenic	Bio-medical Research	<20	Trace
7	Chromium	Bio-medical Research (Glass-cleaning)	<50	Trace
10	Mercury	Thermo/pressure meters	<50	Trace
13	Silver	Photography/X-rays	<100	Trace
22	Benzene	Bio-medical Research	<10	Trace
43	Carbon Tetrachloride	Bio-medical Research	<10	Trace
49	Chloroform	Bio-medical Research	<100	Trace
99	Methylene Chloride	Bio-medical Research	<500	Trace
100	Naphthalene	Bio-medical Research	<10	Trace
116	Phenol	Bio-medical Research	<250	Trace
121	Toluene	Bio-medical Research	<200	Trace

RECEIVED AUG 19 2002 OFFICE OF STATE TOTAL COMPLIANCE

MSD 044024

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 51122162-00

SECTION F - NON-SEWERED WASTES

1. Do you generate any liquid wastes or sludges which are not disposed in the sewer system? [] Yes [] No
If "Yes" complete items 2 and 3 below. Note: Be sure to include wastewaters listed in Section C.7.c.
If "No" skip remainder of this section.

2. Information on non-sewered waste:

Type of Waste	Estimated Quantity Disposed/yr	Units	Store On-site	Dispose On-site	Dispose Off-site
[X] Acids and/or Alkalies	800	Gallons	[X]	[]	[X]
[X] Equipment Oils and/or Grease	1250	Gallons	[X]	[]	[X]
[X] Infectious Waste	165,000	Pounds	[X]	[]	[X]
[] Inks/ Dyes			[]	[]	[]
[] Kitchen/Food Service Grease			[]	[]	[]
[X] Organic Compounds	30,000		[X]	[]	[X]
[] Paints or Paint Sludges			[]	[]	[]
[] Pesticides			[]	[]	[]
[] Pretreatment Sludges			[]	[]	[]
[X] Radioactive Waste	1500	Pounds	[X]	[]	[X]
[X] Solvents/Thinners	500	Pounds	[X]	[]	[X]
[X] Other Non-infectious animal carcasses	110,000	Pounds	[X]	[]	[X]
			[]	[]	[]
			[]	[]	[]

3. List your USEPA and/or MDNR Hazardous Waste generator numbers:
USEPA MOT 300010857 MDNR MO 01591

SECTION G - INDUSTRIAL WASTE SURCHARGE INFORMATION

1. Provide the following analytical information for each sampling point or each connection to the public sewer only if your water usage exceeds 80 Ccf per month. Representative samples of the wastewater in each sewer must be collected and analyzed for the listed parameters. Report the daily average concentrations in mg/l for each point.

Parameter	Sewer Reference Numbers (Refer to Section D.2) If more than 5, attach additional sheets				
	1	2	3	4	5
Total Solids					
Total Suspended Solids					
Biochemical Oxygen Demand (5 day)					
Chemical Oxygen Demand					
Flow (GPD)					
Date Sampled					
Time Sampled					
Type of Sample					
Collected By (Name of organization):					
Analyzed By (Name of organization):					

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MSD 044025

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 5112212 62-00

SECTION H - CERTIFICATION AND SIGNATURE

1. The following individual may be contacted regarding the information contained in this questionnaire:

   Name and Title of Contact person: Mike Kershaw, Hazardous Materials Division Manager

   Tel. No.: (314) 362-6735

2. "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."

   Name and Title of Signing Official: Mike Kershaw, Hazardous Materials Division Manager

   Tel. No.: (314) 362-6735

   Signature: Mike Kershaw Date: 8/14/02

List attachments included with this questionnaire:

AUG 19 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

MSD 044026

Metropolitan
St. Louis Sewer
District

FOR MSD USE ONLY		
ACCOUNT NUMBER: 51122162-00	CATEGORY: 1 2 3 (4) 5 6 9	
TA: BISSELL TS: OM	Reviewer's Initials	8/17/98 Date

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL USER QUESTIONNAIRE

Note to Signing Official: In accordance with Title 40 of the Code of Federal Regulations Part 403 Section 403.14, information and data provided in this questionnaire which identifies the nature and frequency of discharge shall be available to the public without restriction. Requests for confidential treatment of other information shall be governed by procedures specified in 40 CFR Part 2. Should a discharge permit be required for your facility, the information in this questionnaire will be used to issue the permit.

