Sewer Acct. #: **5112216200**

Company: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Address: 660 S. Euclid Ave.

City: St. Louis

State and Zip: MO 63110

Ind_id	File Code	File Description
84240	40	PERMIT

Metropolitan St. Louis Sewer District

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

November 30, 2017

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

Re: Discharge Permit No: 1024353000 - 2
For premise at: 660 S. Euclid Avenue, St. Louis, MO 63110

Dear Ms. Isringhausen:

The Metropolitan St. Louis Sewer District has developed an Industrial Wastewater Discharge Permit for the above premise. Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the permit on the following: information that you supplied in your Industrial User Questionnaire, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

The terms and conditions of this permit are substantially the same as in the previous permit. You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals. Instructions for completing the report form also are enclosed with this letter.

The current permit becomes effective **January 1, 2018**. If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the permit.

Please be aware that an annual permit fee will be added to your monthly sewer bill, or you will receive a separate bill, to cover administrative costs associated with the permit, as provided for under MSD ordinance 12413. The fee is normally added to the last bill of each calendar year, or shortly thereafter.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

SM Rehmer

Scott M. Rehmer, Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit,
Self-monitoring Report Form, Self-monitoring Report Instructions

cc: Doug Mendoza
Jason Gill

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

PERMIT NO: 1024353000 - 2

EFFECTIVE DATE: January 01, 2018
EXPIRATION DATE: December 31, 2022

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
St. Louis, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 8
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 007, 008, 009, 010, 011

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

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 7,833

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Process Waste (Photographic & teaching labs) + Sanitary + Storm Water + Laboratory Waste (Research labs) + Regeneration/Reject Water + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 33,838

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste (Photographic & teaching labs) + Laboratory Waste (Research labs & animal care) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 150,151

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Kitchen Waste + Process Waste + Laboratory Waste (Research labs) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 12,378

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: MH in plaza 27' W, 27' N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 74,853

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste (Photographic & teaching labs) + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in E plaza 36' N, 27' E of S NE bldg

AVERAGE WASTEWATER FLOW (GPD): 74,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: 6" trapped vent, 10'W, 36'N of EHS SW bldg corner

AVERAGE WASTEWATER FLOW (GPD): 546

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: 12" vent 125'W, 30'N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 30,029

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste (Photographic & teaching labs) + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by April 28, 2018. For non-quarterly self-monitoring requirements, the permit year commences on January 1.**

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

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

B. CHANGE IN DISCHARGE:

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

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

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

C. PROBLEM DISCHARGE:

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

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

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

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

G. PERMIT RENEWAL:

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

H. PERMIT TRANSFER:

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

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

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

K. DEFINITIONS:

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

L. SEWER USE ORDINANCE:

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

M. NOTIFICATION AND REPORTING:

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

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

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

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

SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 007, 008, 009, and 011 may, at times, convey storm water in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

A.2. Sampling/Reporting Req for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

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

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

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

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily

dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety (90), sixty-eight (68), and seventy-seven (77) percent of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Permit No: 1024353000 - 2 Effective Date: Jan 01, 2018 Expiration Date: Dec 31, 2022

Premise Address: 660 S. Euclid Avenue, 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. Certify Discharge Monitoring Report & attachments

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: _____

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 10, 2017

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

Re: Discharge Permit No: 1024353000 - 2
For premise at: 660 S. Euclid Avenue, St. Louis, MO 63110

Dear Ms. Isringhausen:

The Metropolitan St. Louis Sewer District has completed its review of your application for renewal of the Industrial Wastewater Discharge Permit for the above premise. The current permit expires on **December 31, 2017**.

Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the draft permit on the following: information that you supplied in your Industrial User Questionnaire, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

The terms and conditions of this permit are substantially the same as in the previous permit, which had an effective date of October 1, 2015. Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the draft permit, and we will proceed to issue the final permit.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

SM Rehmer

Scott M. Rehmer
Assistant Engineer

Enclosures: Draft Industrial Wastewater Discharge Permit

cc: Doug Mendoza
Jason Gill

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

PERMIT NO: 1024353000 - 2

EFFECTIVE DATE: January 01, 2018
EXPIRATION DATE: December 31, 2022

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
St. Louis, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 8
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 007, 008, 009, 010, 011

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

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 7,833

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Process Waste (Photographic & teaching labs) + Sanitary + Storm Water + Laboratory Waste (Research labs) + Regeneration/Reject Water + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 33,838

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste (Photographic & teaching labs) + Laboratory Waste (Research labs & animal care) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 150,151

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Kitchen Waste + Process Waste + Laboratory Waste (Research labs) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 12,378

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: MH in plaza 27' W, 27' N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 74,853

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste (Photographic & teaching labs) + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in E plaza 36' N, 27' E of S NE bldg

AVERAGE WASTEWATER FLOW (GPD): 74,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: 6" trapped vent, 10'W, 36'N of EHS SW bldg corner

AVERAGE WASTEWATER FLOW (GPD): 546

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: 12" vent 125'W, 30'N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 30,029

WASTEWATER SOURCE AND CATEGORY: Sanitary + Cooling Tower Blowdown + Process Waste (Photographic & teaching labs) + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Regeneration/Reject Water + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year

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

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

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

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

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PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by April 28, 2018. For non-quarterly self-monitoring requirements, the permit year commences on January 1.**

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

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

B. CHANGE IN DISCHARGE:

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

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

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

C. PROBLEM DISCHARGE:

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

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

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

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

G. PERMIT RENEWAL:

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

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H. PERMIT TRANSFER:

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

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

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

K. DEFINITIONS:

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

L. SEWER USE ORDINANCE:

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

M. NOTIFICATION AND REPORTING:

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

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

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

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

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SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 007, 008, 009, and 011 may, at times, convey storm water in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

A.2. Sampling/Reporting Req for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7-day holding time of the unpreserved sample.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

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

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

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily

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dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety (90), sixty-eight (68), and seventy-seven (77) percent of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Permit No: 1024353000 - 2 Effective Date: Jan 01, 2018 Expiration Date: Dec 31, 2022

Premise Address: 660 S. Euclid Avenue, 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								

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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. Certify Discharge Monitoring Report & attachments

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: _____

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT
PERMIT FACT SHEET

Check one:
FIRST TIME PERMIT ☐
RENEWAL ☒

Prepared by: S. Rehmer SR	Date: 10/9/2017
Reviewed by: JMM	Date: 10-10-17

PERMIT NO: 1024353000-2 EFFECTIVE DATE: 1/1/2018 EXPIRATION DATE: 12/31/2022

COMPANY NAME: WASHINGTON UNIVERSITY MEDICAL SCHOOL

PREMISE ADDRESS: 660 South Euclid, 63110

RELATED ACCOUNT NUMBERS: 10243532-00; 10243533-00; 10373777-00; 10481063-00; 10524528-01; 10553440-00

TYPE OF OPERATION: Research and teaching facility

TOTAL NUMBER OF SAMPLING POINTS: 8 or NO SAMPLING POINT ☐

NUMBER OF: ORDINANCE 8 CATEGORICAL 0 COMBINED 0

CATEGORICAL INDUSTRY? YES ☐ NO ☒

If Yes, 40 CFR _____ Subpart _____ PSES ☐ PSNS ☐

40 CFR _____ Subpart _____ PSES ☐ PSNS ☐

EXTRA STRENGTH SURCHARGE? YES ☐ NO ☒ If Yes, BOD _____ COD _____ TSS _____

RETURN FACTOR? YES ☒ NO ☐ If Yes, Acct #(s) * RF * see below

SPECIAL CONDITIONS REQUIRED? YES ☒ NO ☐

All SMR start dates begin at start of calendar quarter: ☒ same as/containing permit effective date
☐ following permit effective date

SMR General Cert. B attached to first permit SP (001) at reporting frequency of once/3mo? Y ☒ N ☐

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	☒	☐	
Pollutant & Limitations Documentation Sheets:	☒	☐	
Permit Preparation Checklist:	☒	☐	
Production-based Standards Calc. Sheets (for Sampling Points _____)	☐	☐	☒
Mass-based Standards Calc. Sheets (for Sampling Points _____)	☐	☐	☒
Equivalent Concentration Limits Sheets (for Sampling Points _____)	☐	☐	☒
Most Strict Limits Sheets (for Sampling Points _____)	☐	☐	☒
Combined Wastestream Formula Sheets (for Sampling Points _____)	☐	☐	☒
Text of any Customized Special Conditions: If Yes, for which SCs: _____	☐	☐	☒

Other: n/a

COMMENTS (Include notations of any significant changes from last permit):
* Three of seven accts have RF's: the primary acct is 246496 (1024353000) = 0.90, Sep-2010; second 246498 (1024353200) = 0.68, Sep-2010; and third 377308 (1037377700) = 0.77, Sep-2010.

PERMIT NO: 1024353000-2

SPECIAL CONDITIONS NOT TIED TO SPECIFIC SAMPLE POINTS

Special Condition:	# F.1	# E.18	# D.3	# _____	# _____	# _____	# _____	# _____
List any related SMR certifications:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
SMR certification frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List any related General Reports:	# _____	# Rad Discharge Report	# _____	# _____	# _____	# _____	# _____	# _____
General Report frequency:	[none]	once 3 mo	[none]	[none]	[none]	[none]	[none]	[none]

Are all the SMR certifications listed above associated with first permit sample point (001)? YES ☐ NO ☐ N/A (No Certs) ☒

Check here if there are no non-SP-specific Special Conditions: ☐

MSD 045430

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 011 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, CT blowdown, Process ww, Lab ww, Regen/Reject, P&E Wash, Storm

Flow Rate: 546 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 63.2 k-gpd

MSD 045431

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 010 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, P&E Wash

Flow Rate: 546 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation (Ord 12559, CFR___, etc)	Monitoring frequency	Basis for monitoring freq. (std for vol, etc; innocuous, low flow, etc)	Any OK?
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 1.035 k-gpd

MSD 045432

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 009 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, CT blowdn, P&E Wash, Process ww, Lab ww, Regen/Reject, Storm

Flow Rate: 74,850 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 142 k-gpd

MSD 045433

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 008 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, CT blowdn, P&E Wash, Process ww, Lab ww, Regen/Reject, Storm

Flow Rate: 74,853 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP; added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 142 k-gpd

MSD 045434

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 007 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, CT blowdn, P&E Wash, Lab ww, Storm

Flow Rate: 12,378 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 23.5 k-gpd

MSD 045435

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 005 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, CT blowdn, Kitchen ww, P&E Wash, Process ww, Lab ww, Boiler blowdn, Regen/Reject, Storm

Flow Rate: 150,151 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 341 k-gpd

MSD 045436

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 003 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, CT blowdn, P&E Wash, Process ww, Lab ww, Storm

Flow Rate: 33,838 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 64.1 k-gpd

MSD 045437

PERMIT NO: 1024353000-2

SAMPLING POINT REFERENCE NUMBER: 001 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Sanitary, CT blowdn, P&E Wash, Process ww, Lab ww, Regen/Reject, Storm

Flow Rate: 7,833 Units: GPD Basis for Flow Rate: IUQ received 6/26/17

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added last time due to ww type	Ord 12559	once 3 mo	standard, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Last flow = 14.8 k-gpd

MSD 045438

PERMIT PREPARATION CHECKLIST – PART 1
(Fact Sheet Attachment)

Company Name: WASHINGTON UNIVERSITY MEDICAL SCHOOL Permit No.: 1024353000

Effective Date: 1/1/2018 Prepared by: 12/31/2022 Date: 10/9/2017

REVIEW THE PRETREATMENT DATABASE (PIMS), INDUSTRY FILE AND PERMIT APPLICATION. ANSWER THESE QUESTIONS & UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ☒ No ☐
   If no, add _____ delete: _____

2. Is user in surcharge? Yes ☐ No ☒
   If yes, date last certified: _____
   If yes, Special Condition F.2 applies.

3. Does user's premise have more than one MSD account? Yes ☒ No ☐
   If yes, were all account numbers correctly listed (including occupant #s)? Yes ☒ No ☐
   If no, have account numbers been corrected in database before proceeding? Yes ☐ No ☐

4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ☒ No ☐
   If yes, list acct no., RF and date last updated:
   Acct 246496 RF 0.90 Updated 9/9/2010
   Acct 246498 RF 0.68 Updated 9/9/2010
   Acct 377308 RF 0.77 Updated 9/9/2010
   If yes, **Special Condition F.1** applies.

5. Does user discharge water from a source not included in the MSD Billing system? Yes ☐ No ☒
   If yes, Special Condition F.3 & General Report "Discharge Volume for Billing" apply.
   If yes, Is a flow meter used to record the volume discharged from this other source? Yes ☐ No ☐
   If yes, SC E.37 and Gen. Rpt. "Calibration of Discharge Flow Meter" apply.
   If no, SC E.38 applies.

6. Have you established agreement among permit application, water consumption records and PIMS on component flows at each SP, total SP flows and total premise flow? Yes ☒ No ☐
   If no, explain _____

7. Has user been granted any variances from ordinance limitations? Yes ☐ No ☒
   If yes, Application Date: _____
   Approval Date: _____, or approved as part of this permit issuance? Yes ☐
   (Variances cannot last more than 5 years after approval)
   If yes, Parameter(s) _____ at SP(s) _____
   If yes, Special Condition C.4 applies.

8. Have any numerical limitations been applied to user, in addition to those already contained in the ordinance? Yes ☐ No ☒
   If yes, Parameter(s) _____ at SP(s) _____
   Date limit(s) originally applied: _____, or as part of variance above? ☐
   If yes, are Special Conditions, other than the standard special conditions, required? Yes ☐ No ☐
   If yes, explain under "non-standard special conditions" question below.

9. Does user discharge any radioactive materials? Yes ☒ No ☐
   If yes, **Special Condition E.18 & General Report "Radiation Discharge" apply**.

10. Does user generate wastes and/or wastewater by genetic engineering research? Yes ☐ No ☒
    If yes, Special Condition B.12 applies.

11. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ☒ No ☐
    If no, explain: _____
    If no, is documentation sufficient to use Special Condition Yes ☐ No ☐
    E.5 ☐ "Sampling Not Required at Connections with NO SP and with SP on parts",
    E.6 ☐ "Sampling Not Required at Connection with NO SP on it",
    E.7 ☐ "Sampling Not Required at Connection with SP on only part of it", or
    E.8 ☐ "Sampling Not Required at Permittee with No SP"?
    If no, is compliance schedule necessary to obtain documentation? Yes ☐ No ☐
    If yes, Special Condition G.1 is necessary.

12. Does premise require use of "upstream/downstream" sampling? Yes ☐ No ☒
    If yes, Upstream SP # _____ & Downstream SP # _____
    If yes, Special Conditions D.11 and E.9 apply.

13. Are there any inactive connections to MSD sewers? Yes ☐ No ☒
    If yes, Special Condition E10 applies.

14. Have you verified, in PIMS, the SP location descriptions are complete and adequate? Yes ☒ No ☐

15. Have you verified, in PIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ☒ No ☐

16. Does user have any discharges subject to NPDES permitting regulations? Yes ☐ No ☒
    If yes, list MSD points & corresponding NPDES points: _____
    If yes, Special Condition E.14 applies.

17. Do any SPs convey stormwater in addition to regulated wastewater? Yes ☒ No ☐
    If yes, list points: 001, 003, 005, 007, 008, 009, 011 and note on P&LD sheets.
    If yes, **Special Condition D.10** applies.

18. Are any SPs Dry Justified in PIMS? Yes ☐ No ☒
    If yes, list points _____ and note on P&LD sheets.
    If yes, no self-monitoring is required, and Special Condition E.3 applies.

19. Are there SPs where user discharges only non-process wastewater? Yes ☐ No ☒
    If yes, does no self-monitoring requirement / Special Condition E.3 apply? Yes ☐ No ☐
    If yes, list points _____ and note on P&LD sheets.

20. Are there SPs with infrequent discharges that require coordination with the user for MSD to collect samples? Yes ☐ No ☒
    If yes, list points: _____ and note on P&LD sheets.
    If yes, Special Condition D.14 applies.

21. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ☐ No ☒
    If yes, list points _____ and note on P&LD sheets.
    If yes, Special Condition D.1 applies.

22. Are there SPs with self-monitoring requirements, but at less than a quarterly frequency, for all parameters? Yes ☐ No ☒
    If yes, list points _____ and note on P&LD sheets.
    If yes, Special Condition E.4 applies.

23. Can local limits TTO be removed from monitoring at any ordinance SPs? Yes ☐ No ☒
    If yes, list points _____ and explain on P&LD sheets.
    If yes, does TTO also need to be removed from MSD's monitoring? Yes ☐ No ☐
    If yes, discuss with inspector (name: _____) and explain why it had been monitored by MSD: _____

24. Does user have a history of compliance problems at this or a previous location? Yes ☐ No ☒
    If yes, explain problems: _____
    If yes, is a compliance schedule required? Yes ☐ No ☐
    If yes, Special Condition G.1 applies. Is supporting documentation attached? Yes ☐ No ☐
    If yes, are any other special requirements required? Yes ☐ No ☐
    Explain: _____

25. Is user required to monitor for Total Phenols at an ordinance SP? Yes ☒ No ☐
    If yes, does **Special Condition D.3** for Total Phenols monitoring options apply? Yes ☒ No ☐

26. Has user chosen to employ continuous monitoring techniques for:
    pH? If yes, list points _____. SC E.29 & Gen Rpt "Cont-Mon pH Excursions" apply. Yes ☐ No ☒
    Temp? If yes, list points _____. SC E.30 & Gen Rpt "Cont-Mon Temp Excursions" apply. Yes ☐ No ☒
    LEL? If yes, list points _____. SC E.31 & Gen Rpt "Cont-Mon LEL Excursions" apply. Yes ☐ No ☒
    If yes for pH or Temp, have corresponding SP limits in PIMS been set to 'Alert Only' and does PIMS Monitoring Special Instructions have notes re. field 'violations'? Yes ☐ No ☐

27. Does the company perform any processes for which summaries of activities are needed? Yes ☐ No ☒
    If yes, Special Condition E.33 & General Report "Process Activity Summary" apply.

28. Are special billing conditions, other than the standard Special Conditions, needed? Yes ☐ No ☒
    If yes, describe: _____
    If yes, Special Condition F.4 applies.
    Does General Report "Discharge Volume for Billing" apply? Yes ☐ No ☐
    Does General Report "Custom Non-Standard" apply? Yes ☐ No ☐

29. Are any Special Conditions, other than the standard special conditions, required? Yes ☐ No ☒
    If yes, explain: _____
    Which Special Condition applies? _____
    Is supporting documentation attached? Yes ☐ No ☐
    If no, explain: _____
    Does General Report "Custom Non-Standard" apply? Yes ☐ No ☐

30. Is user a hauled waste industry, discharging its wastewater at the Hauled Waste Station? Yes ☐ No ☒
    If yes, have ☐ permit title, ☐ cover page, & ☐ general conditions been modified? Yes ☐ No ☐
    If yes, Special Conditions B.9, C.7, D.13, H.1, and H.2 apply.

31. Is user classified as a Categorical Industrial User (CIU)? Yes ☐ No ☒
    If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit.
List those that are specific to a sampling point on that sampling point's fact sheet, too.
List those that are not specific to a sampling point on the "Special Conditions Not Tied to Specific SPs" fact sheet, too.

General Report	Special Condition #	Sampling Point #
	F.1	
Rad Discharge Report	E.18	
	D.10	001, 003, 005, 007, 008, 009, 011
	D.3	

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

September 22, 2015

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

Re: Discharge Permit No: 1024353000 - 1.1
For premise at: 660 S. Euclid Avenue, St. Louis, MO 63110

Dear Ms. Isringhausen:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on January 1, 2013, for the above premise, is hereby revised as per the attached revised permit.