SECTION A - GENERAL INFORMATION

1. Company Name: Washington University School of Medicine
2. Mailing Address: 660 S. Euclid Campus Box 8229
   St. Louis, MO 63110 Zip Code
3. Premise Address: Same
   Zip Code
4. Person Authorized to Sign Reporting Documents:
   Name and Title: Mike Kershaw, Hazardous Materials Division Manager
   Tel No. (314) 362-6735
5. Check one: [X] Existing Discharge
   [] Proposed Discharge If proposed, indicate discharge start date:
6. Shift Information:
   a. Number of shifts per work day: 3 and work days per week: 7
   b. Average number of employees per shift: 1st 5530 2nd 170 3rd 50 Total: 5750
   c. Shift start times: 1st 8:00 a.m. 2nd 4:30 p.m. 3rd 11:30 p.m.

SECTION B - PRODUCT OR SERVICE INFORMATION

1. Briefly describe the primary manufacturing or service activities at the premise address and list the applicable SIC number for each activity:

	PRIMARY ACTIVITIES	SIC NUMBER
a.	Research Labs	8733
b.	Medical Training Classrooms	8221
c.	Research Animal Care	0279
d.		

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MSD 044027

Company Name: _____
Premise Address: _____
Account Number: 5112 2162-00

SECTION B - PRODUCT OR SERVICE INFORMATION (Cont'd)

2. Are primary activities generally batch or continuous processes? [] batch [X] continuous
3. Principal raw materials used: Laboratory Chemicals/Reagents
4. Principal products produced: None
5. Check all activities which are conducted at your premise in addition to the primary activities described in B.1 above. Indicate the SIC number, if known. Do not check activities which are already included in B.1.

	SIC NO.		SIC NO.
[] Adhesive & Sealants Mfg.		[] Mineral Mining & Processing	
[] Aluminum Forming		[] Nonferrous Metals Forming	
[] Asbestos Mfg.		[] Nonferrous Metals Mfg	
[] Battery Mfg.		[] Organic Chem., Plastics & Synthetic Fibers Mfg	
[] Builder's Paper and Roofing Felt Mfg.		[] Paint Formulating	
[] Carbon Black Mfg.		[] Painting, Finishing or Paint Stripping	
[] Cement Mfg.		[] Parts Washing	
[] Coil Coating		[] Paving and Roofing Materials	
[] Copper Forming		[] Pesticide Chem. Mfg., Formulating, Packaging	
[] Dairy Products Processing		[] Petroleum Refining	
[] Drum Reconditioning		[] Pharmaceutical Mfg	
[] Electrical and Electronic Components		[] Phosphate Mfg	
[] Electroplating		[] Photographic Processing	
[] Explosive Mfg.		[] Plastic Molding and Forming	
[] Feedlots		[] Porcelain Enameling	
[] Ferroalloy Mfg.		[] Printing & Publishing	
[] Fertilizer Mfg.		[] Pulp, Paper & Paperboard Mfg	
[X] Food Preparation		[] Q. C. Laboratory	
[] Fruits and Vegetable Processing		[] R & D Laboratory	
[] General Offices		[] Radioactive Materials Processing	
[] Glass Mfg.		[] Repair Shop, Garage	
[] Grain Milling		[] Rubber & Rubber Prod. Mfg.	
[] Gum & Wood Chemical Mfg.		[] Seafood Processing	
[] Hazardous Waste Treatment, Storage or Disposal		[] Soap and Detergent Mfg.	
[] Health Care & Hospital		[] Solvent Recycling	
[] Industrial Laundry		[] Steam Electric Power Generation	
[] Ink Formulating		[] Sugar Processing	
[] Inorganic Chemicals Mfg.		[] Textile Mills	
[] Iron and Steel Mfg.		[] Timber Products Mfg.	
[] Leather Tanning and Finishing		[] Transportation Equipment Cleaning	
[] Machine Shop		[] Transportation Services	
[] Machinery Mfg. or Rebuilding		[] Used Oil Reclamation	
[] Meat Processing		[] Vehicle/equipment Washing	
[] Metal Finishing		[] Warehousing	
[] Metal Molding and Casting		[] Waste Recycling	
		[] Others _____	

6. Are your processes subject to seasonal variation? [] Yes [X] No
If "Yes," explain and indicate the month(s) of peak activity. _____

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Company Name: _____
Premise Address: _____
Account Number: 5112 2162-00

SECTION C - WATER CONSUMPTION AND WASTEWATER DISCHARGES

1. Raw Water Source(s): [X] City of St. Louis Water Div. [] St. Louis Co. Water Co. [] Other Municipal Source _____ [] Hauled by Contractor [] Surface water [] Private Well [] Other (describe) _____