The following revisions were made to the permit:

- Removed Sample Point (SP) 006 and self-monitoring requirements
- Added SP's 010 and 011 and self-monitoring requirements
- For Special Condition A.1, removed SP 006 and added SP 011

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

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

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

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

SMRehmer

Scott M. Rehmer
Assistant Engineer

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

cc: Doug Mendoza
Mike Kynion

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

PERMIT NO: 1024353000 - 1.1

EFFECTIVE DATE: October 01, 2015
EXPIRATION DATE: December 31, 2017

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

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 8
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 007, 008, 009, 010, 011

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

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 14,839

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Process Waste (Photographic & teaching labs) + Sanitary + Storm Water + Laboratory Waste (Research labs) + Regeneration/Reject Water + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 64,103

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown + Laboratory Waste (Research labs & animal care) + Plant & Equipment Washdown + Process Waste (Photographic & teaching labs) + Sanitary + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 341,328

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown + Boiler Blowdown + Storm Water + Kitchen Waste + Laboratory Waste (Lab research & animal care and formalin solution) + Plant & Equipment Washdown + Process Waste (Photographic & teaching labs) + Regeneration/Reject Water + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 23,450

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Sanitary + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: MH in plaza 27' W, 27' N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 141,800

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Sanitary + Storm Water + Process Waste (Photographic & teaching labs) + Regeneration/Reject Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in E plaza 36' N, 27' E of S NE bldg

AVERAGE WASTEWATER FLOW (GPD): 141,800

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Sanitary + Storm Water + Process Waste (Photographic & teaching labs) + Regeneration/Reject Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 010

SAMPLING POINT LOCATION: 6" trapped vent, 10'W, 36'N of EHS SW bldg corner

AVERAGE WASTEWATER FLOW (GPD): 1,035

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 011

SAMPLING POINT LOCATION: 12" vent 125'W, 30'N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 63,200

WASTEWATER SOURCE AND CATEGORY: Sanitary + Process Waste (Photographic & teaching labs) + Laboratory Waste (Lab research & animal care) + Plant & Equipment Washdown + Regeneration/Reject Water + Cooling Tower Blowdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by January 28, 2016. For non-quarterly self-monitoring requirements, the permit year commences on January 1.**

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

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

B. CHANGE IN DISCHARGE:

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

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

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

C. PROBLEM DISCHARGE:

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

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

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

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

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

G. PERMIT RENEWAL:

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

H. PERMIT TRANSFER:

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

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

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

K. DEFINITIONS:

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

L. SEWER USE ORDINANCE:

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

M. NOTIFICATION AND REPORTING:

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

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

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

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

SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 007, 008, 009, and 011 may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

A.2. Sampling / Reporting Required for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

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

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

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

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily

dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety (90), sixty-eight (68), and seventy-seven (77) percent of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Permit No: 1024353000 - 1.1 Effective Date: Oct 01, 2015 Expiration Date: Dec 31, 2017

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. Certify Discharge Monitoring Report & attachments

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: _____

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT REVISION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Premise Address: **660 S. Euclid Avenue, 63110**

Former Permit No: **1024353000-1** Original Effective Date: **1/1/2013**

Revised Permit No: **1024353000-1.1** Revision Effective Date: **10/1/2015**

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

On 9/16/15, received IUQ pages 4-5 for new sample points 010 and 011, as follow-up to new bldg. drawings and WW surveys received on 3/30/15 & 4/7/15; SP006 has been removed.

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

Removed SP006, added new SP010 + SP011.

WHAT – List the Permit Preparation Checklist questions for which answers have changed from last permit, and complete those questions & attach the applicable checklist sheets:

Q.17 stormwater conveyed thru new SP011, and added to spec cond D.10.

Pg. #	1	**Permit #, effective date, SP ref numbers**
Pg. #	5	**Removed SP006 from previous permit**
Pg. #	8	**New SP010**
Pg. #	9	**New SP011**
Pg. #	11	**First report due date**
Pg. #	15	**Spec Cond A1, Deleted SP006, added SP011**

SMR Start Dates for any new requirements:

Once/3 mo:	10/1/15	or ☐	no new requirements
Once/6 mo:	_____	or ☐	no new requirements
Once/year:	10/1/15	or ☐	no new requirements

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	☒	☐	
Permit Preparation Checklist (Only the pages for Q's 17)	☒	☐	☐
Pollutant & Limitations Documentation Sheets (for Sampling Points 010, 011)	☒	☐	☐
Production-based Standards Calc. Sheets (for Sampling Points _____)	☐	☐	☒
Mass-based Standards Calc. Sheets (for Sampling Points _____)	☐	☐	☒
Most Strict Limits Sheets (for Sampling Points _____)	☐	☐	☒
Combined Wastestream Formula Sheets (for Sampling Points _____)	☐	☐	☒
Text of any Customized Special Conditions: If Yes, for which SCs: _____	☐	☐	☒
Other: _____			

Prepared by: S. Rehmer	Date: 9/17/2015
Reviewed by: DMM	Date: 9-21-15

PERMIT NO: 1024353000-1.1

CHANGES TO

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

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

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

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

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

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

MSD 045462

PERMIT NO: 1024353000-1.1

SAMPLING POINT REFERENCE NUMBER: 010 **TYPE:** Ord ☒ Cat ☐ Comb ☐ **NEW SP** ☒ **or CHANGE to SP** ☐
Wastewater Components: Sanitary + Plant & Equipment Washdown
Flow Rate: 1,035 Units: GPD Basis for Flow Rate: IUQ, p.4-5, received 9/16/15

FOR SPs WITH CHANGES, COMPLETE ONLY WHAT HAS CHANGED:

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation	Monitoring frequency	Basis for monitoring frequency	Any OK?
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	lab data presence at other SP's	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some lab data presence at other SP's	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some lab data >DL at other SP's	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
List related SMR certs:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for Ord TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

MSD 045463

PERMIT NO: 1024353000-1.1

SAMPLING POINT REFERENCE NUMBER: 011 **TYPE:** Ord ☒ Cat ☐ Comb ☐ **NEW SP** ☒ **or CHANGE to SP** ☐
Wastewater Components: Sanitary + Process ww (labs) + Lab ww (Lab research, animal care) + P&E Wash + Regen/Reject + CT Blow + Storm
Flow Rate: 63,200 Units: GPD Basis for Flow Rate: IUQ, p.4-5, received 9/16/15

FOR SPs WITH CHANGES, COMPLETE ONLY WHAT HAS CHANGED:

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation	Monitoring frequency	Basis for monitoring frequency	Any OK?
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	lab data presence at other SP's	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some lab data presence at other SP's	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some lab data >DL at other SP's	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for Ord TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

MSD 045464

PERMIT PREPARATION CHECKLIST – PART 1 (**only Q.17 applies**)
(Fact Sheet Attachment)

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL** Permit No.: **1024353000-1.1**

Effective Date: 10/1/2015 Prepared by: S. Rehmer Date: 9/17/2015

REVIEW THE PRETREATMENT DATABASE (PIMS), INDUSTRY FILE AND PERMIT APPLICATION.
ANSWER THESE QUESTIONS & UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

17. Do any SPs convey stormwater in addition to regulated wastewater? Yes ☒ No ☐
If yes, list points: 011 and note on P&LD sheets.
If yes, Special Condition D.10 applies.

List all the Special Conditions from Part 1 that are applicable to this permit.
List those that are specific to a sampling point on that sampling point's fact sheet, too.
List those that are not specific to a sampling point on the "Special Conditions Not Tied to Specific SPs" fact sheet, too.

General Report	Special Condition #	Sampling Point #
	D.10	011

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 4, 2012

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

Re: Discharge Permit No: 1024353000 - 1
For premise at: 660 S. Euclid Avenue, St. Louis, MO 63110

Dear Ms. Isringhausen:

The Metropolitan St. Louis Sewer District has developed an Industrial Wastewater Discharge Permit for the above premise. Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the permit on the following: information that you supplied in your Industrial User Questionnaire, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the previous permit. Changes include:

- Added Total Phenols sampling and reporting requirement at all ordinance sample points, due to its known presence and the types of process and laboratory waste discharged.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals. Instructions for completing the report form also are enclosed with this letter.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the permit.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

SM Rehmer

Scott M. Rehmer, Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit,
Self-monitoring Report Form, Self-monitoring Report Instructions

cc: Doug Mendoza
Jason Gill

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

PERMIT NO: 1024353000 - 1

EFFECTIVE DATE: January 01, 2013
EXPIRATION DATE: December 31, 2017

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

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 7
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006, 007, 008, 009

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

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 14,839

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Plant & Equipment Washdown + Regeneration/Reject Water (Water softener regeneration) + Process Waste (Photographic & teaching labs) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 64,103

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Plant & Equipment Washdown + Process Waste (Photographic, teaching labs, animal care) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 341,328

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Kitchen Waste + Laboratory Waste (Research labs) + Process Waste (Photographic, teaching labs, animal care, etc.) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration/Reject Water (Water softener regeneration) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 006

SAMPLING POINT LOCATION: 6" trapped clay pipe 13' N, 9' E of SE corner of building 80

AVERAGE WASTEWATER FLOW (GPD): 1,034

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown (Waste storage facility) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 23,450

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Process Waste + Laboratory Waste (Research labs) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: MH in plaza 27' W, 27' N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 131,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Laboratory Waste (Research labs) + Non-Contact Cooling Water + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in E plaza 36' N, 27' E of S NE bldg

AVERAGE WASTEWATER FLOW (GPD): 131,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown + Non-Contact Cooling Water + Laboratory Waste + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by April 28, 2013. For non-quarterly self-monitoring requirements, the permit year commences on January 1.**

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

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

B. CHANGE IN DISCHARGE:

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

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

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

C. PROBLEM DISCHARGE:

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

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

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

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

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

G. PERMIT RENEWAL:

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

H. PERMIT TRANSFER:

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

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

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

K. DEFINITIONS:

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

L. SEWER USE ORDINANCE:

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

M. NOTIFICATION AND REPORTING:

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

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

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

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

SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 006, 007, 008, and 009 may, at times, convey storm water in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

A.2. Sampling / Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

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

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

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

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District

determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety (90), sixty-eight (68), and seventy-seven (77) percent of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Permit No: 1024353000-1 Effective Date: 01/01/2013 Expiration Date: 12/31/2017

Premise Address: 660 S. Euclid Ave, 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: _____

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 10, 2012

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

Re: Discharge Permit No: 1024353000 - 1
For premise at: 660 S. Euclid Ave., 63110

Dear Ms. Isringhausen:

The Metropolitan St. Louis Sewer District has completed its review of your application for renewal of the Industrial Wastewater Discharge Permit for the above premise. The current permit expires on December 31, 2012.

Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the draft permit on the following: information that you supplied in your Industrial User Questionnaire, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the previous permit. Changes include:

- Added Total Phenols sampling and reporting requirement at all ordinance sample points, due to its known presence and the types of process and laboratory waste discharged.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the draft permit, and we will proceed to issue the final permit.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

SM Rehmer

Scott M. Rehmer
Assistant Engineer

Enclosures: Draft Industrial Wastewater Discharge Permit

cc: Doug Mendoza
Jason Gill

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

PERMIT NO: 1024353000 - 1

EFFECTIVE DATE: January 01, 2013
EXPIRATION DATE: December 31, 2017

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

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 7
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006, 007, 008, 009

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

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 14,839

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Plant & Equipment Washdown + Regeneration/Reject Water (Water softener regeneration) + Process Waste (Photographic & teaching labs) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit*	Limit Type**	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DRAFT

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 64,103

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Plant & Equipment Washdown + Process Waste (Photographic, teaching labs, animal care) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 341,328

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Kitchen Waste + Laboratory Waste (Research labs) + Process Waste (Photographic, teaching labs, animal care, etc.) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration/Reject Water (Water softener regeneration) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DRAFT

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 006

SAMPLING POINT LOCATION: 6" trapped clay pipe 13' N, 9' E of SE corner of building 80

AVERAGE WASTEWATER FLOW (GPD): 1,034

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown (Waste storage facility) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DRAFT

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 23,450

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non-Contact Cooling Water + Process Waste + Laboratory Waste (Research labs) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type**	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: MH in plaza 27' W, 27' N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 131,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Laboratory Waste (Research labs) + Non-Contact Cooling Water + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type**	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in E plaza 36' N, 27' E of S NE bldg

AVERAGE WASTEWATER FLOW (GPD): 131,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown + Non-Contact Cooling Water + Laboratory Waste + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Phenols [mg/L]	21	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by April 28, 2013. For non-quarterly self-monitoring requirements, the permit year commences on January 1.**

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

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

B. CHANGE IN DISCHARGE:

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

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

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

C. PROBLEM DISCHARGE:

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

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

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

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

G. PERMIT RENEWAL:

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

H. PERMIT TRANSFER:

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

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

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

K. DEFINITIONS:

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

L. SEWER USE ORDINANCE:

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

M. NOTIFICATION AND REPORTING:

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

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

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

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

SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 006, 007, 008, and 009 may, at times, convey storm water in addition to wastewater regulated by this permit. The self-monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

A.2. Sampling / Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

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

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

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily

dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety (90), sixty-eight (68), and seventy-seven (77) percent of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

DRAFT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Permit No: 1024353000-1 Effective Date: 01/01/2013 Expiration Date: 12/31/2017

Premise Address: 660 S. Euclid Ave, 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: _____

DRAFT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT FACT SHEET

Check one:

FIRST TIME PERMIT	☐	Prepared by: Scott Rehmer	Date: 10/8/12
RENEWAL	☒	Reviewed by: DAVE MENDOZA	Date: 10-9-12

PERMIT NO: 1024353000-1 EFFECTIVE DATE: 1/1/13 EXPIRATION DATE: 12/31/17

COMPANY NAME: WASHINGTON UNIVERSITY MEDICAL SCHOOL

PREMISE ADDRESS: 660 S. Euclid Ave, 63110

RELATED ACCOUNT NUMBERS: 10243529-00; 10243532-00; 102435333-00; 10243539-00; 10373777-00; 10481063-00

SIC NUMBERS: 0279, 8221, 8733

TYPE OF OPERATION: Research and teaching facility

TOTAL NUMBER OF SAMPLING POINTS: 7 or NO SAMPLING POINT ☐

NUMBER OF: ORDINANCE 7 CATEGORICAL 0 COMBINED 0

CATEGORICAL INDUSTRY? YES ☐ NO ☒

If Yes, 40 CFR _____ Subpart _____ PSES ☐ PSNS ☐

EXTRA STRENGTH SURCHARGE? YES ☐ NO ☒ If Yes, BOD _____ COD _____ TSS _____

RETURN FACTOR? YES ☒ NO ☐ If Yes, Acct #(s) * RF * see below

SPECIAL CONDITIONS REQUIRED? YES ☒ NO ☐

All SMR start dates begin at start of calendar quarter: ☒ same as/containing permit effective date
☐ following permit effective date

SMR General Cert. B attached to first permit SP (001) at reporting frequency of once/3mo? Y ☒ N ☐

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
Pollutant & Limitations Documentation Sheets:	☒	☐	
Permit Preparation Checklist:	☒	☐	
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	☒	☐	
Production-based Standards Calc. Sheets (for Sampling Points _____)	☐	☐	☒
Mass-based Standards Calc. Sheets (for Sampling Points _____)	☐	☐	☒
Most Strict Limits Sheets (for Sampling Points _____)	☐	☐	☒
Combined Wastestream Formula Sheets (for Sampling Points _____)	☐	☐	☒
Text of any Customized Special Conditions: If Yes, for which SCs: _____	☐	☐	☒

Other: * Three accts have RF's, as follow: the primary acct is 246496 (1024353000) = 0.90, 9/8/2010; secondly 246498 (1024353200) = 0.68, 9/9/2010; and thirdly 377308 (1037377700) = 0.77, 9/9/2010.

COMMENTS (Include notations of any significant changes from last permit):

Added ord total phenols sampling for all sample points & SC.D3 for reporting phenols.

PERMIT NO: 1024353000-1

SPECIAL CONDITIONS NOT TIED TO SPECIFIC SAMPLE POINTS

Special Condition:	# F.1	# E.18	# D.3	# _____	# _____	# _____	# _____	# _____
List any related SMR certifications:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
SMR certification frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List any related General Reports:	# _____	# Rad Discharge Report	# _____	# _____	# _____	# _____	# _____	# _____
General Report frequency:	[none]	once 3 mo	[none]	[none]	[none]	[none]	[none]	[none]

Are all the SMR certifications listed above associated with first permit sample point (001)? YES ☐ NO ☐ N/A (No Certs) ☒

Check here if there are no non-SP-specific Special Conditions: ☐

MSD 045503

PERMIT NO: 1024353000-1

SAMPLING POINT REFERENCE NUMBER: 001 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: San, NCCW, P&E wash, Regen/Reject, Process ww, Lab ww, Storm

Flow Rate: 14,839 Units: GPD Basis for Flow Rate: IUQ

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☒ NO ☐ Explain: Added ord total phenols sampling for all sample points.

MSD 045504

PERMIT NO: 1024353000-1

SAMPLING POINT REFERENCE NUMBER: 003 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: San, NCCW, P&E wash, Process ww, Lab ww, Storm

Flow Rate: 64,103 Units: GPD Basis for Flow Rate: IUQ

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation (Ord 12559, CFR___, etc)	Monitoring frequency	Basis for monitoring freq. (std for vol, etc; innocuous, low flow, etc)	Any OK?
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: Added ord total phenols sampling for all sample points.

MSD 045505

PERMIT NO: 1024353000-1

SAMPLING POINT REFERENCE NUMBER: 005 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: San, NCCW, Kitchen, Boiler, P&E wash, Regen/Reject, Process ww, Lab ww, Storm

Flow Rate: 341,328 Units: GPD Basis for Flow Rate: IUQ

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☒ NO ☐ Explain: Added ord total phenols sampling for all sample points.

MSD 045506

PERMIT NO: 1024353000-1

SAMPLING POINT REFERENCE NUMBER: 006 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: San, P&E wash, Storm

Flow Rate: 1,034 Units: GPD Basis for Flow Rate: IUQ

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☒ NO ☐ Explain: Added ord total phenols sampling for all sample points.

MSD 045507

PERMIT NO: 1024353000-1

SAMPLING POINT REFERENCE NUMBER: 007 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: San, NCCW, P&E wash, Process ww, Lab ww, Storm

Flow Rate: 23,450 Units: GPD Basis for Flow Rate: IUQ

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation (Ord 12559, CFR___, etc)	Monitoring frequency	Basis for monitoring freq. (std for vol, etc; innocuous, low flow, etc)	Any OK?
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☒ NO ☐ Explain: Added ord total phenols sampling for all sample points.

MSD 045508

PERMIT NO: 1024353000-1

SAMPLING POINT REFERENCE NUMBER: 008 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: San, NCCW, P&E wash, Lab ww, Storm

Flow Rate: 131,850 Units: GPD Basis for Flow Rate: IUQ

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☒ NO ☐ Explain: Added ord total phenols sampling for all sample points.

MSD 045509

PERMIT NO: 1024353000-1

SAMPLING POINT REFERENCE NUMBER: 009 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: San, NCCW, P&E wash, Lab ww, Storm

Flow Rate: 131,850 Units: GPD Basis for Flow Rate: IUQ

Pollutants	**Basis for inclusion (or exclusion of std polls)**	**Basis for limitation** (Ord 12559, CFR___, etc)	**Monitoring frequency**	**Basis for monitoring freq.** (std for vol, etc; innocuous, low flow, etc)	**Any OK?**
GENERAL:					
FLOW	standard	n/a	once 3 mo	standard	
BOD	standard	n/a	once 3 mo	standard	☐
COD	standard	n/a	once 3 mo	standard	☐
O&G	standard	Ord 12559	once 3 mo	std, plus some data presence	
pH	standard	Ord 12559	once 3 mo	standard	
Temp	standard	Ord 12559	once 3 mo	standard	
TSS	standard	n/a	once 3 mo	standard	☐
Ord. TTO	standard	Ord 12559	once/year	standard	
Ord. total phenols	KP, added due to type of waste	Ord 12559	once 3 mo	std for WW type, plus some data presence	☐
			[none]		☐
PRIORITY/CATEGORICAL:					
Silver, total	photo wastewater	Ord 12559	once 3 mo	prev. permits, some data >DL	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# ____	# ____	# ____	# ____	# ____	# ____	# ____
List related SMR certs:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# ____	# ____	# ____	# ____	# ____	# ____	# ____	# ____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☒ NO ☐ Explain: Added ord total phenols sampling for all sample points.

MSD 045510

PERMIT PREPARATION CHECKLIST - PART 1
(Fact Sheet Attachment)

Company Name: WASHINGTON UNIVERSITY MEDICAL SCHOOL Permit No.: 1024353000-1

Effective Date: 1/1/2013 Prepared by: 12/31/17 Date: 10/8/2012

REVIEW THE PRETREATMENT DATABASE (PIMS), INDUSTRY FILE AND PERMIT APPLICATION. ANSWER THESE QUESTIONS & UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ☒ No ☐
   If no, add _____ delete: _____

2. Is user in surcharge? Yes ☐ No ☒
   If yes, date last certified: _____
   If yes, Special Condition F.2 applies.

3. Does user's premise have more than one MSD account? Yes ☒ No ☐
   If yes, were all account numbers correctly listed (including occupant #s)? Yes ☒ No ☐
   If no, have account numbers been corrected in database before proceeding? Yes ☐ No ☐

4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ☒ No ☐
   If yes, list acct no., RF and date last updated:
   Acct 246498 RF 0.68 Updated 9/9/2010
   Acct 246496 RF 0.90 Updated 9/8/2010
   Acct 377308 RF 0.77 Updated 9/9/2010
   If yes, Special Condition F.1 applies.

5. Does user discharge water from a source not included in the MSD Billing system? Yes ☐ No ☒
   If yes, Special Condition F.3 & General Report "Discharge Volume for Billing" apply.

6. Have you established agreement among permit application, water consumption records and PIMS on component flows at each SP, total SP flows and total premise flow? Yes ☒ No ☐
   If no, explain _____

7. Has user been granted any variances from ordinance limitations? Yes ☐ No ☒
   If yes, Application Date: _____
   Approval Date: _____, or approved as part of permit issuance? Yes ☐
   If yes, Parameter(s) _____ at SP(s) _____
   If yes, Special Condition C.4 applies.

8. Does user discharge any radioactive materials? Yes ☒ No ☐
   If yes, Special Condition E.18 & General Report "Radiation Discharge" apply.

9. Does user generate wastes and/or wastewater by genetic engineering research? Yes ☐ No ☒
   If yes, Special Condition B.12 applies.

10. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ☒ No ☐
    If no, explain: _____
    If no, is documentation sufficient to use Special Condition Yes ☐ No ☐
    E.5 ☐ "Sampling Not Required at Connections with NO SP and with SP on parts",
    E.6 ☐ "Sampling Not Required at Connection with NO SP on it",
    E.7 ☐ "Sampling Not Required at Connection with SP on only part of it", or
    E.8 ☐ "Sampling Not Required at Permittee with No SP"?
    If no, is compliance schedule necessary to obtain documentation? Yes ☐ No ☐
    If yes, Special Condition G.1 is necessary.

11. Does premise require use of "upstream/downstream" sampling? Yes ☐ No ☒
    If yes, Upstream SP # _____ & Downstream SP # _____
    If yes, Special Conditions D.11 and E.9 apply.

12. Are there any inactive connections to MSD sewers? Yes ☐ No ☒
    If yes, Special Condition E10 applies.

13. Have you verified, in PIMS, the SP location descriptions are complete and adequate? Yes ☒ No ☐

14. Have you verified, in PIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ☒ No ☐

15. Does user have any discharges subject to NPDES permitting regulations? Yes ☐ No ☒
    If yes, list MSD points & corresponding NPDES points: _____
    If yes, Special Condition E.14 applies.

16. Do any SPs convey stormwater in addition to regulated wastewater? Yes ☒ No ☐
    If yes, list points: 001, 003, 005, 006, 007, 008, 009 and note on P&LD sheets.
    If yes, Special Condition D.10 applies.

17. Are any SPs Dry Justified in PIMS? Yes ☐ No ☒
If yes, list points _____ and note on P&LD sheets.
If yes, no self-monitoring is required, and Special Condition E.3 applies.

18. Are there SPs where user discharges only non-process wastewater? Yes ☐ No ☒
If yes, does no self-monitoring requirement / Special Condition E.3 apply? Yes ☐ No ☐
If yes, list points _____ and note on P&LD sheets.

19. Are there SPs with infrequent discharges that require coordination with the user for MSD to collect samples? Yes ☐ No ☒
If yes, list points: _____ and note on P&LD sheets.
If yes, Special Condition D.14 applies.

20. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ☐ No ☒
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition D.1 applies.

21. Are there SPs with self-monitoring requirements, but at less than a quarterly frequency, for all parameters? Yes ☐ No ☒
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition E.4 applies.

22. Can local limits TTO be removed from monitoring at any ordinance SPs? Yes ☐ No ☒
If yes, list points _____ and explain on P&LD sheets.
If yes, does TTO also need to be removed from MSD's monitoring? Yes ☐ No ☐
If yes, discuss with inspector (*name:* _____) and explain why it had been monitored by MSD: _____

23. Does user have a history of compliance problems at this or a previous location? Yes ☐ No ☒
If yes, explain problems: _____
If yes, is a compliance schedule required? Yes ☐ No ☐
If yes, Special Condition G.1 applies.
Is supporting documentation attached? Yes ☐ No ☐
If yes, are any other special requirements required? Yes ☐ No ☐
Explain: _____

24. Is user required to monitor for Total Phenols at an ordinance SP? Yes ☒ No ☐
If yes, does Special Condition D.3 for Total Phenols monitoring options apply? Yes ☒ No ☐

25. Has user chosen to employ continuous monitoring techniques for:
pH? If yes, list points _____. SC E.29 & Gen Rpt "Cont-Mon pH Excursions" apply. Yes ☐ No ☒
Temp? If yes, list points _____. SC E.30 & Gen Rpt "Cont-Mon Temp Excursions" apply. Yes ☐ No ☒
LEL? If yes, list points _____. SC E.31 & Gen Rpt "Cont-Mon LEL Excursions" apply. Yes ☐ No ☒

26. Does the company perform any processes for which summaries of activities are needed? Yes ☐ No ☒
If yes, Special Condition E.33 & General Report "Process Activity Summary" apply.

27. Are special billing conditions, other than the standard Special Conditions, needed? Yes ☐ No ☒
If yes, describe: _____
If yes, Special Condition F.4 applies.
Does General Report "Discharge Volume for Billing" apply? Yes ☐ No ☐
Does General Report "Custom Non-Standard" apply? Yes ☐ No ☐

28. Are any Special Conditions, other than the standard special conditions, required? Yes ☐ No ☒
If yes, explain: _____
Which Special Condition applies? _____
Is supporting documentation attached? Yes ☐ No ☐
If no, *explain:* _____
Does General Report "Custom Non-Standard" apply? Yes ☐ No ☐

29. Is user a hauled waste industry, discharging its wastewater at the Hauled Waste Station? Yes ☐ No ☒
If yes, have permit title, cover page language, & general conditions been modified? Yes ☐ No ☐
If yes, Special Conditions B.9, D.13, H.1, and H.2 apply.

30. Is user classified as a Categorical Industrial User (CIU)? Yes ☐ No ☒
If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit.
List those that are specific to a sampling point on that sampling point's fact sheet, too.
List those that are not specific to a sampling point on the "Special Conditions Not Tied to Specific SPs" fact sheet, too.

General Report	Special Condition #	Sampling Point #
_____	F.1	n/a
Rad Discharge Report	E.18	n/a
_____	D.10	001, 003, 005, 006, 007, 008, 009
_____	D.3	n/a
_____	_____	_____
_____	_____	_____

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 4, 2011

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

Re: Discharge Permit No: 5112216200 - 2.1
For premise at: 660 S. Euclid Avenue, 63110

Dear Ms. Isringhausen:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on February 1, 2008, for the above premise, is hereby revised as per the attached revised permit.

The following revisions were made to the permit:

- Added self-monitoring requirements for new sample points 008 and 009
- Updated the return factor values listed in Section II.C.1.

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

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

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

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

SM Rehmer

Scott M. Rehmer
Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit,
Self-monitoring Report Form, Sample Point Map

cc: Doug Mendoza
Jason Gill

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

PERMIT NO: 5112216200 - 2.1

EFFECTIVE DATE: June 01, 2011
EXPIRATION DATE: December 31, 2012

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
St. Louis, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 7
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006, 007, 008, 009

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

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 14,839

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Regeneration/Reject Water(Water softener regeneration) + Process Waste(Photographic & teaching labs) + Laboratory Waste(Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 64,103

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste(Photographic & teachng labs, animal care) + Laboratory Waste(Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 341,328

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Kitchen Waste + Laboratory Waste(Research labs) + Process Waste(Photographic & teaching labs, animal care, etc.) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration/Reject Water(Water softener regeneration) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 006

SAMPLING POINT LOCATION: 6" trapped clay pipe 13' N, 9' E of SE corner of building 80

AVERAGE WASTEWATER FLOW (GPD): 1,034

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown(Waste storage facility) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 23,450

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Process Waste + Laboratory Waste(Research labs) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: MH in plaza 27' W, 27' N of NE bldg corner

AVERAGE WASTEWATER FLOW (GPD): 131,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Laboratory Waste(Research labs) + Non Contact Cooling Water + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 009

SAMPLING POINT LOCATION: MH in E plaza 36' N, 27' E of S NE bldg

AVERAGE WASTEWATER FLOW (GPD): 131,850

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown + Non Contact Cooling Water + Laboratory Waste + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by October 28, 2011. For non-quarterly self-monitoring requirements, the permit year commences on January 1.**

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

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

B. CHANGE IN DISCHARGE:

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

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

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

C. PROBLEM DISCHARGE:

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

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

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

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

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

G. PERMIT RENEWAL:

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

H. PERMIT TRANSFER:

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

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

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

K. DEFINITIONS:

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

L. SEWER USE ORDINANCE:

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

M. NOTIFICATION AND REPORTING:

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

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

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

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

SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 006, 007, 008, and 009 may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

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

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

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

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety (90), sixty-eight (68), and seventy-seven (77) percents of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Permit No: 5112216200-2.1 Effective Date: 6/1/2011 Expiration Date: 12/31/2012

Premise Address: 660 S. Euclid Avenue, 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: _____

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT REVISION

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Location: **660 S. Euclid Avenue, 63110**

Former Permit No: **5112216200-2** Original Effective Date: **2/1/2008**

Revised Permit No: **5112216200-2.1** Revision Effective Date: **6/1/2011**

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

Per the facility inspection of 2/28/2011, new bldg at 425 S. Euclid was added, which included two new sampling manholes.

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

Added sample points 008 & 009 to self-monitoring requirements

Pg. # 1 **Permit #, Eff date, # of SP's, SP ref numbers listed**

Pg. # 7 **New SP-008 discharge sheet**

Pg. # 8 **New SP-009 discharge sheet**

Pg. # 10 **First report due date**

Pg. # 14 **Added 008 & 009 to SC A.1 for no monitoring w/ storm runoff**

Pg. # 14 **Updated RF's to 90, 68, & 77 percents (were 91, 73, & 58, resp.)**

SMR Start Dates for any new requirements:
Once/3 mo: 7/1/2011 or ☐ no new requirements
Once/6 mo: _____ or ☒ no new requirements
Once/year: 1/1/2012 or ☐ no new requirements

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

Other: _____

Prepared by: S. Rehmer	Date: 5/3/2011
Reviewed by: DMM	Date: 5-4-11

PERMIT NO: 5112216200-2.1

CHANGES TO

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

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

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

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

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

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

MSD 045531

PERMIT NO: 5112216200-2.1

SAMPLING POINT REFERENCE NUMBER: 008 **TYPE:** Ord ☒ Cat ☐ Comb ☐ **NEW SP** ☒ **or CHANGE to SP** ☐

Wastewater Components: Sanitary, Lab waste, NCCW, P&E wash, Storm

Flow Rate: 131,850 Units: GPD Basis for Flow Rate: Facility contact, 2/28/2011

FOR SPs WITH CHANGES, COMPLETE ONLY WHAT HAS CHANGED:

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation	Monitoring frequency	Basis for monitoring frequency	Any OK?
GENERAL:					
FLOW	**standard**	**n / a**	**once / 3 mo**	**standard**	
BOD	**standard**	**n / a**	**once / 3 mo**	**standard**	☐
COD	**standard**	**n / a**	**once / 3 mo**	**standard**	☐
O&G	**standard**	**ORD. 12559**	**once / 3 mo**	**standard**	
pH	**standard**	**ORD. 12559**	**once / 3 mo**	**standard**	
Temp	**standard**	**ORD. 12559**	**once / 3 mo**	**standard**	
TSS	**standard**	**n / a**	**once / 3 mo**	**standard**	☐
Ord. TTO	**standard**	**ORD. 12559**	**once / year**	**standard**	
			[none]		☐
			[none]		☐
PRIORITY/ CATEGORICAL:					
Silver	**Photographic waste**	**Ord. 12559**	**once 3 mo**	**Data shows presence at other SP's.**	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# _____	# _____	# _____	# _____	# _____	# _____	# _____
List related SMR certs:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for Ord TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

MSD 045532

PERMIT NO: 5112216200-2.1

SAMPLING POINT REFERENCE NUMBER: 009 **TYPE:** Ord ☒ Cat ☐ Comb ☐ **NEW SP** ☒ **or CHANGE to SP** ☐
Wastewater Components: Sanitary, Lab waste, NCCW, P&E wash, Storm
Flow Rate: 131,850 Units: GPD Basis for Flow Rate: Facility contact, 2/28/2011

FOR SPs WITH CHANGES, COMPLETE ONLY WHAT HAS CHANGED:

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation	Monitoring frequency	Basis for monitoring frequency	Any OK?
GENERAL:					
FLOW	**standard**	**n / a**	**once / 3 mo**	**standard**	
BOD	**standard**	**n / a**	**once / 3 mo**	**standard**	☐
COD	**standard**	**n / a**	**once / 3 mo**	**standard**	☐
O&G	**standard**	**ORD. 12559**	**once / 3 mo**	**standard**	
pH	**standard**	**ORD. 12559**	**once / 3 mo**	**standard**	
Temp	**standard**	**ORD. 12559**	**once / 3 mo**	**standard**	
TSS	**standard**	**n / a**	**once / 3 mo**	**standard**	☐
Ord. TTO	**standard**	**ORD. 12559**	**once / year**	**standard**	
			[none]		☐
			[none]		☐
PRIORITY/ CATEGORICAL:					
Silver	**Photographic waste**	**Ord. 12559**	**once 3 mo**	**Data shows presence at other SP's.**	☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐
			[none]		☐

Special Condition:	# D.10	# _____	# _____	# _____	# _____	# _____	# _____	# _____
List related SMR certs:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
SMR cert frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]
List related General Rpts:	# _____	# _____	# _____	# _____	# _____	# _____	# _____	# _____
General Rpt frequency:	[none]	[none]	[none]	[none]	[none]	[none]	[none]	[none]

Is this an Ord or Comb SP w/mon for Ord TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

MSD 045533

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT MODIFICATION

Permit to be Modified:

Company Name: **WASHINGTON UNIVERSITY MEDICAL SCHOOL**

Location: **660 S Euclid Ave, STL, MO 63110**

Permit No: **5112216200** Original Effective Date: **01/01/2008**

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

What is to be Modified:

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

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

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

Pg. # **2-6** **For SP's, Limit change for TTO**

Pg. # **12** **SC E.18 Radioactive Discharge Reporting Requirements**

Pg. # _____ _____

Pg. # _____ _____

Pg. # _____ _____

Pg. # _____ _____

Reasons for Modification:

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

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

Prepared by: S. Rehmer	Date: 12-27-2007
Reviewed by: DMM	Date: 1-2-8

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

Rev 07/2007

Metropolitan St. Louis Sewer District

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

December 28, 2007

Michael Koch, Environmental Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 South Euclid Ave, Campus Box 8229
St. Louis, MO 63110

Re: Discharge Permit No: 5112216200 - 2
For premise at: 660 S Euclid Ave, 63110

Dear Mr. Koch:

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

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

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

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

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

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer, Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit
cc: Doug Mendoza
James Goodall

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

PERMIT NO: 5112216200 - 2

EFFECTIVE DATE: February 01, 2008
EXPIRATION DATE: December 31, 2012

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 5
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006, 007

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

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 14,839

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Regeneration / Reject Water (Water softener regeneration) + Process Waste (Photographic & teaching labs) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 64,103

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste (Photographic & teaching labs, animal care) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 341,328

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Kitchen Waste + Laboratory Waste (Research labs) + Process Waste (Photographic & teaching labs, animal care, etc.) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration / Reject Water (Water softener regeneration) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 006

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

AVERAGE WASTEWATER FLOW (GPD): 1,034

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown (Waste storage facility) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 23,450

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Process Waste + Laboratory Waste (Research labs) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

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

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

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

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

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. CHANGE IN DISCHARGE:

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

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

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

C. PROBLEM DISCHARGE:

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

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

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

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

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

G. PERMIT RENEWAL:

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

H. PERMIT TRANSFER:

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

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

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

K. DEFINITIONS:

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

L. SEWER USE ORDINANCE:

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

M. NOTIFICATION AND REPORTING:

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

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

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

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

SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 006 and 007 may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

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

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

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

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety-one (91), seventy-three (73), and fifty-eight (58) percents of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

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 29, 2007

Michael Koch
Environmental Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

Re: Discharge Permit No: 5112216200 - 1
For premise at: 660 S. Euclid Ave.
St. Louis, MO 63110

Dear Mr. Koch:

The Metropolitan St. Louis Sewer District has developed an Industrial Wastewater Discharge Permit for the above premise. Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the permit on the following: information that you supplied in your Industrial User Questionnaire, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

The enclosed permit becomes effective January 01, 2008, and will expire on December 31, 2012. The terms and conditions of this permit are substantially the same as in the previous permit. You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. We have enclosed copies of the necessary report forms.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the permit.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

Enclosures: Industrial Wastewater Discharge Permit, Self-monitoring Report Forms
cc: Doug Mendoza
Jim Goodall

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

PERMIT NO: 5112216200 - 1

EFFECTIVE DATE: January 01, 2008
EXPIRATION DATE: December 31, 2012

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 5
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006, 007

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 14,839

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Regeneration / Reject Water (Water softener regeneration) + Process Waste (Photographic & teaching labs) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 64,103

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste (Photographic & teaching labs, animal care) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 341,328

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Kitchen Waste + Laboratory Waste (Research labs) + Process Waste (Photographic & teaching labs, animal care, etc.) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration / Reject Water (Water softener regeneration) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 006

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

AVERAGE WASTEWATER FLOW (GPD): 1,034

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown (Waste storage facility) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

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

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

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

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 23,450

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Process Waste + Laboratory Waste (Research labs) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

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

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

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

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

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

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

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

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

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

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

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

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

B. CHANGE IN DISCHARGE:

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

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

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

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

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written

report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

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

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

F. PERMIT TERMINATION OR MODIFICATION:

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

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

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

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and

shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

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

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

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

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

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

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

SECTION II- SPECIAL CONDITIONS:

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

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 006 and 007 may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than three hundred twenty (320) millicuries through sampling points 001, 005, 006, and 007, from the buildings east of Euclid Avenue and not more than one hundred twenty (120) millicuries through sampling point 003, the buildings from the west of Euclid Avenue, of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

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

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety-one (91), seventy-three (73), and fifty-eight (58) percent of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

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 25, 2007

Michael Koch
Environmental Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 South Euclid Avenue, Campus Box 8229
St. Louis, MO 63110

Re: Discharge Permit No: 5112216200 - 1
For premise at: 660 South Euclid Avenue
St. Louis, MO 63110

Dear Mr. Koch:

The Metropolitan St. Louis Sewer District has completed its review of your application for renewal of the Industrial Wastewater Discharge Permit for the above premise. The current permit becomes effective on January 1, 2008, and will expire on December 31, 2012.

Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the draft permit on the following: information that you supplied in your Industrial User Questionnaire, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

The terms and conditions of this permit are substantially the same as in the previous permit. Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the draft permit, and we will proceed to issue the final permit.

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

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott M. Rehmer
Assistant Engineer

Enclosures: Draft Industrial Wastewater Discharge Permit
cc: Doug Mendoza
Jim Goodall

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

PERMIT NO: 5112216200 - 1

EFFECTIVE DATE: January 01, 2008
EXPIRATION DATE: December 31, 2012

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave., Campus Box 8229
St. Louis, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 5
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006, 007

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

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

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

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

METROPOLITAN ST. LOUIS SEWER DISTRICT

Scott A. Rehmer
Assistant Engineer

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

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

AVERAGE WASTEWATER FLOW (GPD): 14,839

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Regeneration / Reject Water (Water softener regeneration) + Process Waste (Photographic & teaching labs) + Laboratory Waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	**	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	**	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	**	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	**	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the ordinance.

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

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

See Section I.A.1 of the permit conditions.

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

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

AVERAGE WASTEWATER FLOW (GPD): 64,103

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste (Photographic & teaching labs, animal care + laboratory waste (Research labs) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]		Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]		Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]		Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 12 A of the Ordinance.

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

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

See Section I.A.1 of the permit conditions.

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 341,328

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Kitchen Waste + Laboratory Waste (Research labs) + Process Waste (Photographic & teaching labs, animal care, etc.) + Plant & Equipment Washdown + Boiler Blowdown + Regeneration / Reject Water (Water softener regeneration) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	[illegible]	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	**	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	[illegible]	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for [illegible] any adjustments to the published limits made pursuant to Article V, Section [illegible] of the Ordinance.

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

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

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

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 006

SAMPLING POINT LOCATION: 6" clay pipe 13' N, 9' E of SE corner of building 89[illegible]

AVERAGE WASTEWATER FLOW (GPD): 1,034

WASTEWATER SOURCE AND CATEGORY: Sanitary + Plant & Equipment Washdown (Waste storage facility) + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	[illegible]	Daily Avg	Once/3 mo
Flow [GPD]		Daily Avg	***
Oil and Grease (Total) [mg/L]	20[illegible]	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	[illegible].52	Instant	Once/year
pH [SU]	[illegible]	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the ordinance.

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

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

**** See Section I.A.[illegible] of the permit conditions.

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 23,450

WASTEWATER SOURCE AND CATEGORY: Sanitary + Non Contact Cooling Water + Process Waste + Laboratory Waste (Research labs) + Plant & Equipment Washdown + Storm Water

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	***	Daily Avg	Once/3 mo
Flow [GPD]		Daily Avg	***
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	0.52	Instant	Once/year
pH [SU]	[illegible]	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the ordinance.

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

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

**** See Section I.A.[illegible] of the permit conditions.

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PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

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

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

a. All facility and sample description information required on the District's reporting form.

b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.

c. Daily flows, with dates, for all measurements or estimates made within the quarter.

d. Any certification statements required pursuant to the Special Conditions in Section II.

e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

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

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

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

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

B. CHANGE IN DISCHARGE:

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

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

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

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

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written

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report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

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

D. BYPASSING PROHIBITED:

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

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

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit;
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations in accordance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based, pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and

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shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system, conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

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SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. No Monitoring When Influenced by Storm Runoff

Sampling points 001, 003, 005, 006 and 007 may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than three hundred twenty (320) millicuries through sampling points 001, 005, 006, and 007, from the buildings east of Euclid Avenue and not more than one hundred twenty (120) millicuries through sampling point 003, the building west of Euclid Avenue, of radioactive material per year to the District's sanitary sewers. Such materials must be soluble or dispersible biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release to the sanitary sewage.