2. Water Bill Addressee: Washington University School of Medicine, 660 S. Euclid, St. Louis, MO 63110

3. Water Service Account Numbers: 51122167-00, 51122162-00, 90006372-01

4. List past twelve months water usage from: [X] Water Bills [] Other Sources

a. 1st quarter	____19__	through	____19__	____Ccf	____Ccf
b. 2nd quarter	____19__	through	____19__	____Ccf	____Ccf
c. 3rd quarter	____19__	through	____19__	____Ccf	____Ccf
d. 4th quarter	____19__	through	____19__	____Ccf	____Ccf

SEE ATTACHMENT FOR APPROX. QUANTITIES

5. Describe any treatment or conditioning process performed on the raw water before use: WATER SOFTENED

6. Identify all water uses within your facility:

Water Uses	Estimated average daily use (Gallons per Day)
a. Sanitary	105,000
b. Irrigation & lawn watering	2,000
c. Non-contact cooling water	155,000
d. Contact cooling water	NA
e. Process water	258,450
f. Plant & equipment washdown	5000
g. Boiler	210,000
h. Other uses SOFT REGEN	32,550
i. Total of USES (6a through 6h):	~~79~~ 768,000

7. Identify all water losses and wasterwater discharges from your facility:

Water Losses & Discharges	Estimated average daily loss/discharge (Gallons per Day)
a. Municipal sewer	~~611,000~~ 624305
b. Watercourse, storm drain, ground	2,000
c. Haulers	0
d. Evaporation	~~155,000~~ 141695
e. Contained in product	0
f. Total of LOSSES & DISCHARGES: (7a through 7e must equal total at 6i)	768,000

8. For each activity you listed in Sections B.1 and B.5, list the average water usage and average wastewater discharge. Attach additional sheets if needed.

Item No.	Activity	Type of Discharge Cont.	Batch	None	Avg Water Use (GPD)	Avg Discharge to Mun sewer (GPD)	Date When Activity First Commenced At This Facility
B.1.a	Research Labs	X	X	[]	45,900	45,900	
	Food Prep	[]	X	[]	3675	3675	
	Animal Care	X	[]	[]	211,550	211,550	
	(Bldg. 80) Equip. Clean-up	X	[]	[]	9,610	9,610	
		[]	[]	[]			
		[]	[]	[]			

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Company Name: [redacted]
Premise Address:
Account Number: 5112 2162-00

SECTION D - SEWER CONNECTION INFORMATION

1. Attach a scale drawing of your premise which shows:
   a. All buildings, structures, alleys, streets and other pertinent features.
   b. All sewers and drains, including all connections, inlets, manholes, vents and other access or control structures. Identify each sewer as sanitary, storm or combined and indicate its size.
   c. A sampling point for each connection to the public sewer.
   d. A sampling point for each discharge from a federally regulated categorical process.
   e. A sampling point for each discharge to a separate storm sewer or water course.

2. List each sampling point identified in 1.c, d and e above and each connection for which there is no sampling point. Assign a sequential reference number to each point, starting with No. 1. Attach additional sheets if needed.

Reference Number	Sewer Size (inches)	Description of sewer sampling point or connection (Vent, manhole, valve, tank or other appurtenance. Indicate size and location)	Total Daily Average Flow (GPD)
1	10"	MH in alley 200' W of Taylor (Between Clayton & McKinley)	~~61,100~~ 55850
2	21"	MH 300" W of Taylor on Scott Ave.	~~549,900~~ 555150
3	Unk	MH in Courtyard N of Blg. 14 (The West Blg.)	3445
4	8"	LINE FROM Bldg 80 E to MH IN STREET (UNNAMED)	9860
5			

SECTION E - WASTEWATER INFORMATION

1. For each point listed in D.2 above, list the wastewater discharge corresponding to each water usage listed in Section C.6. Attach additional sheets if needed.

Type Wastewater	Discharge Quantity (GPD) for each sampling point or connection listed in D.2					Facility Total.
	1	2	3	4	5	(See Instructions)
a. Sanitary	10,500	94,500	2,745	250		107995
b. Irrigation & Lawn Watering	~~200~~	~~8,000~~				
c. Non-Contact Cooling Water	15,500	139,500				155000
d. Contact Cooling Water	NA	NA				
e. Process (From C.8)						
Food Prep.	~~0~~	3675				3675
Res. Lab's	4,850	41,050	525			46425
Animal Care	19,850	191,700				211550
Photo WASTE				5		
f. Plant & Equipment Washdown	500	4500	175	960		14785
g. Boiler Blowdown	~~0~~	~~570,000~~ 52325				~~210000~~ 52325
h. Other (Soft REGEN)	4650	27,900				32550
Regeneration Waste (C.5)						
Totals (Same as D.2)	~~61,100~~ 55850	~~549,900~~ 555150	3445	9860		624305