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Changes Which Might Impact Return Factor

Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on ninety-one (91), seventy-three (73), and fifty-eight (58) percents of the used water (on an annual basis) being discharged to the District from account numbers 246496, 246498, and 377308, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT FACT SHEET

Check one:
FIRST TIME PERMIT ☐ Prepared by: S. Rehmer Date: 10/22/2007
RENEWAL ☒ Reviewed by: DMM Date: 10/24/07
REVISION ☐

PERMIT NO: 5112216200 - 1 EFFECTIVE DATE: 1/1/2008 EXPIRATION DATE: 12/31/2012

COMPANY NAME: WASHINGTON UNIVERSITY MEDICAL SCHOOL

PREMISE ADDRESS: 660 South Euclid

RELATED ACCOUNT NUMBERS: 5112216100, 5112216700, 5112216800, 5112217601, 9000637201

SIC NUMBERS: 0279, 8221, 8733

TYPE OF OPERATION: Research and teaching facility

TOTAL NUMBER OF SAMPLING POINTS: 5 or; NO SAMPLING POINT ☐

NUMBER OF: ORDINANCE 5 CATEGORICAL _____ COMBINED _____

CATEGORICAL INDUSTRY? YES ☐ NO ☒

If Yes, 40 CFR _____ Subpart _____ PSES ☐ PSNS ☐

40 CFR _____ Subpart _____ PSES ☐ PSNS ☐

EXTRA STRENGTH SURCHARGE? YES ☐ NO ☒ If Yes, BOD _____ COD _____ TSS _____

RETURN FACTOR? YES ☒ NO ☐ If Yes, Acct # _____ RF _____ see below *

SPECIAL CONDITIONS REQUIRED? YES ☒ NO ☐

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
Pollutant & Limitations Documentation Sheets:	☒	☐	☐
Permit Preparation Checklist:	☒	☐	☐
Production Based Standards Calculation Sheets: If Yes, for Sampling Points: _____	☐	☐	☒
Most Strict Standards Calculation Sheets: If Yes, for Sampling Points: _____	☐	☐	☒
Combined Wastestream Calculations Sheets: If Yes, for Sampling Points: _____	☐	☐	☒

Other: * Three sewer accounts have return factors: 5112216200, 246496, June 98, 0.91
5112216700, 246498, Dec 98, 0.73
9000637201, 377308, Sep 98, 0.58

COMMENTS (Include notations of any significant changes from last permit):
None

REV 07/2007

PERMIT NO: 5112216200 - 1

SAMPLING POINT REFERENCE NUMBER: 001 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: NCCW, P&E Wash, Process (photographic & labs), Regen/Reject, Sanitary, Storm

Flow Rate: 14,839 Units: GPD Basis for Flow Rate: IUQ

Pollutants	**Basis for in/exclusion**	**Basis for limitation**	**Monitoring frequency**	**Basis for monitoring frequency**
GENERAL:	**Exclusion of general, or Inclusion of extras**			
FLOW	standard	n / a	once / 3 mo	standard
BOD	standard	n / a	once / 3 mo	standard
COD	standard	n / a	once / 3 mo	standard
O&G	standard	ORD. 8472	once / 3 mo	standard
pH	standard	ORD. 8472	once / 3 mo	standard
Temp	standard	ORD. 8472	once / 3 mo	standard
TSS	standard	n / a	once / 3 mo	standard
Ord. TTO	standard	ORD. 8472	once / year	standard
PRIORITY/ CATEGORICAL:				
Silver	Photographic waste	ORD. 8472	once / 3 mo	prev. pmts; some data > DL

Special Conditions: # D.10, # E.18, # _____, # _____, # _____, # _____, # _____, # _____, # _____, # _____

Any significant changes in any of the above from previous permit? YES ☐ NO ☒
Explain: _____

MSD 045575

PERMIT NO: 5112216200 - 1

SAMPLING POINT REFERENCE NUMBER: 003 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: NCCW, P&E Wash, Process (photographic & labs), Regen/Reject, Sanitary, Storm

Flow Rate: 64,103 Units: GPD Basis for Flow Rate: IUQ

Pollutants	**Basis for in/exclusion**	**Basis for limitation**	**Monitoring frequency**	**Basis for monitoring frequency**
GENERAL:	**Exclusion of general, or Inclusion of extras**			
FLOW	standard	n / a	once / 3 mo	standard
BOD	standard	n / a	once / 3 mo	standard
COD	standard	n / a	once / 3 mo	standard
O&G	standard	ORD. 8472	once / 3 mo	standard
pH	standard	ORD. 8472	once / 3 mo	standard
Temp	standard	ORD. 8472	once / 3 mo	standard
TSS	standard	n / a	once / 3 mo	standard
Ord. TTO	standard	ORD. 8472	once / year	standard
PRIORITY/ CATEGORICAL:				
Silver	Photographic waste	ORD. 8472	once / 3 mo	prev. pmts; some data > DL

Special Conditions: # D.10, # E.18, # _____, # _____, # _____, # _____, # _____, # _____, # _____. # _____, # _____

Any significant changes in any of the above from previous permit? YES ☐ NO ☒
Explain: _____

MSD 045576

PERMIT NO: 5112216200 - 1

SAMPLING POINT REFERENCE NUMBER: 005 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: NCCW, P&E Wash, Process (photographic & labs), Regen/Reject, Sanitary, Storm, Kitchen Waste, Boiler Blowdown

Flow Rate: 341, 328 Units: GPD Basis for Flow Rate: IUQ

Pollutants	Basis for in/exclusion	Basis for limitation	Monitoring frequency	Basis for monitoring frequency
GENERAL:	**Exclusion of general, or Inclusion of extras**			
FLOW	standard	n / a	once / 3 mo	standard
BOD	standard	n / a	once / 3 mo	standard
COD	standard	n / a	once / 3 mo	standard
O&G	standard	ORD. 8472	once / 3 mo	standard
pH	standard	ORD. 8472	once / 3 mo	standard
Temp	standard	ORD. 8472	once / 3 mo	standard
TSS	standard	n / a	once / 3 mo	standard
Ord. TTO	standard	ORD. 8472	once / year	standard
PRIORITY/ CATEGORICAL:				
Silver	Photographic waste	ORD. 8472	once / 3 mo	prev. pmts; some data > DL

Special Conditions: # D.10, # E.18, # _____, # _____, # _____, # _____, # _____, # _____, # _____, # _____, # _____

Any significant changes in any of the above from previous permit? YES ☐ NO ☒
Explain: _____

MSD 045577

PERMIT NO: 5112216200 - 1

SAMPLING POINT REFERENCE NUMBER: 006 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: P&E Wash, Sanitary, Storm

Flow Rate: 1,034 Units: GPD Basis for Flow Rate: IUQ

Pollutants	Basis for in/exclusion	Basis for limitation	Monitoring frequency	Basis for monitoring frequency
GENERAL:	**Exclusion of general, or Inclusion of extras**			
FLOW	standard	n / a	once / 3 mo	standard
BOD	standard	n / a	once / 3 mo	standard
COD	standard	n / a	once / 3 mo	standard
O&G	standard	ORD. 8472	once / 3 mo	standard
pH	standard	ORD. 8472	once / 3 mo	standard
Temp	standard	ORD. 8472	once / 3 mo	standard
TSS	standard	n / a	once / 3 mo	standard
Ord. TTO	standard	ORD. 8472	once / year	standard
PRIORITY/ CATEGORICAL:				
Silver	Photographic waste	ORD. 8472	once / 3 mo	prev. pmts; some data > DL

Special Conditions: # D.10, # E.18, # _____, # _____, # _____, # _____, # _____, # _____, # _____. # _____, # _____

Any significant changes in any of the above from previous permit? YES ☐ NO ☒
Explain: _____

MSD 045578

PERMIT NO: 5112216200 - 1

SAMPLING POINT REFERENCE NUMBER: 007 **TYPE:** Ord ☒ Cat ☐ Comb ☐

Wastewater Components: NCCW, P&E Wash, Process (photographic & labs), Regen/Reject, Sanitary, Storm

Flow Rate: 23,450 Units: GPD Basis for Flow Rate: IUQ

Pollutants	Basis for in/exclusion	Basis for limitation	Monitoring frequency	Basis for monitoring frequency
GENERAL:	**Exclusion of general, or Inclusion of extras**			
FLOW	standard	n / a	once / 3 mo	standard
BOD	standard	n / a	once / 3 mo	standard
COD	standard	n / a	once / 3 mo	standard
O&G	standard	ORD. 8472	once / 3 mo	standard
pH	standard	ORD. 8472	once / 3 mo	standard
Temp	standard	ORD. 8472	once / 3 mo	standard
TSS	standard	n / a	once / 3 mo	standard
Ord. TTO	standard	ORD. 8472	once / year	standard
PRIORITY/ CATEGORICAL:				
Silver	Photographic waste	ORD. 8472	once / 3 mo	prev. pmts; some data > DL

Special Conditions: # D.10, # E.18, # _____, # _____, # _____, # _____, # _____, # _____, # _____. # _____, # _____

Any significant changes in any of the above from previous permit? YES ☐ NO ☒
Explain: _____

MSD 045579

PERMIT PREPARATION CHECKLIST - PART 1
(Fact Sheet Attachment)

Company Name: WASHINGTON UNIVERSITY MEDICAL SCHOOL Permit No.: 5112216200 - 1

Effective Date: 1/1/2008 Prepared by: S. Rehmer Date: 10/22/2007

REVIEW THE PRETREATMENT DATABASE (PIMS), INDUSTRY FILE AND PERMIT APPLICATION.

ANSWER THESE QUESTIONS & UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ☒ No ☐
   If no, add _____ delete: _____

2. Is user in surcharge? Yes ☐ No ☒
   If yes, date last certified: _____
   If yes, Special Condition F.2 applies.

3. Does user's premise have more than one MSD account? Yes ☒ No ☐
   If yes, were all account numbers correctly listed (including occupant #s)? Yes ☒ No ☐
   If no, have account numbers been corrected in database before proceeding? Yes ☐ No ☐

4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ☒ No ☐
   If yes, list acct no., RF and date last updated:
   Acct 5112216200 RF 0.91 Updated 6/15/1998
   Acct 5112216700 RF 0.73 Updated 12/14/1998
   Acct 9000637201 RF 0.58 Updated 9/11/1998
   If yes, Special Condition F.1 applies.

5. Does user discharge water from a source not included in the MSD Billing system? Yes ☐ No ☒
   If yes, Special Condition F.3 applies.

6. Have you established agreement among permit application, water consumption records and PIMS on component flows at each SP, total SP flows and total premise flow? Yes ☒ No ☐
   If no, explain _____

7. Has user been granted any variances from ordinance limitations? Yes ☐ No ☒
   If yes Parameter(s) _____ at SP(s) _____
   If yes, Special Condition C.4 applies.

8. Does user discharge any radioactive materials? Yes ☒ No ☐
   If yes, Special Condition E.18 applies.

9. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ☒ No ☐
   If no, explain: _____
   If no, is documentation sufficient to use Spec Cond ☐ E.5, ☐ E.6, ☐ E.7 or ☐ E.8? Yes ☐ No ☐
   If no, is compliance schedule necessary to obtain documentation? Yes ☐ No ☐
   If yes, Special Condition G.1 is necessary.

10. Does premise require use of "upstream/downstream" sampling? Yes ☐ No ☒
    If yes, Upstream SP # _____ & Downstream SP # _____
    If yes, Special Conditions D.11 and E.9 apply.

11. Are there any inactive connections to MSD sewers? Yes ☐ No ☒
    If yes, does Special Condition E10. apply? Yes ☐ No ☐

12. Have you verified, in PIMS, the SP location descriptions are complete and adequate? Yes ☒ No ☐

13. Have you verified, in PIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ☒ No ☐

14. Are any SPs Dry Justified? Yes ☐ No ☒
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition E.3 applies.

15. Do any SPs convey stormwater in addition to regulated wastewater? Yes ☒ No ☐
If yes, list points: 001, 003, 005, 006, 007 and note on P&LD sheets.
If yes, Special Condition D.10 applies.

16. Does user have any discharges subject to NPDES permitting regulations? Yes ☐ No ☒
If yes, list points: _____
If yes, Special Condition E.14 applies.

17. Are there some SPs where user discharges only non-process wastewater? Yes ☐ No ☒
If yes, does Special Condition E.3 apply? Yes ☐ No ☐
If yes, list points _____ and note on P&LD sheets.

18. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ☐ No ☒
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition D.1 applies.

19. Are there SPs with less than a quarterly self-monitoring frequency for all parameters? Yes ☐ No ☒
If yes, Special Condition E.4 applies.

20. Can user be given a waiver from monitoring local limits TTO at any ordinance SPs? Yes ☐ No ☒
If yes, list points _____ and explain on P&LD sheets.

21. Does user have a history of compliance problems at this or a previous location? Yes ☐ No ☒
If yes, is a compliance schedule required? Yes ☐ No ☐
If yes, Special Condition G.1 applies.
Is supporting documentation attached? Yes ☐ No ☐

22. Is user required to monitor for Total Phenols at an ordinance SP? Yes ☐ No ☒
If yes, does Special Condition D.3 apply? Yes ☐ No ☐

23. Are special billing conditions, other than the standard Special Conditions, needed? Yes ☐ No ☒
If yes, describe: _____

24. Are any Special Conditions, other than the standard special conditions, required? Yes ☐ No ☒
If yes, explain: _____

Is supporting documentation attached? Yes ☐ No ☐

25. Is user classified as a Categorical Industrial User (CIU)? Yes ☐ No ☒
If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit.
List those that are specific to a sampling point on that sampling point's fact sheet.

Special Condition #	Sampling Point #
F.1	N / A
E.18	001, 003, 005, 006, 007
D.10	001, 003, 005, 006, 007
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

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

July 8, 2005

Michael Koch
Hazardous Materials Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
P.O. Box 8229
St. Louis, MO 63110

RE: Discharge Permit No: 51122162-00
For premise at: 660 S. Euclid Avenue

Dear Mr. Koch:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on January 1, 2003, for the premise identified above, is hereby modified pursuant to the attached pages 1, 5A, and 11. This modification adds sampling point 007 and amends two related special conditions. This letter and the revised pages 1, 5A, and 11 should be affixed to your permit as your official record and become a part thereof. These changes were identified pursuant to the District's June 21, 2005 facility inspection of your premise.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

Enclosure

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 51122162-00

EFFECTIVE DATE: January 01, 2003
MODIFICATION DATE: August 01, 2005
EXPIRATION DATE: December 31, 2007

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. EUCLID AVENUE
ST. LOUIS, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: FIVE
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006, 007

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

AVERAGE WASTEWATER FLOW (GPD): 6,426

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Sanitary + Laboratory Waste + Process Waste

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. Special Sampling and Analytical Procedures:

1. Sampling points **001**, **003**, **005**, **006** and **007** may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. Special Certification and Reporting Requirements:

1. Permittee is authorized to discharge not more than **three hundred twenty (320) millicuries** through sampling points **001**, **005**, **006**, and **007**, from the buildings east of Euclid Avenue and not more than **one hundred twenty (120) millicuries** through sampling point **003**, the buildings from the west of Euclid Avenue, of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT FILE

DOCUMENTATION FORM for MODIFICATION

GDb: X
P:\ X
PIMS: X
File: X

Permit to be Modified:

Company Name: WASHINGTON UNIVERSITY MEDICAL SCHOOL

Location: 660 S. EUCLID AVE. ST. LOUIS, MO 63110

Permit No: 5112262-00 Effective Date: 08-01-05

What is to be Modified:

Briefly explain what is to be modified and then list the pages affected.

ADD SP007 & AMEND RELATED SPECIAL CONDITIONS.

Pg. # 1 ADD SP007 REFERENCE & MODIFICATION DATE.

Pg. # 5A ADD PAGE 5A & SP 007.

Pg. # 11 ADD SP 007 TO PERMIT SPECIAL CONDITIONS II.A.1(D.10) & II.B.1(E.18).

Pg. #

Reasons for Modification:

Cite regulation, policy, etc. and identify any other documents which support the modification.

SEE ATTACHED DOCUMENTS.

Prepared by: FTG	Date: 07-07-05
Reviewed by: DMM	Date: 7-8-05

Permit Modified by: FTG	Date: 07.07.05
Entire Permit Reissued?	NO ~
Only these pages modified:	1, 5A, 11 ~

Rev 12/01

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. 6/21/05 INSPECTION

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.

PIMS - Pretreatment Information Management System [PIMS St. Louis (PIMS)] - [Sample Points]

File Edit Records Worklists Reports/Letters Tools Window Help

General Info | Sample Points | Metering | Monitoring | Permits | Results | Compliance | Enforcement | Water Use | Spec Dischg

Facility ID: 5112216200 Name: WASHINGTON UNIVERSITY MEDICAL SCHOOL [5112216200] SIU: ☑ Class: Potential Toxic Waste

Number of Sample Points: 10 Sample Point: 007 Manhole in sidewalk E of Bldg 63; 111' N, 2' E of SE corner of building

Definition | Pretreatment | Discharge | Limits | All Limits | Meters

Discharge Component	Process Description	Discharge Is	Stream Is	Avg Flow	Unit	Max Flow	Unit	Effective	End Date
[redacted]	Janitorial cleaning	Batch	Dilution	50	GPD		GPD	06/21/2005	
Laboratory Waste	R&D	Batch	Dilution	1	GPD		GPD	06/21/2005	
Process Waste	Research animal care	Batch	Dilution	5,575	GPD		GPD	06/21/2005	
Sanitary		Continuous	Dilution	800	GPD		GPD	06/21/2005	

Total Avg. Flow: 6,426 GPD

Ready | Jul 07, 2005 9:09:02 AM

start

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 21, 2002

Michael T. Kershaw
Hazardous Materials Div. Manager, EH&S
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
Campus Box 8229
St. Louis, MO 63110

RE: Discharge Permit No: 51122162-00
For premise at: 660 S. Euclid Avenue

Dear Mr. Kershaw:

Enclosed is the Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit for the premise identified above. This permit is issued pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001. This permit has been prepared based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the previous permit. Special condition II.C.1 has been amended to reflect the addition of two additional return factors relating to account numbers 51122167-00 and 90006372-01. Additionally, Section I of the permit conditions has been reorganized and includes additional clarifying language but does not contain any new requirements. Other minor changes may have been made to improve the overall clarity of the document.

The previous permit, effective July 15, 1999, is voided as of the effective date of the enclosed permit.

Monitoring reports required by the conditions of this permit must be submitted quarterly for the life of the permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. Copies of the necessary report forms are enclosed.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed acceptance, by you, of the provisions of this permit.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosures

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 51122162-00

EFFECTIVE DATE: January 01, 2003
EXPIRATION DATE: December 31, 2007

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. EUCLID AVENUE
ST. LOUIS, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: FOUR
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

AVERAGE WASTEWATER FLOW (GPD): 72,605

WASTEWATER SOURCE AND CATEGORY: Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Research & Development Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

AVERAGE WASTEWATER FLOW (GPD): 29,750

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Research & Development Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 695,200

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Research & Development Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 006

SAMPLING POINT LOCATION: 6" clay pipe 13' N, 9' E of SE corner of building 80

AVERAGE WASTEWATER FLOW (GPD): 19,550

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.
b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
c. Daily flows, with dates, for all measurements or estimates made within the quarter.
d. Any certification statements required pursuant to the Special Conditions in Section II.
e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by April 28, 2003.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 350 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. Special Sampling and Analytical Procedures:

1. Sampling points **001**, **003**, **005**, and **006** may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. Special Certification and Reporting Requirements:

1. Permittee is authorized to discharge not more than **three hundred twenty (320) millicuries** through sampling points **001**, **005** and **006**, from the buildings east of Euclid Avenue and not more than **one hundred twenty (120) millicuries** through sampling point **003**, the buildings from the west of Euclid Avenue, of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C. Special Billing Reporting Requirements:

1. Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninety-one (91)**, **seventy-three (73)**, and **fifty-eight (58) percents** of the used water (on an annual basis) being discharged to the District for account numbers **51122162-00**, **51122167-00**, and **90006372-01**, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

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: [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 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.

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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.	Reasearch - Bio-medical	8733
b.	Education - Graduate Medical & Research Training	8221
c.	Animal Care - Research Animal Housing	0279
d.		

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 51122162-00

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)	

6. Are your activities subject to seasonal variation? [] Yes [X] No
If "Yes," explain and indicate the month(s) of peak activity:

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MSD 045603

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	[]	[]	287,824	287,824	
		[]	[]	[]			
		[]	[]	[]			
		[]	[]	[]			

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MSD 045604

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 311221 67-00

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 labs	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 Regen)	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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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]	[]	[]

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Continued on next page

MSD 045606

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	<500	Trace

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MSD 045607

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
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? [] 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 3000 10857 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 045608

Company Name: Washington University School of Medicine
Premise Address: 660 S. Euclid
Account Number: 5112216 2-00

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:

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MSD 045609

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

October 17, 2002

Michael T. Kershaw
Hazardous Materials Div. Manager, EH&S
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
Campus Box 8229
St. Louis, MO 63110

RE: Discharge Permit No: 51122162-00
For premise at: 660 S. Euclid Avenue

Dear Mr. Kershaw:

We have completed our review of your application for renewal of the Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit for the premise identified above. The current permit expires on January 1, 2003. Enclosed is a draft copy of the proposed permit renewal.

Except as noted in this paragraph, the terms and conditions of this draft permit renewal are substantially the same as in the current permit. Special condition II.C.1 has been amended to reflect the addition of two additional return factors relating to account numbers 51122167-00 and 90006372-01. Additionally, Section I of the permit conditions has been reorganized and includes additional clarifying language but does not contain any new requirements. Other minor changes may have been made to improve the overall clarity of the document

This draft has been prepared pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 3, 2001 and is based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed as acceptance of the draft permit and we will proceed to issue the final permit.