2. If any of the above points discharge to a watercourse or a separate storm sewer, complete the following:

NPDES Outfall Number					
NPDES Permit Number					

3. Do any of the above sampling points also convey stormwater from your premise ?

[X] Yes [] No	[X] Yes [] No	[] Yes [] No	[] Yes [] No	[] Yes [] No

4. Do you pretreat any of the wastes discharged through any of the above points?

[X] Yes [] No	[X] Yes [] No	[] Yes [] No	[] Yes [] No	[] Yes [] No

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Company Name: _____
Premise Address: _____
Account Number: 5112 2162-00

SECTION E - WASTEWATER INFORMATION (Cont'd)

5. Describe the type of wastewater pretreatment you employ prior to each point for which you marked "Yes" in E.4:

Point No.	Pretreatment System Description
002	Grease Traps
001, 002	Neutralization Tanks
001, 002	Silver (Photo-fix) Recovery Tanks

6. Does your facility have:
   a. A spill control plan? [X] Yes [] No
   b. A waste minimization plan? [X] Yes [] No
   c. A solvent management plan? [X] Yes [] No
   d. A slug discharge control plan? [] Yes [X] No

7. If any wastewater analyses have been performed on the wastewater discharges from your facility attach copies of the most recent data. Be sure to specify the locations from which the samples were collected. Attach sketches, plans, drawings, etc. as necessary.

8. Priority Pollutant Information: Check one of the four boxes by each listed chemical to indicate whether it is: "Suspected Absent", "Known Absent", "Suspected Present", or "Known Present" ON YOUR PREMISE. Any chemical which is used in your manufacturing or service activity or is generated as a product or as a by-product should be marked "Known Present". Some pollutants are known by other names. Refer to the instruction booklet for those pollutants which have an asterisk (*).

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

ITEM NO.	PRIORITY POLLUTANT	SA	KA	SP	KP
1.	asbestos (fibrous)				X
2.	cyanide (total)				X
3.	antimony (total)		X		
4.	arsenic (total)				X
5.	beryllium (total)		X		
6.	cadmium (total)		X		
7.	chromium (total)				X
8.	copper (total)		X		
9.	lead (total)		X		
10.	mercury (total)				X
11.	nickel (total)		X		
12.	selenium (total)		X		
13.	silver (total)				X
14.	thallium (total)		X		
15.	zinc (total)		X		
16.	acenaphthene		X		
17.	acenaphthylene		X		
18.	acrolein				X
19.	acrylonitrile		X		
20.	aldrin		X		
21.	anthracene		X		
22.	benzene				X
23.	benzidine				X
24.	benzo (a) anthracene *		X		
25.	benzo (a) pyrene		X		
26.	benzo (b) fluoranthene		X		
27.	benzo (g,h,i) perylene *		X		
28.	benzo (k) fluoranthene *		X		
29.	alpha-BHC		X		
30.	beta-BHC		X		
31.	delta-BHC		X		
32.	gamma-BHC *		X		
33.	bis (2-chloroethyl) ether *		X		
34.	bis (2-chloroethoxy) methane *		X		
35.	bis (2-chloroisopropyl) ether *		X		
36.	Reserved				
37.	bis (2-ethylhexyl) phthalate		X		
38.	bromodichloromethane *		X		
39.	bromoform *		X		
40.	bromomethane *		X		
41.	4-bromophenylphenyl ether		X		
42.	butylbenzyl phthalate		X		
43.	carbon tetrachloride *				X
44.	chlordane		X		
45.	4-chloro-3-methylphenol *		X		
46.	chlorobenzene		X		
47.	chlorethane *		X		
48.	2-chloroethylvinyl ether		X		
49.	chloroform *				X
50.	chloromethane *		X		
51.	2-chloronaphthalene		X		
52.	2-chlorophenol *		X		
53.	4-chlorophenylphenyl ether		X		
54.	chrysene *		X		
55.	4,4'-DDD *		X		
56.	4,4'-DDE *		X		
57.	4,4'-DDT *		X		
58.	dibenzo (a,h) anthracene *		X		
59.	dibromochloromethane *		X		
60.	1,2-dichlorobenzene *		X		
61.	1,3-dichlorobenzene *		X		
62.	1,4-dichlorobenzene *		X		
63.	3,3'-dichlorobenzidine		X		
64.	Reserved				
65.	1,1-dichloroethane *		X		
66.	1,2-dichloroethane *		X		
67.	1,1-dichloroethene *		X		
68.	trans-1,2-dichloroethene *		X		
69.	2,4-dichlorophenol		X		
70.	1,2-dichloropropane *		X		
71.	(cis & trans) 1,3-dichloropropene		X		
72.	dieldrin		X		
73.	diethylphthalate *		X		
74.	2,4-dimethylphenol *		X		
75.	dimethyl phthalate		X		
76.	di-n-butyl phthalate		X		