If you have any questions, please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosure

cc: Permit file

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 51122162-00

EFFECTIVE DATE: January 01, 2003
EXPIRATION DATE: December 31, 2007

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. EUCLID AVENUE
ST. LOUIS, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: FOUR
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

DRAFT

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Douglas M. Mendoza, P.E.
Industrial Waste Engineer

MSD 045611

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: Flow from W in MH 30' N, 10' W of NE corner of building 27 (in alley)

AVERAGE WASTEWATER FLOW (GPD): 72,605

WASTEWATER SOURCE AND CATEGORY: Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Research & Development Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

DRAFT

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: Flow from S in MH N of building 14 in drive, 6' S of O2 tanks

AVERAGE WASTEWATER FLOW (GPD): 29,750

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Research & Development Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

DRAFT

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Ave. on S side of Scott Ave. in street

AVERAGE WASTEWATER FLOW (GPD): 695,200

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Non Categorical Process Waste + NCCW + Plant & Equipment Washdown + Regeneration/Reject Water + Research & Development Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

DRAFT

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 006

SAMPLING POINT LOCATION: 6" clay pipe 13' N, 9' E of SE corner of building 80

AVERAGE WASTEWATER FLOW (GPD): 19,550

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

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4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.
b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
c. Daily flows, with dates, for all measurements or estimates made within the quarter.
d. Any certification statements required pursuant to the Special Conditions in Section II.
e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by April 28, 2003.**

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10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 350 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

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C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

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G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

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M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. Special Sampling and Analytical Procedures:

1. Sampling points **001**, **003**, **005**, and **006** may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. Special Certification and Reporting Requirements:

1. Permittee is authorized to discharge not more than **three hundred twenty (320) millicuries** through sampling points **001**, **005** and **006**, from the buildings east of Euclid Avenue and not more than **one hundred twenty (120) millicuries** through sampling point **003**, the buildings from the west of Euclid Avenue, of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

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C. Special Billing Reporting Requirements:

1. Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninety-one (91)**, **seventy-three (73)**, and **fifty-eight (58) percents** of the used water (on an annual basis) being discharged to the District for account numbers **51122162-00**, **51122167-00**, and **90006372-01**, respectively. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT FACT SHEET

Check one:

FIRST TIME PERMIT	
RENEWAL	X
REVISION	

Prepared by:	FG	Date:	8.19.2
Reviewed by:	DMM	Date:	8-23-02

PERMIT NO: 51122162-00 EFFECTIVE DATE: 1.1.03 EXPIRATION DATE: 12.31.07

MODIFICATION DATES: (1)_____, (2)_____, (3)_____, (4)_____

COMPANY NAME: WASHINGTON U. SCHOOL OF MEDICINE

PREMISE ADDRESS: 660 S. EUCLID AVE. ST. LOUIS, MO 63110

RELATED ACCOUNT NUMBERS: 51122161-00, 51122167-00, 51122168-00, 51122176-01, 90006372-01

SIC NUMBERS: 0279, 8221, & 8733

TYPE OF OPERATION: R&D / MEDICAL & RESEARCH TRAINING

TOTAL NUMBER OF SAMPLING POINTS: 4 or; NO SAMPLE POINT ____

NUMBER OF: ORDINANCE 4 CATEGORICAL ____ COMBINED ____

CATEGORICAL INDUSTRY ? YES ____ NO ✓

If Yes, 40 CFR ____ Subpart ____ PSES ___ PSNS ___

40 CFR ____ Subpart ____ PSES ___ PSNS ___

EXTRA STRENGTH SURCHARGE ? YES ___ NO ✓ If Yes, BOD ___ COD ___ TSS ___

RETURN FACTOR ? YES ✓ NO ___ If Yes, Acct # 51122162-00 RF 0.91
51122167-00 0.73
90006372-01 0.58

SPECIAL CONDITIONS REQUIRED ? YES ✓ NO ___

SUPPORTING DOCUMENTS ATTACHED	YES	NO	N/A
Pollutant & Limitations Documentation Sheets:	✓		
Permit Preparation Checklist:	✓		
Production Based Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Most Strict Standards Calculation Sheets:			✓
If Yes, for Sampling Points:			
Combined Wastestream Calculations Sheets:			✓
If Yes, for Sampling Points:			
Other:			

COMMENTS (Include notations of any significant changes from last permit):

(1) FLOWS REVISED. (2) 2 ADDITIONAL RF's ADDED.

PERMIT NO: 5112216 2-00

SAMPLING POINT REFERENCE NUMBER: 001 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SAN + MCW + P/E WASH. + REGEN + R&D + NON-CONT. WASTE.

Flow Rate: 72,605 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: Ag; R&D LAB. IN CURRENT PMT. DATA EVIDENCES SOME PRESENCE.

Basis for Pollutants: STD PERMIT POLLUTANTS

Basis for Limitations: MSD ORD #8472.

Basis for Monitoring Frequencies: 1/3 MOS; VOLUME

Special Conditions: # D.10, # _____, # _____, # _____, # _____, # _____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: FLOW; 55,850 → 72605 GPD

SAMPLING POINT REFERENCE NUMBER: 003 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SAN + P/E WASH. + R&D WASTE

Flow Rate: 29,750 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: Ag: SEE SP 001.

Basis for Pollutants: SEE SP 001

Basis for Limitations: " "

Basis for Monitoring Frequencies: " "

Special Conditions: # D.10, # _____, # _____, # _____, # _____, # _____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES ✓ NO __

Explain: FLOW; 3,445 → 29,750 GPD.

PERMIT NO: 5112142-00

SAMPLING POINT REFERENCE NUMBER: 005 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SAN + NCCW + P/E WASH + BOILER + REGEN + KITCHEN + R&D + NON-CONT WASTE.

Flow Rate: 695,200 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: Ag; SEE SP 001.

Basis for Pollutants: SEE SP 001

Basis for Limitations: " "

Basis for Monitoring Frequencies: " "

Special Conditions: # D.10, # _____, # _____, # _____, # _____, # _____

Any significant changes in Components, Flows, Limits or Monitoring Reqs from previous permit ? YES ✓ NO __

Explain: FLOW; 555,150 → 695,200 GPD

SAMPLING POINT REFERENCE NUMBER: 006 **TYPE:** Ord. ✓ Cat __ Comb __

Wastewater Components: SAN + P/E WASH.

Flow Rate: 19,550 GPD Basis for Flow Rate: IUQ

General Pollutants: BOD ✓ COD ✓ O&GT ✓ pH ✓ Temp ✓ TSS ✓ Ord TTO ✓

Other: N/A

Priority/Categorical Pollutants: Ag; FILM WASTE.

Basis for Pollutants: SEE SP001

Basis for Limitations: " "

Basis for Monitoring Frequencies: " "

Special Conditions: # D.10, # _____, # _____, # _____, # _____, # _____

Any significant changes in Components, Flows, Limits or Monitoring Req from previous permit ? YES ✓ NO __

Explain: FLOW; 9,865 → 19,550 GPD

PERMIT PREPARATION CHECKLIST - PART 1
(Fact Sheet Attachment 2)

Company Name: WASHINGTON U. SCHOOL OF MEDICINE Permit No.: S112162-00

Effective Date: 1.1.03 Prepared by: FG Date: 8.20.02

REVIEW THE PRETREATMENT DATABASE (ECIMS), INDUSTRY FILE AND PERMIT APPLICATION.

ANSWER THE FOLLOWING QUESTIONS AND UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ✓ No ___
   If no, add: ___ delete: ___

2. Is user in surcharge? Yes ___ No ✓
   If yes, date last certified: ___
   If yes, Special Condition F.2 applies.

3. Does user's premise have more than one MSD account? Yes ✓ No ___
   If yes, were all account numbers correctly listed (including occupant #s)? Yes ✓ No ___
   If no, have account numbers been corrected in database before proceeding? Yes ___ No ___

4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ✓ No ___
   If yes, list acct no., RF and date last updated:
   Acct S112162-00 RF 0.91 Updated 6.15.98
   Acct S112147-00 RF 0.73 Updated 1.24.97
   If yes, Special Condition F.1 applies. 9000637-01 RF 0.58 11.1.96

5. Does user discharge water from a source not included in the MSD Billing system? Yes ___ No ✓
   If yes, Special Condition F.3 applies.

6. Have you established agreement among permit application, water consumption records and ECIMS on component flows at each SP, total SP flows and total premise flow? Yes ✓ No ___
   If no, explain ___

7. Has user been granted any variances from ordinance limitations? Yes ___ No ✓
   If yes, Parameter(s) ___ at SP(s) ___
   If yes, Special Condition C.4 applies.

8. Does user discharge any radioactive materials? Yes ✓ No ___
   If yes, Special Condition E.18 applies. E.18 MODIFIED

9. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ✓ No ___
   If no, explain: ___
   If no, is documentation sufficient to use Special Condition E.5, E.6, E.7 or E.8? Yes ___ No ___
   If no, is compliance schedule necessary to obtain documentation? Yes ___ No ___
   If yes, Special Condition G.1 is necessary.

10. Does premise require use of "upstream/downstream" sampling? Yes ___ No ✓
    If yes, Upstream SP # ___ & Downstream SP # ___
    If yes, Special Conditions D.11 and E.9 apply.

11. Are there any inactive connections to MSD sewers? Yes ___ No ✓
    If yes, does Special Condition E10. apply? Yes ___ No ___

12. Have you verified, in ECIMS, the SP location descriptions are complete and adequate? Yes ✓ No ___

13. Have you verified, in ECIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ✓ No ___

14. Are any SPs Dry Justified? Yes ___ No ✓
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition E.3 applies.

15. Do any SPs convey stormwater in addition to regulated wastewater? Yes ✓ No ___
If yes, list points: 001, 003, 005, 006 and note on P&LD sheets.
If yes, Special Condition D.10 applies.

16. Does user have any discharges subject to NPDES permitting regulations? Yes ___ No ✓
If yes, list points: _____
If yes, Special Condition E.14 applies.

17. Are there some SPs where user discharges only non-process wastewater? Yes ___ No ✓
If yes, does Special Condition E.3 apply? Yes ___ No ___
If yes, list points _____ and note on P&LD sheets.

18. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ___ No ✓
If yes, list points _____ and note on P&LD sheets.
If yes, Special Condition D.1 applies.

19. Are there SPs with less than a quarterly self-monitoring frequency for all parameters? Yes ___ No ✓
If yes, Special Condition E.4 applies.

20. Can user be given a waiver from monitoring local limits TTO at any ordinance SPs? Yes ___ No ✓
If yes, list points _____ and explain on P&LD sheets.

21. Does user have a history of compliance problems at this or a previous location ? Yes ___ No ✓
If yes, is a compliance schedule required? Yes ___ No ___
If yes, Special Condition G.1 applies.
Is supporting documentation attached? Yes ___ No ✓

22. Is user required to monitor for Total Phenols at an ordinance SP? Yes ___ No ✓
If yes, does Special Condition D.3 apply? Yes ___ No ✓

23. Are special billing conditions, other than the standard Special Conditions, needed? Yes ___ No ✓
If yes, describe: _____

24. Are any Special Conditions, other than the standard special conditions, required? Yes ___ No ✓
If yes, explain: _____
Is supporting documentation attached? Yes ___ No ✓

25. Is user classified as a Categorical Industrial User (CIU)? Yes ___ No ✓
If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit:

#E.18 #F.1 #_____ #_____ #_____ #_____ #_____ #_____ #_____ #_____

Rev 12/01

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

May 23, 2002

Bruce Backus
Director EH&S
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
Campus Box 8229
St. Louis, MO 63110

RE: INDUSTRIAL USER QUESTIONNAIRE
Discharge Permit No: 51122162-00
For premise at: 660 S. Euclid Avenue

Dear Mr. Backus:

The Metropolitan St. Louis Sewer District Wastewater Discharge permit for the above premise expires on January 1, 2003. Under the terms of the permit, you are requested to apply for renewal at least 180 days prior to the expiration date.

Enclosed is an Industrial User Questionnaire along with detailed instructions to assist you in supplying the required information. This questionnaire serves as your permit application. We request that you return the original and yellow copy to the District by August 19, 2002.

After a review, of the completed questionnaire and our existing data, we will prepare a draft permit and send it to you for comment.

Thank you for your cooperation. If you have any question or any specific problem providing the requested information please contact me at 436-8756.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Enclosures

cc: Doug Mendoza
Jim Goodall
Permit file

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

June 30, 2000

Michael T. Kershaw
Hazardous Materials Manager
WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Avenue
Campus Box 8229
St. Louis, MO 63110

RE: Discharge Permit No: 51122162-00
For premises at: 660 S. Euclid Avenue

Dear Mr. Kershaw:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on July 15, 1999, for the premise identified above, is hereby modified as per the attached pages 1, 4, 5A, and 11. This modification deletes sampling point 004, adds sampling point 006, and revises special conditions II.A.1 and II.B.1 to reflect these changes. This letter and the revised pages 1, 4, 5A, and 11 should be affixed to your permit as your official record and become a part thereof. These changes were identified during the District's June 13, 2000 facility inspection.

This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and does not in any way relieve you of your obligations to achieve the discharge limitations as provided in the permit.

Please contact us if you have any questions.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Bob Zeman, P.E.
Manager of Environmental Compliance

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 51122162-00

EFFECTIVE DATE: JULY 15, 1999
MODIFICATION DATE: JULY 01, 2000
EXPIRATION DATE: DECEMBER 31, 2002

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. EUCLID AVENUE
ST. LOUIS, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: FOUR
SAMPLING PT. REF NUMBER(S): 001, 003, 005, 006

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Fabian T. Grabski
Assistant Engineer

Bob Zeman, P.E.
Manager of Environmental Compliance

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 004

SAMPLING POINT LOCATION: Flow from W in MH 15' N, 42' E of SE corner of Bldg 80

AVERAGE WASTEWATER FLOW (GPD): 9,865

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

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DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 006

SAMPLING POINT LOCATION: 6" clay pipe 13' N, 9' E of SE corner of building 80

AVERAGE WASTEWATER FLOW (GPD): 9,865

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. Special Sampling And Analytical Procedures

1. Sampling points **001**, **003**, **005** and **006** may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. Special Certification & Reporting Requirements

1. Permittee is authorized to discharge not more than three hundred twenty (**320**) millicuries through sampling points **001**, **005** and **006**, from the buildings east of Euclid Ave. and not more than one hundred twenty (**120**) millicuries through sampling point **003**, the buildings from the west of Euclid Ave., of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

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 14, 1999

Mr. Mike Kershaw
Hazardous Materials Division 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 Mr. Kershaw:

Enclosed is the Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit for the premise identified above. This permit is issued pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 25, 1995. This permit has been prepared based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

We have incorporated, into this final permit, a reorganized version of the Section I General Conditions which apply to all MSD permit holders. The reorganized general conditions contain additional clarifying language but do not contain any requirements not found in the draft permit previously sent to you for review.

Monitoring reports required by the conditions of this permit must be submitted on a periodic basis. Copies of the necessary report forms are enclosed.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed acceptance, by you, of the provisions of this permit.

You may contact us at 436-8755 at any time if you have any question about your permit.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Gunter H Durdel

Gunter H. Durdel
Assistant Engineer

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 51122162-00

EFFECTIVE DATE: JULY 15, 1999
EXPIRATION DATE: DECEMBER 31, 2002

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. Euclid Ave.
St. Louis, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: FOUR
SAMPLING PT. REF NUMBER(S): 001, 003, 004, 005

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Gunter H Durdel

Gunter H. Durdel
Assistant Engineer

Bob Zeman, P.E.
Manager of Environmental Compliance

SEE PG 1 DTD 7/1/00
FG

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: Flow from W in MH 30' N, 10' W of NE corner of Bldg 27 (in alley)

AVERAGE WASTEWATER FLOW (GPD): 55,850

WASTEWATER SOURCE AND CATEGORY: Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste + Research & Development Waste + Sanitary + Water Softener Regeneration Waste

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: Flow from S in MH N of Bldg 14 in drive, 6' S of O2 tanks

AVERAGE WASTEWATER FLOW (GPD): 3,445

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Research & Development Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 004

SAMPLING POINT LOCATION: Flow from W in MH 15' N, 42' E of SE corner of Bldg 80

AVERAGE WASTEWATER FLOW (GPD): 9,865

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Process Waste + Sanitary

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

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* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE DESCRIPTION

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Av on S side of Scott Av in street

AVERAGE WASTEWATER FLOW (GPD): 555,150

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste + Research & Development Waste + Sanitary + Water Softener Regeneration Waste

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade) .

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of District Ordinance 8472. The permittee shall include, with each self-monitoring report, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied by the District) shall be submitted to the District's Department of Environmental Compliance for each calendar quarter. Each report shall include:

a. All facility and sample description information required on the District's reporting form.
b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
c. Daily flows, with dates, for all measurements or estimates made within the quarter.
d. Any certification statements required pursuant to the Special Conditions in Section II.
e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 8472. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report, under the terms of this permit, is due by October 28, 1999 .**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 350 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 8472, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 8472.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 8472.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 8472.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Department of Environmental Compliance at (314) 436-8710.

SEE PG 11 DTD 7/1/00.
FG

SECTION II - SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. Special Sampling And Analytical Procedures

1. Sampling points **001**, **003**, **004** and **005** may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. Special Certification & Reporting Requirements

1. Permittee is authorized to discharge not more than three hundred twenty (**320**) millicuries through sampling points **001**, **004** and **005**, from the buildings east of Euclid Ave. and not more than one hundred twenty (**120**) millicuries through sampling point **003**, the buildings from the west of Euclid Ave., of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C. Special Billing Reporting Requirements

1. Pursuant to District Wastewater User Charge Ordinances, the permittee has been granted a reduction in billing for used water which does not enter the District's system. The permittee is currently billed for sewer service charges based on **ninety-one (91) percent** of the used water (on an annual basis) being discharged to the District. The permittee shall notify the District's Department of Environmental Compliance within ten (10) business days of becoming aware of any changes in operations which will change the percentage of used water discharged to the District.

THIS IS THE LAST PAGE OF THIS PERMIT

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

June 18, 1999

Mr. Mike Kershaw
Hazardous Materials Division 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 Mr. Kershaw:

Enclosed is a draft copy of the Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit proposed for the premise identified above. This draft has been prepared pursuant to the federal pretreatment regulations in 40 CFR 403 as amended October 25, 1995 and is based on information that you supplied in the District's Industrial User Questionnaire, on results from previous wastewater samplings and inspections and on requirements contained in existing MSD ordinances and state and federal regulations.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. Absence of a response within this time frame will be deemed as acceptance of the draft permit and we will proceed to issue the final permit.

If you have any questions, please contact me at 436-8755.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Gunter H. Durdel

Gunter H. Durdel
Assistant Engineer

Enclosure

METROPOLITAN ST. LOUIS SEWER DISTRICT
DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 51122162-00

EFFECTIVE DATE: JULY 15, 1999
EXPIRATION DATE: DECEMBER 31, 2002

ISSUED TO: WASHINGTON UNIVERSITY MEDICAL SCHOOL
660 S. EUCLID AVE.
ST. LOUIS, MO 63110

SIC NUMBER(S): 0279, 8221, 8733

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: FOUR
SAMPLING PT. REF NUMBER(S): 001, 003, 004, 005

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 8472, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Gunter H. Durdel
Assistant Engineer

Bob Zeman, P.E.
Manager of Environmental Compliance

MSD 045648

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 001

SAMPLING POINT LOCATION: Flow from W in MH 30' N, 10' W of NE corner of Bldg 27 (in alley)

AVERAGE WASTEWATER FLOW (GPD): 55,850

WASTEWATER SOURCE AND CATEGORY: Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste + Research & Development Waste + Sanitary + Water Softener Regeneration Waste

POLLUTANT DISCHARGE LIMITS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 003

SAMPLING POINT LOCATION: Flow from S in MH N of Bldg 14 in drive, 6' S of O2 tanks

AVERAGE WASTEWATER FLOW (GPD): 3,445

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Research & Development Waste + Sanitary

POLLUTANT DISCHARGE LIMITS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 004

SAMPLING POINT LOCATION: Flow from W in MH 15' N, 42' E of SE corner of Bldg 80

AVERAGE WASTEWATER FLOW (GPD): 9,865

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown + Process Waste + Sanitary

POLLUTANT DISCHARGE LIMITS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

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DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 005

SAMPLING POINT LOCATION: MH 200' W of Taylor Av on S side of Scott Av in street

AVERAGE WASTEWATER FLOW (GPD): 555,150

WASTEWATER SOURCE AND CATEGORY: Boiler Blowdown + Kitchen Waste + Non Contact Cooling Water + Plant & Equipment Washdown + Process Waste + Research & Development Waste + Sanitary + Water Softener Regeneration Waste

POLLUTANT DISCHARGE LIMITS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	.5	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.52	Instant	Once/year

* Limits are based on MSD Ordinance 8472 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.A of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall self-monitor the discharge at each of the identified sampling points at the frequency specified in this permit. The permittee shall submit self-monitoring reports to the District's Department of Environmental Compliance identifying the concentrations of regulated substances in each of these discharges. Each report shall also include a record of all measured or estimated average daily flows during the reporting period.

2. The pollutants to be monitored are specified individually for each sampling point. The limitation, limitation type and monitoring frequency are given for each pollutant. **Except as noted in paragraph 3, of this section, composite samples shall be collected for all pollutants.** The limitation types are defined as follows:

An INSTANT limitation is the maximum allowable concentration of the pollutant in a grab sample for all pollutants except pH and temperature. For pH the INSTANT limitation is the minimum or maximum allowable instantaneous pH value reported in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature reported in degrees C.

A DAILY AVG limitation is the maximum allowable concentration of the pollutant in a composite sample collected within a 24 hour period.

A DAILY MAX limitation is the maximum allowable concentration of the pollutant in any sample collected within a 24 hour period.

A MONTHLY AVG limitation is the maximum allowable average concentration of the pollutant determined by calculating the arithmetic average of the concentrations found in all daily samples collected within a calendar month. The concentrations of all daily samples analyzed using the methods specified in this permit must be included in the calculation.

A 4-DAY AVG limitation is the maximum allowable average concentration of the pollutant determined by calculating the arithmetic average of the concentrations found in the daily samples collected on four consecutive sampling days. The sampling days are not necessarily consecutive calendar days.

A daily sample is any sample collected within a 24 hour period.

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3. Unless specified otherwise in Section II of these conditions and except for the pollutants listed at the end of this paragraph, all samples collected to satisfy the monitoring and reporting requirements of this permit shall be **COMPOSITE SAMPLES** made up by combining individual grab samples collected within a 24 hour period. In no case may a composite sample be made from fewer than four grab samples. In all cases the individual grab samples must be adequately spaced so as to ensure a sample that is representative of the permittee's normal operations. Grab samples shall be collected for oil and grease, total phenol, cyanide, sulfide and volatile organics if required. Temperature and pH shall be measured at the point of discharge and the measurements reported as instantaneous values except, if continuous monitoring is employed, reporting shall be as per paragraph 7 below.

4. When monitoring is required for Total Toxic Organics (TTO), TTO shall be determined by summing all quantifiable values greater than .01 mg/l for the applicable toxic organics listed in 40 CFR 401.15. For discharges subject to categorical pretreatment standards, the applicable toxic organics are listed in the standard. For all other discharges the organics to be included in the TTO are all of those which are or may be present in the discharge.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH and/or temperature at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-C of Ordinance 8472. The permittee shall include with the quarterly self monitoring reports required by this Section, a summary of the continuous temperature and/or pH monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion and the total time for all excursions for temperature and the total time for all excursions for pH.

8. If the permittee monitors any of the listed pollutants using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. All self-monitoring reports shall be certified and signed in accordance with the provisions of District Ordinance 8472, Article X, Section Three. The signed reports shall be submitted every three months (Quarterly) to the District's Department of Environmental Compliance. Each report shall be postmarked no later than the 28th day of the month following the end of the monitoring period. **The first report is due by October 28, 1999.**

10. If any sampling performed by the permittee using the methods specified in this permit indicates a violation of any permit limitation, the permittee shall notify the District's Department of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of surcharges under the provisions of the District's Sewer Service Charge Ordinances. Measured values which exceed 300 mg/l for BOD, 600 mg/l for COD and/or 350 mg/l for TSS may be subject to surcharge. If the permittee is currently subject to surcharge, the BOD, COD and TSS values used for surcharge billing are listed in the Special Conditions Section II of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Department of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in District Ordinance 8472, Article II, significant new or increased discharge means:

a. Any discharge from a new process or facility or a new source.

b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.

c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.

d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in District Ordinance 8472, Article VIII, Section Nine.

e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.

f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in District Ordinance 8472, Article II.

g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District's Department of Environmental Compliance by telephone of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Department of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
b. There are no feasible alternatives to the bypass; and
c. In the event of an anticipated bypass, advance notice is provided to the District's Department of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

a. A violation of any term or condition of this permit.
b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 8472 Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Department of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

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H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of Sewer Use Ordinance No. 8472 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District upon presentation of proper credentials and after execution of appropriate confidentiality agreements shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the user shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than three (3) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in District Ordinance 8472, Article II.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all the conditions of District Ordinance 8472.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Department of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24 hours a day by calling the Metropolitan St. Louis Sewer District dispatcher at 768-6260.

3. During normal business hours, notifications may be made by calling the Department of Environmental Compliance at 436-8710.

SECTION II - SPECIAL CONDITIONS:

These Special Conditions supplement and/or amend the General Conditions of Section I. Where there is any perceived conflict between the general and special conditions, the special condition shall govern.

A. Special Sampling And Analytical Procedures

1. Sampling points **001**, **003**, **004** and **005** may, at times, convey storm water in addition to wastewater regulated by this permit. The self monitoring required pursuant to Section I.A.1 of this permit, shall be conducted only at times when the discharge of regulated wastewater will not be influenced by storm water runoff.

B. Special Certification & Reporting Requirements

1. Permittee is authorized to discharge not more than three hundred twenty (**320**) millicuries through sampling points **001**, **004** and **005**, from the buildings east of Euclid Ave. and not more than one hundred twenty (**120**) millicuries through sampling point **003**, the buildings from the west of Euclid Ave., of radioactive material per year to the District's sanitary sewers. Such materials must be soluble, or dispersible if biological material, in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, in conjunction with other user's discharges of radioactive materials, causes the aggregate of all radioactive materials entering the District's treatment plant to exceed one (1) curie per year or causes interference as defined in MSD Ordinance 8472.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

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THIS IS THE LAST PAGE OF THIS PERMIT

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PERMIT MODIFICATION
DOCUMENTATION FORM

Permit to be Modified:

Company Name: WASHINGTON UNIVERSITY MEDICAL SCHOOL

Location: 660 S. EUCLID AVE, ST. LOUIS, MO 63110

Permit No: 51122162-00 Effective Date: 07-01-00

What is to be Modified:

Briefly explain what is to be modified and then list the pages affected.

SP 006 REPLACES SP 004. REVISE APPLICABLE SPECIAL CONDITIONS.

Pg. # 1 (1) ADD MOD. DATE (2) REMOVE SP 004 (3) ADD SP 006.

Pg. # 4 (1) ADD "THIS PAGE VOID" FOR SP 004.

Pg. # 5A (1) ADD PG. 5A. (2) ADD SP 006; REPLACES SP 004.

Pg. # 11 (1) REMOVE SP 004 & ADD SP 006; SPECIAL CONDITIONS A.1 (D.10) & B.1 (E.18).

Reasons for Modification: (Cite regulation, policy, etc. and identify any other documents which support the modification)

DISTRICT'S 06-13-00 FACILITY INSPECTION IDENTIFIED NEW SP 006 WHICH [redacted] IS NOT IMPACTED (AS SP 004 IS) BY STORMWATER RUNOFF FROM GARAGE ACROSS THE STREET. SEE INSPECTION REPORT.

Modification Form Prepared By: FG Date: 06-28-00

****

Permit Modified by: FG Date: 06-28-00

Entire permit reissued NO (or) Only pages _____ modified.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

FACT SHEET

Check If:
FIRST TIME PERMIT: ✓
PERMIT RENEWAL: ___
PERMIT REVISION: ___

Prepared by: [illegible]
Date: 5-04-99, 6-17-99
Checked by: [illegible]
Date: 6/17/99

PERMIT NO: 5112 2162-00 EFFECTIVE DATE: 07-15-99

EXPIRATION DATE: 12-31-02
MODIFICATION DATE(S): 07-01-00

OTHER ACCOUNT NUMBERS: 5112216700 5112216800 9000637201 5112217601 5112216100

COMPANY NAME: Washington University School of Medicine

PREMISE ADDRESS: 660 S. Euclid Ave / 63110

SIC NUMBER(S): 0279, 8221, 8733

TYPE OF OPERATION: Medical Training, Research Labs, Animal Care

TOTAL NUMBER OF SAMPLING POINTS: FOUR
NUMBER OF: ORDINANCE 4 CATEGORICAL ___ COMBINED ___

CATEGORICAL INDUSTRY: YES ___ NO ✓
IF YES, 40 CFR ___ SUBPART ___

EXTRA STRENGTH SURCHARGE: YES ___ NO ✓
IF YES, BOD: ___ COD: ___ TSS: ___

RETURN FACTOR: YES ✓ NO ___ IF YES, PERCENT (%): 91

SPECIAL CONDITIONS: YES ✓ NO ___

SUPPORTING DOCUMENTS ATTACHED:

PERMIT PREPARATION CHECK LIST: YES ✓ NO ___
POLLUTANT & LIMITATIONS DOCUMENTATION SHEETS: YES ✓ NO ___
PRODUCTION BASED STDS CALCULATION SHEETS: YES ___ NO ___ N/A ✓
IF YES, FOR SAMPLING POINT: ___
MOST STRICT STANDARDS CALCULATION SHEETS: YES ___ NO ___ N/A ✓
IF YES, FOR SAMPLING POINT: ___
COMBINED WASTESTREAMS CALCULATION SHEETS: YES ___ NO ___ N/A ✓
IF YES, FOR SAMPLING POINT: ___
OTHER: ___

COMMENTS: SP006 REPLACED SP004 7/1/00; FG

MSD 045661

PERMIT NO: 5112-162-00

SAMPLING POINT REFERENCE NUMBER: 001

WASTEWATER SOURCES: San + NCCW + Lab/Proc Waste + P&E Washdn + Regen Waste
FLOW RATE (GPD): 55,850
BASIS FOR FLOW RATE: IUQ

GENERAL POLLUTANTS:
BOD ✓ COD ✓ O & G ✓ PH ✓ TEMP ✓ TSS ✓
OTHER

PRIORITY POLLUTANTS: AG, TTO

BASIS FOR POLLUTANTS & LIMITATIONS: Ordinance # 8472

AG is monitored because wastes from X-Ray and photo film development passes through this point; verified in 6/14/99 facility inspection.

SPECIAL CONDITION(S) REQUIRED: YES ✓ NO
IF YES, # D.10 # # # IS APPLICABLE.

SAMPLING POINT REFERENCE NUMBER: 003

WASTEWATER SOURCES: San + Lab Waste + P&E Washdn
FLOW RATE (GPD): 3,445
BASIS FOR FLOW RATE: IUQ

GENERAL POLLUTANTS:
BOD ✓ COD ✓ O & G ✓ PH ✓ TEMP ✓ TSS ✓
OTHER

PRIORITY POLLUTANTS: AG, TTO

BASIS FOR POLLUTANTS & LIMITATIONS: Ordinance # 8472

AG - See comments at SP001

SPECIAL CONDITION(S) REQUIRED: YES ✓ NO
IF YES, # D.10 # # # IS APPLICABLE.

MSD 045662

PERMIT NO: 5/12[illegible]162-00

SAMPLING POINT REFERENCE NUMBER: 004

WASTEWATER SOURCES: San + Film Waste + P&E Washdn
FLOW RATE (GPD): 9,860
BASIS FOR FLOW RATE: IUQ

GENERAL POLLUTANTS:
BOD ✓ COD ✓ O & G ✓ PH ✓ TEMP ✓ TSS ✓
OTHER

PRIORITY POLLUTANTS: AG, TTO

BASIS FOR POLLUTANTS & LIMITATIONS: Ordinance #8472

SP006 REPLACED SP004 ON 7/1/00. FG

AG - See comments at SP 001

SPECIAL CONDITION(S) REQUIRED: YES ✓ NO
IF YES, # D.10 # # # IS APPLICABLE.

SAMPLING POINT REFERENCE NUMBER: 005

WASTEWATER SOURCES: San + NCCW + LAB/PROC + P&E Washdn + B Blowdn + Roger Waste
FLOW RATE (GPD): 55,850
BASIS FOR FLOW RATE: IUQ

GENERAL POLLUTANTS:
BOD ✓ COD ✓ O & G ✓ PH ✓ TEMP ✓ TSS ✓
OTHER

PRIORITY POLLUTANTS: AG, TTO

BASIS FOR POLLUTANTS & LIMITATIONS: Ordinance #8472.

AG - See comments at SP001.

SPECIAL CONDITION(S) REQUIRED: YES ✓ NO
IF YES, # D.10 # # # IS APPLICABLE.

Rev: 10/27/93 PG ___ OF ___

Company Name: Washington [redacted] School of Medicine Cat: 4[redacted]

Acct. Number: 51122162-00 Date: 6-17-99

Prepared By: [illegible]

Reviewed By / Date:

_____/_____

_____/_____

PERMIT PREPARATION CHECK LIST (Rev 02/29/96)

REVIEW THE PRETREATMENT DATABASE AND INDUSTRY FILE. ANSWER THE FOLLOWING QUESTIONS AND UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT. ATTACH COMPLETED CHECK LIST TO PERMIT FACT SHEET.

1. Are the correct SIC numbers listed? ✓Yes ___No
   If No - add:_____.
   - delete:_____.

2. Is user in surcharge - Category 2? ___Yes ✓No
   If Yes - date last certified:_____.
   Special Condition F.2 is applicable.

3. Does user have more than one water account? ✓Yes ___No
   If Yes - is PSIM using the most appropriate account number? ✓Yes ___No
   If No - what account number should be used?
   #_____. Prepare Jar 019 request.

4. If user has only one water account, do the discharge factors provide an accurate representation of the flows at each sampling point? ✓N/A ___Yes ___No
   If No - explain:_____.

5. Does user have a return factor less than 1.00 for any account? ✓Yes ___No
   If Yes - list account number, return factor and date updated:
   # 51122162 00 RF .91 UPDATED 6-15-98.
   #_____ RF_____ UPDATED_____.
   Special Condition (F.1) is applicable.

6. Does user discharge water from a source not included in MSD's billing system? ___Yes ✓No
   If Yes - Special Condition F.3 is applicable.

7. Has user been granted a variance from an ordinance limitation? ___Yes ✓No
   If Yes - parameter(s)_____at sampling point(s)_____.
   Special Condition C.4 is applicable.

8. Does user discharge any radioactive waste? ✓Yes ___No
   If Yes - Special Condition (E.18) is applicable?

9. Do all of the user's active connections, to the District sewers, have identified sampling points? ✓Yes ___No
   If No - how many do not? _____.
   Explain:_____.
   If No - can Special Condition E.5, E.6, E.7 or E.8 be used? ___Yes ___No
   If Yes - is documentation sufficient? ___Yes ___No
   If No - is compl schedule necessary to establish documentation? ___Yes ___No
   If Yes - Special Condition G.1 is applicable.

10. Does user have upstream/downstream sampling points? ___Yes ✓No
    If Yes - upstream # _____ & downstream # _____.
    If Yes - Special Conditions D.11 and E.9 are applicable.

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11. Are there any inactive wastewater connections to District sewers? ___Yes ✓No
    If Yes - does Special Condition E.10 apply? ___Yes ___No

12. Do the Sampling Point Location comments specifically locate the sampling point(s)? ✓Yes ___No

13. Do the Wastewater Source and Category comments accurately identify the wastewater discharged and the applicable categorical standards? ✓Yes ___No

14. Are there any sampling points identified as Dry Justified? ___Yes ✓No
    If Yes - which sampling point(s)_____.
    Special Condition E.3 is applicable.

15. Are there sampling points which convey stormwater in addition to wastewater? ✓Yes ___No
    If Yes - which sampling point(s): 001, 005, 003, 004.
    Special Condition D.10 is applicable.

16. Are there sampling points subject to a NPDES permit? ___Yes ✓No
    If Yes - which sampling point(s):_____.
    Special Condition E.14 is applicable.

17. Does user discharge any process waste? ✓Yes ___No
    If No - does Special Condition B.1, B.2 or B.3 apply? ___Yes ___No

18. Are there sampling points which convey no process waste flows? ___Yes ✓No
    If Yes - does Special Condition E.3 apply? ___Yes ___No
    If Yes - which sampling point(s):_____.

19. Can grab samples be used in lieu of composite samples? ___Yes ✓No
    If Yes - which sampling point(s):_____.
    If Yes - is documentation adequate? ___Yes ___No
    Special Condition D.1 is applicable.

20. Are there sampling points with less than quarterly sampling frequency for all parameters? ___Yes ✓No
    If Yes - which sampling point(s):_____.
    Special Condition E.4 is applicable.

21. Do the ordinance discharge limits correspond to the watershed? ✓Yes ___No
    Watershed is classified small____ or large ✓ river.

22. Are all applicable priority pollutants listed at ordinance sampling points? ✓Yes ___No
    If No - add:_____.
    - delete:_____.

23. Can user be exempted from monitoring for local limits TTO at any ordinance sampling point(s)? ___Yes ✓No
    If Yes - which sampling point(s)_____.
    If Yes - explain_____

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24. Does user have a history of compliance problems at this or a previous location? ___Yes ✓No
    If Yes - is a compliance schedule required? ___Yes___No
      If Yes - Special Condition G.1 is applicable.

25. Is user a categorical user? ___Yes ✓No
    If No - questions 26 through 39 can be skipped.

26. Do any sampling points have both Ordinance & Categorical limits? ___Yes___No
    If Yes - which sampling point(s):_____.
    Special Condition C.3 is applicable. Attach worksheet.

27. Is the Combined Wastestream Formula (CWF) required? ___Yes___No
    If Yes - which sampling point(s):_____.
    If Yes - date last calculated:_____.
    Special Condition C.2 is applicable. Attach CWF worksheet.

28. Are there process discharges, from a categorical operation, for which standards have not been promulgated? ___Yes___No
    If Yes - which sampling point(s):_____.
    Is Special Condition E.20 applicable? ___Yes___No

29. Are categorical limitations based on production rates? ___Yes___No
    If Yes - which sampling point(s):_____.
    If Yes - date last calculated:_____.
      Do Special Conditions C.1, E.1 or E.2 apply? ___Yes___No
        If Yes - which Special Condition(s):_____.

30. Are categorical limitations mass limits? ___Yes___No
    If Yes - which sampling point(s):_____.
    Special Condition E.19 is applicable.

31. Is user a job shop electroplater with >10,000 gpd? ___Yes___No
    If Yes - Special Condition D.2 is applicable.

32. Is user a soap and detergent manufacturer subject to 40 CFR 417? ___Yes___No
    If Yes - are they subject to Subparts O__, P__, Q__ or R__? ___Yes___No
      If Yes - for Subpart O, Special Condition B.4 is applicable.
      If Yes - for Subpart P, Special Condition B.5 is applicable.
      If Yes - for Subpart Q, Special Condition B.6 is applicable.
      If Yes - for Subpart R, Special Condition B.7 is applicable.

33. Is user a leather tanner/finisher subject to 40 CFR 425? ___Yes___No
    If Yes - under Appendix A, Special Condition D.6 is applicable.
    If Yes - under Appendix B, Special Condition D.7 is applicable.

34. Is user a pharmaceutical manufacturer subject to 40 CFR 439? ___Yes___No
    If Yes - have they certified to the absence of cyanide? ___Yes___No
      If Yes - Special Condition E.15 is applicable.
      If No - must total cyanide limitations be adjusted? ___Yes___No
        If Yes - calculate adjusted limitations. Attach worksheet.

35. Is user a metal molder/caster subject to 40 CFR 464? ___Yes___No
    If Yes - Special Condition D.4 is applicable.

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36. Is user a coil coater subject to 40 CFR 465? ___Yes___No
    If Yes - Special Conditions D.5 and E.16 are applicable.
    If Yes - is user subject to 40 CFR 465 Subpart D? ___Yes___No
      If Yes - Special Conditions D.9 and E.17 are applicable.
      If Yes - is there a separate categorical sampling point for the regulated waste? ___Yes___No
        If Yes - include O&G (Hydrocarbon) in the list of parameters at the categorical sampling point.
        If No - and categorical waste discharges at a combined ord/cat sampling point, include O&G (Total) and O&G (Hydrocarbon) in the list of parameters at the combined sampling point.

37. Do any sampling points have both Ordinance & Categorical TTO limits? ___Yes___No
    If Yes - which sampling point(s):_____.
    Is Special Condition E.13 applicable? ___Yes___No
      If Yes - explain:_____.

38. Can user certify, in lieu of monitoring, for categorical TTO at a categorical or combined sampling point? ___Yes___No
    If Yes - which sampling point(s):_____.
    Special Condition E.11 ____ or E.12 ____ is applicable.

39. May user monitor for Oil & Grease, in lieu of TTO, at a categorical sampling point? ___Yes___No
    If Yes - which sampling point(s):_____.
    If Yes - Special Condition D.8 is applicable.
    If Yes - is a modification of Special Condition E.13 applicable? ___Yes___No

40. Is user required to monitor for Total Phenols? ___Yes ✓No
    If Yes - is Special Condition D.3 applicable? ___Yes___No

41. Are all SARA Data pollutants monitored? ✓N/A___Yes___No
    If No - do additional pollutants need to be monitored? ___Yes___No
    If Yes - list pollutant(s):_____.

42. Are all Haz Waste Report (403.12(p)) pollutants monitored? ✓N/A___Yes___No
    If No - do additional pollutants need to be monitored? ___Yes___No
    If Yes - list pollutant(s):_____.