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Continued on Page 6

Company Name:
Premise Address:
Account Number: 5112 2162-00

SECTION E - WASTEWATER INFORMATION (Cont'd)

Priority Pollutant Information (Cont'd)

SA = "Suspected Absent" KA = "Known Absent" SP = "Suspected Present" KP = "Known Present"

ITEM NO.	PRIORITY POLLUTANT	SA	KA	SP	KP
77.	di-n-octyl phthalate *		X		
78.	4,6-dinitro-2-methylphenol *		X		
79.	2,4-dinitrophenol				X
80.	2,4-dinitrotoluene		X		
81.	2,6-dinitrotoluene		X		
82.	1,2-diphenylhydrazine *		X		
83.	endosulfan I *		X		
84.	endosulfan II *		X		
85.	endosulfan sulfate		X		
86.	endrin		X		
87.	endrin aldehyde		X		
88.	ethylbenzene		X		
89.	fluoranthene		X		
90.	fluorene *		X		
91.	heptachlor		X		
92.	heptachlor epoxide		X		
93.	hexachlorobenzene *		X		
94.	hexachlorobutadiene		X		
95.	hexachlorocyclopentadiene *		X		
96.	hexachloroethane *		X		
97.	indeno (1,2,3-cd) pyrene *		X		
98.	isophorone *		X		
99.	methylene chloride *				X
100.	naphthalene		X		
101.	nitrobenzene		X		
102.	2-nitrophenol		X		
103.	4-nitrophenol *		X		
104.	N-nitrosodimethylamine *		X		
105.	N-nitrosodi-n-propylamine *		X		
106.	N-nitrosodiphenylamine		X		
107.	PCB-1016 *		X		
108.	PCB-1221 *		X		
109.	PCB-1232 *		X		
110.	PCB-1242 *		X		
111.	PCB-1248 *		X		
112.	PCB-1254 *		X		
113.	PCB-1260 *		X		
114.	pentachlorophenol		X		
115.	phenanthrene		X		
116.	phenol				X
117.	pyrene		X		
118.	2,3,7,8-tetrachlorodibenzo-p-dioxin *		X		
119.	1,1,2,2-tetrachloroethane *		X		
120.	tetrachloroethene *		X		
121.	toluene *				X
122.	toxaphene		X		
123.	1,2,4-trichlorobenzene		X		
124.	1,1,1-trichloroethane *		X		
125.	1,1,2-trichloroethane *		X		
126.	trichloroethene *		X		
127.	Reserved				
128.	2,4,6-trichlorophenol		X		
129.	vinyl chloride *		X		

9. For priority pollutants in E.8 which are indicated "Known Present," list and provide the following data for each. Attach additional sheets if needed.

ITEM NO.	PRIORITY POLLUTANT	HOW USED	ANNUAL USAGE (LBS)	LOSS TO SEWER (LBS/YEAR)
1	Asbestos	Thermal System Insulation	0	Trace
2	Cyanides	Bio-Medical Research	<5	Trace
4	Arsenic	Bio-Medical Research	<10	Trace
7	Chromium	Glass Cleaning	<50	Trace
10	Mercury	Thermometers / Pressure-meters	<100	Trace
18	Acrolein	Bio-Medical Research	<1	Trace
22	Benzene	Bio-Medical Research	<10	Trace
23	Benzidine	Bio-Medical Research	<100	Trace
43	Carbon Tetrachloride	Bio-Medical Research	<40	Trace
49	Chloroform	Bio-Medical Research	<500	Trace
79	2,4-Dinitrophenol	Bio-Medical Research	<5	Trace
99	Methylene Chloride	Bio-Medical Research	<500	Trace
116	Phenol	Bio-Medical Research	<500	Trace
121	Toluene	Bio-Medical Research	<200	Trace

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Company Name: _____
Premise Address: _____
Account Number: 5112 2162-00

SECTION F - NON-SEWERED WASTES

1. Do you generate any liquid wastes or sludges which are not disposed in the sewer system? [X] Yes [] No
If "Yes" complete items 2 and 3 below. Note: Be sure to include wastewaters listed in Section C.7.c.
If "No," skip remainder of this section.

2. Information on non-sewered waste:

Type of Waste	Estimated Quantity Disposed/yr	Units	Store on-site	Dispose on-site	Dispose off-site
[X] Acids and/or Alkalies	1001	Gallons	[X]	[]	[X]
[X] Equip. Oils and/or Grease	1650	Gallons	[X]	[]	[X]
[X] Infectious Waste	100,000	Pounds	[X]	[]	[X]
[] Inks/Dyes			[]	[]	[]
[] Kitchen/Food Service Grease			[]	[]	[]
[X] Organic Compounds	20,000	Pounds	[X]	[]	[X]
[X] Paints or Paint Sludges	300	Gallons	[X]	[]	[X]
[] Pesticides			[]	[]	[]
[] Pretreatment Sludges			[]	[]	[]
[X] Radioactive Waste	2000	Pounds	[X]	[]	[X]
[X] Solvents/Thinners	150	Gallons	[X]	[]	[X]
[] Other Animal Carcasses	100,000	Pounds	[X]	[]	[X]
			[]	[]	[]
			[]	[]	[]

3. List your USEPA and/or MDNR Hazardous Waste generator numbers:

USEPA MOT 300010857 MDNR ~~01590~~ 01591

SECTION G - INDUSTRIAL WASTE SURCHARGE INFORMATION

1. The following analytical information is required for each sampling point or each connection to the public sewer (see D.1.c), only if your water usage exceeds 80 Ccf per month. Representative samples of the wastewater in each sewer must be collected and analyzed for the listed parameters. Concentrations are to be reported in mg/l.

Sewer Number (Refer to Section D.2)
(If more than 5, attach additional sheets)

Daily Average Concentration For Each Sampling Point or Connection

Parameter (mg/l)	1	2	3	4	5
Total Solids					
Total Suspended Solids					
Biochemical Oxygen Demand$_5$					
Chemical Oxygen Demand					
Flow (gpd)					
Date Sampled					
Time Sampled					
Type of Sample					

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AUG 17 1998
DEPT. of ENVIRONMENTAL COMPLIANCE

Company Name: _____
Premise Address: _____
Account Number: 5112 2162-00

SECTION G - INDUSTRIAL WASTE (Cont'd)

2. Sample handling information: Organization Name and Address

   a. Samples collected by: _____

   b. Samples analyzed by: _____

SECTION H - CERTIFICATION AND SIGNATURE

1. The following individual may be contacted regarding the information contained in this questionnaire:

   Name and title of contact person: Mike Kershaw, Hazardous Materials Div. Manager

   Tel No. (314) 362-6816

2. "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."

   Name and title of signing official: Bruce Backus, Director

   Environmental Health & Safety Tel No. (314) 362-6816

   Signature _____ Date 8-25-98

List attachments included with this questionnaire:

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Environmental Compliance

MSD 044034

METROPOLITAN ST LOUIS SEWER DISTRICT
INDUSTRIAL DATA SHEET

INDUSTRIAL WASTE PROGRAM JAR010.01
RUN 5/27/99 TIME 1456 WATERSHED DESIGNATION = BOM
MSD ACCOUNT NUMBER = 51122162-00M TREATMENT AREA = BISSELL POINT
TRUNK SEWER = OLD MILL CREEK

USER NAME = WASHINGTON U SCHOOL OF MEDICINE QUESTIONNAIRE RECEIVED DATE = 8/17/98 REVIEWER = JEG
USER MAILING ADDRESS = CAMPUS BOX 8229 PREMISE ADDRESS = 660 S EUCLID 6
660 S EUCLID ST LOUIS MO 63110
ST LOUIS MO 63130

ACCOUNT NAME = WASHINGTON UNIVERSITY
ACCOUNT MAILING ADDRESS = 660 S EUCLID
CAMPUS BOX 8047
ST LOUIS MO 63110-1010

FIELD CONTACT = MIKE KERSHAW OFFICE CONTACT =
TITLE = HAZARDOUS MATER DIV MGR TITLE = DAILY SHIFTS = 3
TELEPHONE = 314-362-6735 TELEPHONE = DAYS PER WEEK = 7
SICS = 8733 8221 0279 EMPLOYEES = 5750