43. Are there any special billing provisions, not previously listed, that require a Special Condition in the permit? ___Yes ✓No
    If Yes - describe:

    _____

    _____

44. Are any Special Conditions other than the standard Special Conditions needed? ___Yes ✓No
    If Yes - please describe:

    _____

    _____

    _____

Acct. Number: 5112 2162 00

SUMMARY: List all the Special Conditions applicable to this permit:

F.1 # E.18 # D.10 # ____ # ____ # ____ # ____ # ____ # ____

If Special Condition G.1 is applicable, outline the requirements & dates below:

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	JEB 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 045669

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: 51122162-00

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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MSD 045671

Company Name: [redacted]
Premise Address: [redacted]
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~~ 005	3	4	5	(See Instructions)
a. Sanitary	10,500	94,500	2745	250		107995
b. Irrigation & Lawn Watering	~~200~~	~~48,000~~				
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	4850	41,050	525			46425
Animal Care	19,850	191,700				211550
f. Plant & Equipment Washdown	500	4500	175	9610		14785
g. Boiler Blowdown	~~0~~	~~52,325~~ ~~210,000~~				~~210000~~ 5232
h. Other (_____)	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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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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MSD 045674

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	1000	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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DEPT. of ENVIRONMENTAL COMPLIANCE

MSD 045675

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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AUG 31 1998
Environmental Compliance

MSD 045676

Permit Copy

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: 001,003,004,005

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

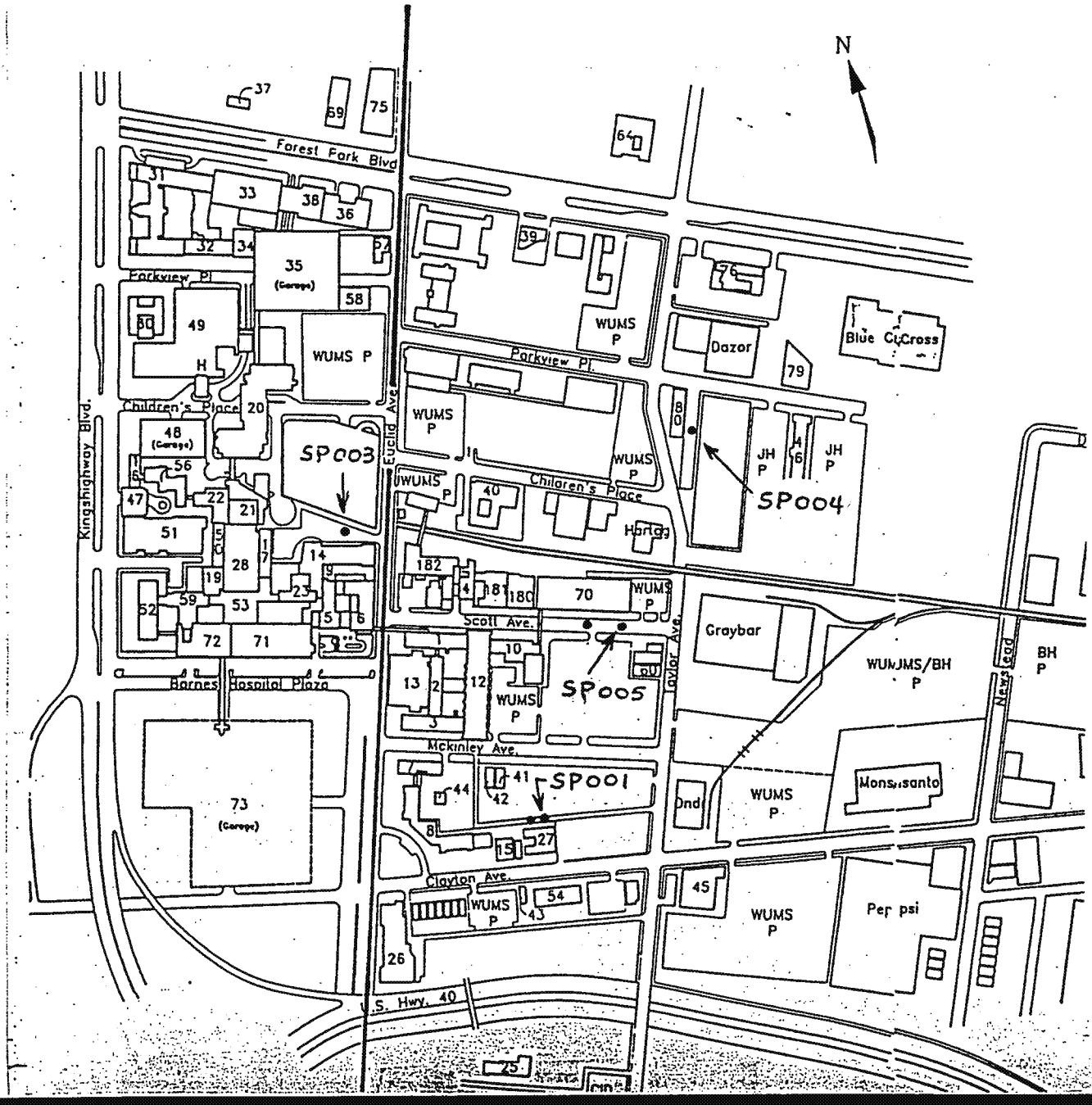
Special Sampling Requirements or Instructions: ____

Map Effective Date: 09-02-98 By: JEG

Map Revision Date: 06-16-99 By: JEG

Map Revision Date: ____ By: ____

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

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

Use this sheet only for page 2 and following pages.

This page is not valid unless a page 1 using the proper form is attached.

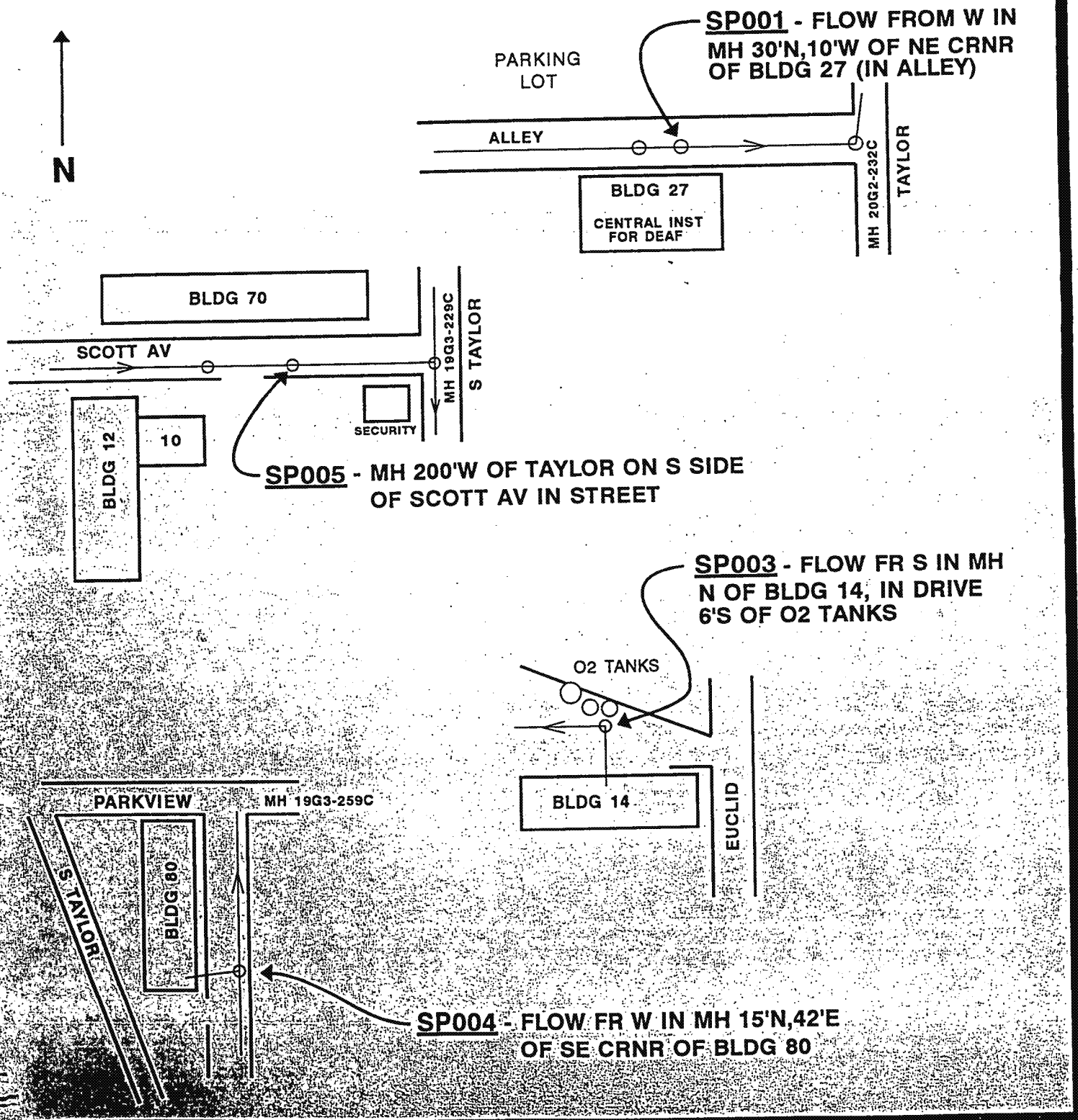
Map Effective/Revision/Void Date must correspond to the date on page 1.

Map Effective Date: 09-02-98 By: JEG

Map Revision Date: 06-16-99 By: JEG

Map Revision Date: By:

Map Void Date: By:



SP MAP D.M.C. 1/05-2 MAP IS INVALID IF NOT DATED AND INITIALED OR IF VOID DATE IS FILLED IN

Cotc

TUB 12/07/04
SS ✓
Per ✓
Cats ✓
DE ✓

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: 5112216200

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 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: 9/9/04 C: 9/9 - 9/10/04		G: 9/9/04 C: 9/9 - 9/10/04		G: 9/8/04 C: 9/8 - 9/9/04		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:15 Am C: 10:30 Am		G: 9:30 am C: 9:45 am		G: 10:00 am C: 10:15 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	29,300	E	50,000	E	450,000	gal/day
Biological Oxygen Demand (C)		C	46	C	12	C	218	mg/L
Chemical Oxygen Demand (C)		C	130	C	60	C	470	mg/L
Total suspended Solids (C)		C	63	C	9	C	231	mg/L
pH (Std pH Units) (G)		G	8.25	G	8.30	G	7.28	pH
Oil & Grease (G)		G	17	G	8	G	15	mg/L
Temperature °C (G)		G	27.3	G	30.1	G	28.1	°C
Silver (C)		C	<0.05	C	<0.05	C	<0.05	mg/L
Arsenic (C)		C	<0.05 NR	C	<0.05 NR	C	<0.05 NR	mg/L
Chromium (C)		C	<0.05 NR	C	<0.05 NR	C	<0.05 NR	mg/L
Mercury (C)		C	<0.0005 NR	C	<0.05 NR	C	<0.05 NR	mg/L
Total Cyanides (G)		G	<0.02 NR	G	<0.02 NR	G	<0.02 NR	mg/L
Asbestos (S/L) (G)		G	<114000 NR	G	<114000 NR	G	<114000 NR	mg/L
			Not entered in PIMS					
TTO			<0.016		<0.1712		<0.403	

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You must complete and sign the certification statements on the reverse side. NR - not read by print

MSD 045680

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

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 11/2/04

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine

Permit No: 5112216200

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 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: 9/8/04 C: 9/8-9/9/04						
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 9:00 am C: 9:00 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	21,000					
Biological Oxygen Demand (c)		C	61					
Chemical Oxygen Demand (c)		C	85					
Total Suspended Solids (c)		C	6					
pH (std. pH units) (G)		G	8.69					
Oil + Grease (G)		G	8					
Temperature °C (G)		G	27.2					
Silver (c)		C	<0.05					
Arsenic (c)		C	<0.05 NR					
Chromium (c)		C	<0.05 NR					
Mercury (c)		C	<0.0005 NR					
Total cyanides (G)		G	0.02 NR					
Asbestos (s/L) (G)		G	114000 NR					
			↳ not entered in PTMS					
TTO			<0.164					

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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

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 11/2/04

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: 12/8/04

To: Tom Boehm

Fax #: 314-436-8753

From: Michael Koch 314-362-6735

Pages (incl. cover sheet): 2

Comments: Tom,

Here is the 3rd Quarter results for the TTC's.

Please call me with questions,

Thanks,
Michael Koch

Founded 1926 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

October 1, 2004
Lab No. 04E-1158
Invoice No. 52325
P.O. 292480
Page 2 of 2

WASHINGTON UNIVERSITY

Attention: Michael Koch

RESULTS: µg/L EPA 600 624, VOLATILE ORGANIC OMPOUNDS BY GC/MS

ANALYTE	001	003	005	006
Acrolein	<100 *	<100 *	<100 *	<100 *
Benzene	<2	<2	<2	<2
Carbon tetrachloride	<5	<5	<5	<5
Chloroform	<5	11.2 *	8.2	9.6
Methylene chloride	<5	<5	<5	<5
Toluene	<5	<5	<5	<5

RESULTS: mg/L EPA 600 625, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

ANALYTE	001	003	005	006
2,4-Dinitrophenol	<0.020 *	<0.020 *	<0.021 *	<0.021 *
Benzidine	<0.040 *	<0.040 *	<0.043 *	<0.043 *
Phenol	<0.005	<0.005	0.239 *	<0.005
* TTO: sum:	<0.016 (001)	<0.1712 (003)	<0.403 (005)	<0.164 (006)

MDL: Minimum Detection Limit

* = >.01 mg/L

Steve Root

Steve Root, Manager
Environmental Testing

SR/jlm

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.

4CB 10/27/04 Radss ✓

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: 51122162-00

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	0.0487
H-3	5.5896
I-125	0.2006
I-125V	0.0010
P-32	0.3236
P-33	0.0250
S-35	0.3221
TOTAL ACTIVITY DISCHARGED:	**6.5107**

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: 10/26/2004

RE: radrpt.doc 2/00

RECEIVED

OCT 27 2004

DIVISION OF ENVIRONMENTAL COMPLIANCE

YCB 10/27/04 Radss ✓

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: 51122162-00

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	1.4885
Ca-45	0.0210
H-3	78.9175
I-125	0.0011
P-32	0.3279
P-33	0.0020
S-35	0.0258
Zn-65	0.0240
TOTAL ACTIVITY DISCHARGED:	**80.8078**

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: 10/26/2004

RE: radrpt.doc 2/00

08/10/04
YCB
Rad ✓
(see next page)

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: 51122162-00

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	1.2170
H-3	115.1701
I-125	0.0055
P-32	0.3641
S-35	0.0572
Zn-65	0.0149
TOTAL ACTIVITY DISCHARGED:	**116.8288**

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: 07/28/2004

RE: radrpt.doc 2/00

RECEIVED

AUG 0 2 2004

DIVISION OF
ENVIRONMENTAL COMPLIANCE

TCB
Rad K

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	0.0471
H-3	5.5535
I-125	0.1814
I-125V	0.0030
P-32	2.9239
P-33	0.0550
S-35	0.3068
TOTAL ACTIVITY DISCHARGED:	**9.0707**

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: 07/28/2004

RE: radrpt.doc 2/00

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: 5112 2162 - 00

Premise Address: 660 South 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: 5/26/04 C: 5/26-27/04		G: 5/26/04 C: 5/26-27/04		G: 5/25 C: 5/25-26/04		
TIMES AT WHICH SAMPLES WERE COLLECTED ⇨		G: 10:00 AM C: 10:00 AM		G: 9:30 AM C: 9:30 AM		G: 9:45 AM C: 9:45 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	12,805	E	28,758	E	695,800	gal/day
Biological Oxygen Demand		C	27	C	26	C	14	mg/L
Chemical Oxygen Demand		C	84	C	95	C	56	mg/L
Total Suspended Solids		C	45	C	71	C	30	mg/L
pH		G	7.18	G	7.51	G	8.32	pH
Oil + Grease		G	<5	G	<5	G	<5	mg/L
Temperature		G	17.4	G	17.5	G	18.9	°C
Silver		C	<0.05	C	0.11	C	<0.05	mg/L

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JUN 24 2004

DIVISION OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

MSD 045690

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

Title: Hazardous Materials Manager Telephone: (314) 362-6735

Signature: [signature] Date: 6/23/04

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Washington University School of Medicine

Permit No: 5112262-00

Premise Address: 660 South Euclid 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: 5/25/04 C: 5/25 & 5/26/04						
TIMES AT WHICH SAMPLES WERE COLLECTED ⇨		G: 10:00 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	17,550	E		E		gal/day
Biological Oxygen Demand		C	53	C		C		mg/L
Chemical Oxygen Demand		C	121	C		C		mg/L
Total Suspended Solids		C	67	C		C		mg/L
pH		G	8.45	G		G		pH
Oil & Grease		G	6	G		G		mg/L
Temperature		G	18.9	G		G		°C
Silver		C	<0.05	C		C		mg/L

You must complete and sign the certification statements on the reverse side.

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JUN 24 2004
DIVISION OF
ENVIRONMENTAL COMPLIANCE

PMT

METROPOLITAN SEWER DISTRICT

INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

5112262-00

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	1.9150
H-3	44.7630
I-125	0.0070
P-32	0.3445
P-33	0.0010
S-35	0.1448
TOTAL ACTIVITY DISCHARGED:	**47.1753**

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 Kershman

Title: Radiation Safety Specialist Telephone: (314) 362-2996

Signature: Date: 04/23/2004

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RE: radrpt.doc 2/00

APR 28 2004

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: [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	0.0075
H-3	4.8779
I-125	0.1486
P-32	0.2987
P-33	0.1120
S-35	0.2678
TOTAL ACTIVITY DISCHARGED:	**5.7125**

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 Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: Date: 04/23/2004

RE: radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

VG 3/22/04

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 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: 2/19/04 C: 2/18-2/19/04		G: 2/19/04 C: 2/18-2/19/04		G: 2/18/04 C: 2/17-2/18/04		
TIMES AT WHICH SAMPLES WERE COLLECTED ⇨		G: 9:35 AM C: 9:30 AM		G: 9:50 AM C: 9:45 AM		G: 10:35 AM C: 10:30 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	12,605	E	29,750	E	695,000	gal/day
Biological Oxygen Demand		C	49	C	209	C	168	mg/L
Chemical oxygen Demand		C	121	C	364	C	205	mg/L
Total Suspended Solids		C	65	C	145	C	34	mg/L
pH		G	8.89	G	8.75	G	9.30	pH
Oil + Grease		G	9	G	<5	G	24	mg/L
Temperature		G	21.0	G	18.0	G	21.0	°C
Silver		C	<0.05	C	0.19	C	<0.05	mg/L

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MAR 22 2004

1 of 2

You must complete and sign the certification statements on the reverse side.

MSD 045695

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 S. Euclid 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: 2/18/04 C: 2/17/-2/18/04						
TIMES AT WHICH SAMPLES WERE COLLECTED ⇨		G: 11:00 AM C: 10:55 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	19,550					gal/day
Biological Oxygen Demand		C	176					mg/L
Chemical Oxygen Demand		C	225					mg/L
Total Suspended Solids		C	85					mg/L
pH		G	7.78					pH
Oil - Grease		G	35					mg/L
Temperature		G	16.8					°C
Silver		C	<0.05					mg/L

RECEIVED
MAR 22 2004

2 of 2

You must complete and sign the certification statements on the reverse side.

MSD 045696

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: Jon Kruyne

Title: Haz Mat Tech III Telephone: 314 747-1533

Signature: _____ Date: 3·02·04

Founded 1929
St. Louis Testing Laboratories
INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

February 25, 2004
Lab No. 04E-0151
P.O. No 29760W

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

Attention: John Kruyne

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 2/19/04, 9:35 A.M.
WASTE WATER COMPOSITE, PT. 001, 2/18-19/04, 9:30 A.M.
WASTE WATER GRAB, PT. 003, 2/19/04, 9:50 A.M.
WASTE WATER COMPOSITE, PT. 003, 2/18-19/04, 9:45 A.M.
WASTE WATER GRAB, PT. 005, 2/18/04, 10:35 A.M.
WASTE WATER COMPOSITE, PT. 005, 2/17-18/04, 10:30 A.M.
WASTE WATER GRAB, PT. 006, 2/18/04, 11:00 A.M.
WASTE WATER COMPOSITE, PT. 006, 2/17-18/04, 10:55 A.M.

RESULTS: mg/L Except As Noted

ANALYTE	001	003	005	006	MDL	METHOD NUMBER	ANALYSIS DATE
Biological Oxygen Demand	49	209	168	176	10	405.1	2/23/04 2/25/04
Chemical Oxygen Demand	121	364	205	225	10	410.4	2/20/04
Total Suspended Solids	65	145	34	85	5	160.2	2/20/04
pH (Std. pH Units)	8.89	8.75	9.30	7.78	---	150.1	2/1804 2/19/04
Oil & Grease	9	<5	24	35	5	1664	2/20/04
Temperature	21.0	18.0	21.0	16.8	---	170.1	2/18/04 2/19/04
Silver	<0.05	0.19	<0.05	<0.05	0.05	200.7	2/20/04

MDL: Minimum Detection Limit

Identification of tested specimens provided by the client.

Carmen S. DeBlass, Director
Environmental Testing

CSD/jlm

RECEIVED
MAR 22 2004

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.