RAW MATERIALS = LABORATORY CHEMICALS & REAGENTS PRODUCTS = NONE

INDUSTRIAL CATEGORY = 4 9 PRETREATMENT = N I WASTE DISPOSAL = X Z Y INSP. DATE = 6/ 9/98 REINSP. DATE = 6/ 9/00 JEG
COMMENTS = CONT-OP,SPCCP-YES,HW#01591, PERMIT ISSUE DATE = REISSUE DATE =

SEWER ACCOUNT NUMBERS = 5112216700 9000637201 5112217601 5112216800 5112216100

WATER CONSUMPTION (GPD) = 292,695 RETURN FACTOR = .91 WASTEWATER DISCHARGE (GPD) = 266,352 NPDES PERMIT NUMBER =

SURCHARGE BILLING VALUES (MG/L) RECERTIFICATION DATE =
SUSPENDED SOLIDS = BIOCHEMICAL OXYGEN DEMAND = CHEMICAL OXYGEN DEMAND = GREASE =

SEWER ROUTE = ADJUSTED CATEGORICAL STANDARD INDICATORS =

POTENTIAL POLLUTANTS LBS/YR COMMENTS
GENERAL POLLUTANTS
NONE
PRIORITY POLLUTANTS
NONE
PROHIBITED POLLUTANTS
NONE

---------- SEWER REFERENCE NUMBER 001 ----------

DESCRIPTION = MH 30'N,10'W OF NE CRNR OF BLDG 27 (IN ALLEY) NPDES OUTFALL NUMBER =

AVERAGE WASTEWATER DISCHARGE (GPD) = 23,971 DISCHARGE FACTOR = .09 SPLIT SAMPLE WITH COMPANY =
ALTERNATIVE CONCENTRATION LIMIT COMMENTS = SAN+NCCW+PROC+PLT&EQUIP WASHDN+SOFT REGEN

RUN 5/27/99 TIME 1456 WATERSHED DESIGNATION = BOM
MSD ACCOUNT NUMBER = 51122162-00M TREATMENT AREA = BISSELL POINT
TRUNK SEWER = OLD MILL CREEK

USER NAME = WASHINGTON U SCHOOL OF MEDICINE

LABORATORY ANALYSIS OF WASTEWATER

GENERAL POLLUTANTS (MG/L EXCEPT AS NOTED)		STANDARD-A	
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	AVG	300
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	M/I	300
011 CHEMICAL OXYGEN DEMAND =	_ _	AVG	600
011 CHEMICAL OXYGEN DEMAND =	_ _	M/I	600
028 OIL AND GREASE (TOTAL) =	_ _	M/I	200
030 PH ACIDIC (S.U.) LESS THAN 7 =		M/I	5.5
031 PH BASIC (S.U.) GREATER THAN OR EQUAL TO 7 =	_ _	M/I	11.5
040 TEMPERATURE (DEGREES C) =	_ _	M/I	60
049 TOTAL SUSPENDED SOLIDS =	_ _	AVG	350
049 TOTAL SUSPENDED SOLIDS =	_ _	M/I	350
PRIORITY POLLUTANTS (MG/L)			
013 SILVER (TOTAL) =	_ _	AVG	.5
013 SILVER (TOTAL) =	_ _	M/I	1.5
131 TOTAL TOXIC ORGANICS =	_ _	M/I	5.52
PROHIBITED POLLUTANTS			
NONE			

---------- SEWER REFERENCE NUMBER 002 ----------

DESCRIPTION = MH 300'W OF TAYLOR ON S SIDE OF SCOTT AV IN STREET NPDES OUTFALL NUMBER =

AVERAGE WASTEWATER DISCHARGE (GPD) = 237,053 DISCHARGE FACTOR = .89 SPLIT SAMPLE WITH COMPANY =
ALTERNATIVE CONCENTRATION LIMIT COMMENTS = SAN+NCCW+PROC+P&E WSHDN+BOIL BLWDN+REGEN

LABORATORY ANALYSIS OF WASTEWATER

GENERAL POLLUTANTS (MG/L EXCEPT AS NOTED)		STANDARD-A	
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	AVG	300
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	M/I	300
011 CHEMICAL OXYGEN DEMAND =	_ _	AVG	600
011 CHEMICAL OXYGEN DEMAND =	_ _	M/I	600
028 OIL AND GREASE (TOTAL) =		M/I	200
030 PH ACIDIC (S.U.) LESS THAN 7 =	_ _	M/I	5.5
031 PH BASIC (S.U.) GREATER THAN OR EQUAL TO 7 =	_ _	M/I	11.5
040 TEMPERATURE (DEGREES C) =	_ _	M/I	60
049 TOTAL SUSPENDED SOLIDS =	_ _	AVG	350
049 TOTAL SUSPENDED SOLIDS =	_ _	M/I	350
PRIORITY POLLUTANTS (MG/L)			
013 SILVER (TOTAL) =	_ _	AVG	.5
013 SILVER (TOTAL) =	_ _	M/I	1.5
131 TOTAL TOXIC ORGANICS =	_ _	M/I	5.52

RUN 5/27/99 TIME 1456 WATERSHED DESIGNATION = BOM
MSD ACCOUNT NUMBER = 51122162-00M TREATMENT AREA = BISSELL POINT
TRUNK SEWER = OLD MILL CREEK

USER NAME = WASHINGTON U SCHOOL OF MEDICINE

PROHIBITED POLLUTANTS
NONE

---------- SEWER REFERENCE NUMBER 003 ----------

DESCRIPTION = FLOW FR S IN MH N OF BLDG 14 IN DRIVE 6'S OF 02 TK NPDES OUTFALL NUMBER =

AVERAGE WASTEWATER DISCHARGE (GPD) = 2,663 DISCHARGE FACTOR = .01 SPLIT SAMPLE WITH COMPANY =
ALTERNATIVE CONCENTRATION LIMIT COMMENTS = SAN+LAB WASTE+PLT&EQUIP WASHDN

LABORATORY ANALYSIS OF WASTEWATER

GENERAL POLLUTANTS (MG/L EXCEPT AS NOTED)		STANDARD-A	
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	AVG	300
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	M/I	300
011 CHEMICAL OXYGEN DEMAND =	_ _	AVG	600
011 CHEMICAL OXYGEN DEMAND =	_ _	M/I	600
028 OIL AND GREASE (TOTAL) =	_ _	M/I	200
030 PH ACIDIC (S.U.) LESS THAN 7 =	_ _	M/I	5.5
031 PH BASIC (S.U.) GREATER THAN OR EQUAL TO 7 =	_ _	M/I	11.5
040 TEMPERATURE (DEGREES C) =	_ _	AVG	350
040 TEMPERATURE (DEGREES C) =	_ _	M/I	350
PRIORITY POLLUTANTS (MG/L)			
013 SILVER (TOTAL) =	_ _	AVG	.5
013 SILVER (TOTAL) =	_ _	M/I	1.5
131 TOTAL TOXIC ORGANICS =	_ _	M/I	5.52

PROHIBITED POLLUTANTS
NONE

---------- SEWER REFERENCE NUMBER 004 ----------

DESCRIPTION = FLOW FR W IN MH 15'N,42'E OF SE CRNR OF BLDG 80 NPDES OUTFALL NUMBER =

AVERAGE WASTEWATER DISCHARGE (GPD) = 2,663 DISCHARGE FACTOR = .01 SPLIT SAMPLE WITH COMPANY =
ALTERNATIVE CONCENTRATION LIMIT COMMENTS = SANITARY + PLT&EQUIP WASHDN

LABORATORY ANALYSIS OF WASTEWATER

GENERAL POLLUTANTS (MG/L EXCEPT AS NOTED)		STANDARD-A	
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	AVG	300
006 BIOCHEMICAL OXYGEN DEMAND (5 DAY) =	_ _	M/I	300
011 CHEMICAL OXYGEN DEMAND =	_ _	AVG	600
011 CHEMICAL OXYGEN DEMAND =	_ _	M/I	600
028 OIL AND GREASE (TOTAL) =	_ _	M/I	200
030 PH ACIDIC (S.U.) LESS THAN 7 =	_ _	M/I	5.5

RUN 5/27/99 TIME 1456 WATERSHED DESIGNATION = BOM

MSD ACCOUNT NUMBER = 51122162-00M TREATMENT AREA = BISSELL POINT

TRUNK SEWER = OLD MILL CREEK

USER NAME = WASHINGTON U SCHOOL OF MEDICINE

031 PH BASIC (S.U.) GREATER THAN OR EQUAL TO 7 =	_ _	M/I	11.5
040 TEMPERATURE (DEGREES C) =	_ _	M/I	60
049 TOTAL SUSPENDED SOLIDS =	_ _	AVG	350
049 TOTAL SUSPENDED SOLIDS =	_ _	M/I	350
PRIORITY POLLUTANTS (MG/L)			
013 SILVER (TOTAL) =	_ _	AVG	.5
013 SILVER (TOTAL) =	_ _	M/I	1.5
126 TRICHLOROETHENE =	_ A	M/I	.0019
131 TOTAL TOXIC ORGANICS =	_ _	M/I	5.52

PROHIBITED POLLUTANTS

NONE