PMT
S1122162-00

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	11.4980
H-3	57.2205
I-125	0.0080
P-32	0.3354
S-35	0.1164
TOTAL ACTIVITY DISCHARGED:	**69.1783**

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

DJS

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: Daniel J Szatkowski

Title: Health Physicist II Telephone: 314 362 3479

Signature: [signature] Date: 1/26/2004

RE: radrpt.doc 2/00

RECEIVED
JAN 27 2004

PMT
S1122K2-00

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	0.3461
H-3	10.8068
I-125	0.0384
P-32	0.3677
P-33	0.0300
S-35	0.3339
TOTAL ACTIVITY DISCHARGED:	**11.9228**

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

DJS

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: Daniel J Szatkowski

Title: Health Physicist II Telephone: 314 362 3479

Signature: Dan Szatkowski Date: 1/26/2004

RE: radrpt.doc 2/00

RECEIVED
JAN 27 2004

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: 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 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 11/24/03 C 11/24-25/03		G 11/24/03 C 11/24-25/03		G 11/20/03 C 11/20-21/03		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 11:15 AM C 11:30 AM		G 11:35 AM C 12:00 NOON		G 10:45 AM C 10:30 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	12.605	E	29.750	E	695.200	gal/day
Biological Oxygen Demand		C	32	C	67	C	16	mg/L
Chemical Oxygen Demand		C	87	C	133	C	54	mg/L
Total Suspended Solids		C	34	C	51	C	48	mg/L
pH		G	8.31	G	8.50	G	8.36	pH
Oil + Grease		G	<5	G	<5	G	6	mg/L
Temperature		G	19.3	G	16.4	G	20.5	°C
Silver		C	0.16	C	0.06	C	<0.05	mg/L

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JAN 05 2004

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: 511222 62-00

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 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 11/20/03 C 11/20-21/03							
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 9:45AM C 9:55AM							
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	19.550						gal/day
Biological Oxygen Demand		C	95						mg/L
Chemical Oxygen Demand		C	330						mg/L
Total Suspended Solids		C	100						mg/L
pH		G	7.73						pH
Oil + Grease		G	<5						mg/L
Temperature		G	19.6						°C
Silver		C	<0.05						mg/L

RECEIVED
JAN 0 5 2004

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: Jon Kruyne ~~Michael T. Keishaw~~

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: _____ Date: 12/30/03

SMF 10/93

MSD 045703

PM

#S122162-00

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	0.0285	~~0.0284~~
H-3	3.4624	~~3.4012~~
I-125		0.0870
P-32	0.3615	~~0.3482~~
P-33		0.0550
S-35	0.4005	~~0.3785~~
TOTAL ACTIVITY DISCHARGED:	4.3949	~~4.2984~~

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

DJS

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: Daniel J Szatkowski

Title: Health Physicist II Telephone: 314 362 3479

Signature: [signature] Date: 10/22/2003

RE: radrpt.doc 2/00

RECEIVED

OCT 24 2003

DMT

#5112162-00

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	0.1680
H-3	21.4620
I-125	0.0160 ~~0.0150~~
P-32	0.2307 ~~0.2200~~
S-35	0.1681
TOTAL ACTIVITY DISCHARGED:	22.0448 ~~22.0331~~

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

DJS

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: Daniel J Szatkowski

Title: Health Physicist II Telephone: 314 362 3479

Signature: [signature] Date: 10/22/2003

RE: radrpt.doc 2/00

RECEIVED

OCT 24 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

FG 10/14/03

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 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: 8/5/03 C: 8/5-6/03		G: 8/5/03 C: 8/5-6/03		G: 8/4/03 C: 8/4-5/03		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:00 a.m. C: 10:00 a.m.		G: 11:00 a.m. C: 11:00 a.m.		G: 11:00 a.m. C: 11:00 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	72,605	E	29,750	E	695,200	GPD
Biological Oxygen Demand		C	24	C	33	C	11	mg/l
Chemical Oxygen Demand		C	152	C	84	C	51	mg/l
Total Suspended Solids		C	20	C	11	C	6	mg/l
pH		G	8.02	G	8.35	G	8.59	std. pH units
Oil & Grease		G	<5	G	<5	G	<5	mg/l
Temperature		G	32.0	G	30.3	G	32.8	C°
Silver		C	<0.05	C	<0.05	C	<0.05	mg/l
Asbestos		C	<15,000	C	<15,000	C	<15,000	structures per liter
Arsenic		C	<0.10	C	<0.10	C	<0.10	mg/l
Chromium		C	<0.05	C	<0.05	C	<0.05	mg/l
Mercury		C	<0.0005	C	<0.0005	C	<0.0005	mg/l
Total Cyanide N/A		~~G~~	~~<0.02~~	~~G~~	~~<0.02~~	~~G~~	~~0.05~~	~~mg/l~~
Acrolein		G	<100	G	<100	G	<100	µg/l
Methylene Chloride		G	<5	G	<5	G	57.8	µg/l
Chloroform		G	<5	G	5.3	G	<5	µg/l
Carbon Tetrachloride		G	<5	G	<5	G	<5	µg/l
Benzene KP		G	<2	G	<2	G	<2	µg/l
Toluene		G	<5	G	<5	G	<5	µg/l
Phenol		G	<0.005	G	<0.005	G	0.0200	mg/l
2,4-Dinitrophenol		G	<0.010	G	<0.010	G	<0.010	mg/l
Benzidine		G	<0.040	G	<0.040	G	<0.040	mg/l
TTO ——>			<0.14		<0.14		<0.4518	

RECEIVED OCT 14 2003

You must complete and sign the certification statements on the reverse side. FG

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: 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 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: 8/4/03 C: 8/4-5/03				
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:00 a.m. C: 10:00 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	19,550			GPD
Biological Oxygen Demand		C	28			mg/l
Chemical Oxygen Demand		C	129			mg/l
Total Suspended Solids		C	25			mg/l
pH		G	8.94			std. pH units
Oil & Grease		G	12			mg/l
Temperature		G	29.3			C°
Silver		C	<0.05			mg/l
Asbestos		C	<15,000			structures per liter
Arsenic		C	<0.10			mg/l
Chromium		C	<0.05			mg/l
Mercury		C	<0.005			mg/l
Total Cyanide N/A		~~G~~	~~<0.02~~			mg/l
Acrolein		G	<100			µg/l
Methylene Chloride		G	<5			µg/l
Chloroform		G	<5			µg/l
Carbon Tetrachloride		G	<5			µg/l
Benzene 1,2		G	<2			µg/l
Toluene		G	<5			µg/l
Phenol		G	<0.005			mg/l
2,4-Dinitrophenol		G	<0.010			mg/l
Benzidine		G	<0.010			mg/l
TD →			<0.14 PG			

RECEIVED
OCT 14 2003

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
OCT 14 2003

Print or type name of signing official: Michael T. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-8735

Signature: _____ Date: 10/9/03

SMF 10/93

MSD 045708

PMT

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: 5112262-00

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	0.9528
GD-153	0.0023
H-3	38.4658
I-125	0.0365
P-32	0.2563
S-35	0.1503
ZN-65	0.1500
TOTAL ACTIVITY DISCHARGED:	**40.0140**

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: RSS III Telephone: (314) 362-2996

Signature: [signature] Date: 7/25/2003

RECEIVED

JUL 28 2003

RE:radrpt.doc 2/00

PMT

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: 5112216 2-00

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	0.0790
CR-51	0.0001
H-3	3.5627
I-125	0.1205
IN-111	0.0010
P-32	0.5157
P-33	0.0450
S-35	0.3737
TOTAL ACTIVITY DISCHARGED:	**4.6976**

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: RSS III Telephone: (314) 362-2996

Signature: DMK Date: 7/25/2003

RE: radrpt.doc 2/00

RECEIVED

JUL 28 2003

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

FG 7/24/3

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 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: 5/21/03 C: 5/21-22/03		G: 5/20/03 C: 5/20-21/03		G: 5/19/03 C: 5/19-20/03		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 12:15 pm C: 12:20 pm		G: 10:35 a.m. C: 11:00 a.m.		G: 10:45 a.m. C: 10:50 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	72,605	E	29,750	E	695,200	Gallons/day
Biological Oxygen Demand		C	60	C	44	C	10	mg/l
Chemical Oxygen Demand		C	123	C	111	C	27	mg/l
Total Suspended Solids		C	53	C	169	C	32	mg/l
pH		G	8.06	G	8.21	G	8.47	Std pH units
Oil & Grease		G	<5	G	6	G	6	mg/l
Temperature		G	25.7	G	23.5	G	26.7	°C
Silver		C	<0.05	C	0.09	C	<0.05	mg/l

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: 511262-00

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 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: 5/19/03 C: 5/19-20/03						
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:15 a.m. C: 10:30 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	19,550					
Biological Oxygen Demand		C	20					
Chemical Oxygen Demand		C	73					
Total Suspended Solids		C	9					
pH		G	8.52					
Oil & Grease		G	9					
Temperature		G	26.2					
Silver		C	<0.05					

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 T. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: Mike Kershaw Date: 7/21/03

SMF 1053

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 S. Euclid, 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: 2/5/03 C 2/6-7/03		G: 2/5/03 C: 2/6-7/03		G: 2/4/03 C: 2/5-6/03		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 11:00 a.m. C: 10:15 a.m.		G: 11:15 a.m. C: 10:30 a.m.		G: 9:45 a.m. C: 11:00 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	72,605	E	29,750	E	695,200	Gallons/day
Biological Oxygen Demand		C	59	C	22	C	20	mg/l
Chemical Oxygen Demand		C	206	C	146	C	137	mg/l
Total Suspended Solids		C	210	C	74	C	29	mg/l
pH		G	8.40	G	8.52	G	9.38	pH
Oil & Grease		G	6	G	<5	G	21	mg/l
Temperature °C		G	18.8	G	14.2	G	20.1	°C
Silver		C	<0.05	C	0.05	C	<0.05	mg/l

APR 28 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

MSD 045714

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. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 367-6735

Signature: _____ Date: 4/23/03

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: 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 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: 2/4/03 C: 2/4-5/03				
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 9:30 a.m. C: 9:40 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	19,550			GPD
Biological Oxygen Demand		C	69			mg/l
Chemical Oxygen Demand		C	210			mg/l
Total Suspended Solids		C	126			mg/l
pH		G	8.39			pH
Oil & Grease		G	23			mg/l
Temperature		G	17.5			°C
Silver		C	<0.05			mg/l

RECEIVED
APR 28 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

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 Ave

Permit No: 5112-2162-00

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)
C-14	0.23990
Gd-153	0.00500
H-3	141.30258
I-125	0.00140
Mn-54	0.15600
P-32	0.21327
S-35	0.11600
Tc-99M	0.00010
TOTAL ACTIVITY DISCHARGED:	142.03425 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

DK

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 APR 28 2003 Office of:

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: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 4-25-03

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 West of Euclid Ave

Permit No: S1122162-00

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)
C-14	0.02798
Cr-51	0.00100
H-3	2.73470
I-125	0.09259
In-111	0.00100
P-32	0.42090
P-33	0.04000
S-35	0.42968
TOTAL ACTIVITY DISCHARGED:	3.74586 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

DK I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

RECEIVED APR 28 2003 OFFICE OF ENVIRONMENTAL COMPLIANCE

Print/type name of signing official: David M Kershman

Title: Radiation Safety Specialist III Telephone: (314) 362-2996

Signature: [signature] Date: 4-25-03

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

MSD ACCOUNT #: W5112216200

INVOICE

Invoice Number: PDP-2835

Invoice Date: 4/4/03

Explanation of Charges

Fee for Pretreatment Program Discharge Permit covering the period October 1, 2002 through September 30, 2003 issued in accordance with the Metropolitan St. Louis Sewer District Ordinance #8660 for the location at 660 S. Euclid Ave..

Basecharge @ $150.00 per permit		150.00
Volume charge (computed on average daily ccf's)	949.220 ccfs @ $.72 per ccf	683.44
Sample Point Charge 4 points @ $100.00 per sample point.		400.00
	Total Fee Due:	$1,233.44

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

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: S112262-00

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)
C-14	0.016
Cr-51	0.005
H-3	2.360
I-125	0.115
P-32	0.320
P-33	0.051
S-35	0.402
TOTAL ACTIVITY DISCHARGED:	3.269 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

DJS

I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons 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 28 2003 MSD OF EWD - TECHNICAL COMPLIANCE

Print/type name of signing official: Daniel J Szatkowski

Title: Health Physicist II Telephone: 314 362 3479

Signature: Daniel J Szatkowski Date: 1-24-03

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 Ave.

Permit No: S112162-00

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)
C-14	1.760
H-3	65.052
I-125	0.004
P-32	0.213
P-33	0.002
S-35	0.187
TOTAL ACTIVITY DISCHARGED:	67.218 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

DJS I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

JAN 28 2003
OFFICE OF ENVIRONMENTAL COMPLIANCE

Print/type name of signing official: Daniel J Szatkowski

Title: Health Physicist II Telephone: 314 362 3479

Signature: Daniel J Szatkowski Date: 1-24-03

radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

RECEIVED JAN 29 2003 OFFICE OF ENVIRONMENTAL COMPLIANCE

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 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 11/13/02 C 11/13-14/02		G 11/13/02 C 11/12-13/02		G 11/11/02 C 11/11-12/02		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 10:40 a.m. C 10:45 a.m.		G 10:00 a.m. C 11:00 a.m.		G 10:30 a.m. C 10:40 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	72,605	E	89,750	E	695,200	Gal
Biological Oxygen demand		C	52	C	153	C	40	mg/l
Chemical Oxygen Demand		C	201	C	303	C	90	mg/l
Total suspended Solids		C	97	C	88	C	28	mg/l
pH		G	8.76	G	8.82	G	9.16	std. pH units
Oil & Grease		G	9	G	13	G	7	mg/l
Temperature		G	21	G	16.2	G	21.8	C°
Silver		C	<0.05	C	0.08	C	<0.05	mg/l

You must complete and sign the certification statements on the reverse side.

MSD 045722

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. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: Mike Kershaw Date: 1/27/03

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: 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 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 11/11/02 C 11/11-12/02					
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 10:30 am. C 10:40 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	19,550				
Biological Oxygen Demand		C	71				mg/l
Chemical Oxygen Demand		C	209				mg/l
Total Suspended Solids		C	98				mg/l
pH		G	9.66				std. pH units
Oil & Grease		G	<5				mg/l
Temperature		G	17.8				C°
Silver		C	<0.05				mg/l

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 T. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 367-6735

Signature: _____ Date: 1/27/03

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash. U. School of Medicine - Bldg West of Euclid

Permit No: 5122162-00

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)
C-14	0.015
H-3	1.960
I-125	0.104
P-32	0.674
P-33	0.037
S-35	0.464
TOTAL ACTIVITY DISCHARGED:	3.254 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

[DJS] 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 30 2002 OFFICE OF ENVIRONMENTAL COMPLIANCE

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: Health Physicist II Telephone: 314 362 3479

Signature: Daniel J Szatkowski Date: 10-28-02

radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash. U. School of Medicine - Bldg. East of Euclid Ave.

Permit No: 51122162-00

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)
C-14	18.189
Gd-153	0.005
H-3	55.842
I-125	0.001
P-32	0.196
S-35	0.026
TOTAL ACTIVITY DISCHARGED:	74.719 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

DJS 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 30 2002 OFFICE OF ENVIRONMENTAL COMPLIANCE

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: Health Physicist II Telephone: 314 362 3479

Signature: Daniel J Szatkowski Date: 10-28-02

radrpt.doc 2/00

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: 5112462-00

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 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: 8/27/02 C: 8/28-29/02		G: 8/27/02 C: 8/27-28/02		G: 8/27/02 C: 8/27-28/02		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 11:30 a.m. C: 12:30 p.m.		G: 1:00 p.m. C: 1:15 p.m.		G: 11:00 a.m. C: 11:15 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	72,605	E	29,750	E	695,200	Gallons
Biological Oxygen Demand		C	10	C	47	C	23	PPM
Chemical Oxygen Demand		C	21	C	96	C	65	PPM
Total Suspended Solids		C	12	C	27	C	34	PPM
pH		G	8.52	G	9.44	G	8.68	Std. pH Units
Oil & Grease		G	<5	G	25	G	<5	PPM
Temperature		G	33.2	G	31.4	G	33.8	°C
Silver		C	<0.05	C	0.05	C	<0.05	PPM
Asbestos		C	<0.47	C	<0.47	C	<0.47	PPM
Arsenic		C	<0.05	C	<0.05	C	<0.05	PPM
Chromium		C	<0.05	C	<0.05	C	<0.05	PPM
Mercury		C	<0.0005	C	<0.0005	C	<0.0005	PPM
Total Cyanide	N/A	G	~~<0.02~~	G	~~<0.02~~	G	~~<0.02~~	PPM
Acrolein		G	ND	G	ND	G	ND	PPB
Methylene Chloride		G	ND	G	ND	G	0.023	PPB
Chloroform		G	ND	G	<0.01	G	0.012	PPB
Carbon Tetrachloride		G	ND	G	ND	G	ND	PPB
Benzene		G	ND	G	ND	G	ND	PPB
Toluene		G	ND	G	ND	G	0.017	PPB
Phenol		G	ND	G	ND	G	ND	PPM
2,4-Dinitrophenol		G	ND	G	ND	G	ND	PPM
Benzidine		G	ND	G	ND	G	ND	PPM
TID =			<0.01		<0.01		0.0457	

RECEIVED OCT 25 2002 OFFICE 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 T. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: _____ Date: 10/21/02

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 S. Euclid, 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: 8/26/02 C: 8/26-27/02						
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G: 10:30 a.m. C: 10:45 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	19,550					Gallons
Biological Oxygen Demand		C	19					PPM
Chemical Oxygen Demand		C	68					PPM
Total Suspended solids		C	32					PPM
pH		G	8.48					std. pH units
Oil & Grease		G	<5					PPM
Temperature		G	28.4					°C
Silver		C	<0.05					PPM
Asbestos		C	<0.47					PPM
Arsenic		C	<0.05					PPM
Chromium		C	<0.05					PPM
Mercury		C	<0.0005					PPM
Total Cyanide		G	~~<0.02~~ N/A					PPM
Acrolein		G	ND					PPB
Methylene Chloride		G	ND					PPB
Chloroform		G	<0.01					PPB
Carbon Tetrachloride		G	ND					PPB
Benzene		G	ND					PPB
Toluene		G	ND					PPB
Phenol		G	ND					PPM
2,4-Dinitrophenol		G	ND					PPM
Benzidine		G	ND					PPM

RECEIVED OCT 26 2002 OFFICE OF ENVIRONMENTAL COMPLIANCE

10-20-01

You must complete and sign the certification statements on the reverse side.

MSD 045730

Founded 1929
St. Louis Testing Laboratories
INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

WASHINGTON UNIVERSITY
Campus Box 8229
660 South Euclid Ave.
St. Louis, MO 63110

September 16, 2002
Lab No. 02E-0890
P.O. No. 29760W

Attention: Mike Kershaw

REPORT OF TESTS

SAMPLE ID: WASTE WATER GRAB, PT. 001, 8/27/02 @ 11:30 AM
WASTE WATER COMPOSITE, PT. 001, 8/28/02 – 8/29/02 @ 12:30 PM
WASTE WATER GRAB, PT. 003, 8/27/02 @ 1:00 PM
WASTE WATER COMPOSITE, PT. 003, 8/27/02 - 8/28/02 @ 1:15 PM
WASTE WATER GRAB, PT. 005, 8/27/02 @ 11:00 AM
WASTE WATER COMPOSITE, PT. 005, 8/27/02 – 8/28/02 @ 11:15 AM
WASTE WATER GRAB, PT. 006, 8/26/02 @ 10:30 AM
WASTE WATER COMPOSITE, PT. 006, 8/26/02 – 8/27/02 @ 10:45 AM

RESULTS: mg/L Except As Noted

ANALYTE	001	003	005	006	MDL	METHOD NUMBER
Biological Oxygen Demand (C)	10	47	23	19	10	405.1
Chemical Oxygen Demand (C)	21	96	65	68	10	410.4
Total Suspended Solids (C)	12	27	34	32	5	160.2
pH (Std. pH Units) (G)	8.52	9.44	8.68	8.48	---	150.1
Oil & Grease (G)	<5	25	<5	<5	5	1664
Temperature, °C (G)	33.2	31.4	33.8	28.4	---	170.1
Silver (C)	<0.05	0.05	<0.05	<0.05	0.05	200.7
Asbestos (MSL) (C)	<0.47	<0.47	<0.47	<0.47	0.47	SM 2570B
Arsenic (C)	<0.05	<0.05	<0.05	<0.05	0.05	200.7
Chromium (C)	<0.05	<0.05	<0.05	<0.05	0.05	200.7
Mercury (C)	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	245.1
Total Cyanide (G)	<0.02	<0.02	<0.02	<0.02	0.02	335.2

MDL: Minimum Detection Limit

MSL: Million Structures per Liter

(C) Composite, (G) Grab

RECEIVED
OCT 26 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

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.

St. Louis Testing Laboratories, Inc., warrants that the testing services provided herein have been performed, findings obtained and reports prepared in accordance with generally accepted testing laboratory principles and practices, subject to generally accepted margins of error for the instruments used in performing the tests. No other warranties are either expressed or implied. No opinions, conclusions or warranties are rendered by St. Louis Testing Laboratories as to fitness of the sample for any particular purpose other than compliance with the specific code standards to the extent that such code standards are specifically set forth on the front of this report.

These tests were conducted in accordance with the standards and procedures specified. The analysis and/or tests have been made and report prepared, based upon results from specific samples identified and supplied by the client or their representatives. We assume no responsibility for, nor make any warranties for any extrapolation of data from the test results and relating such test results to any batch or lot or material from which we had no control of sample acquisition.

This report is furnished in strict confidence for the exclusive use of the client or their representive, and no distribution of all or part of the report shall be made to third parties without the prior written approval of the company or individual ordering the work. Official reports will be provided only by St. Louis Testing Laboratories, Inc. and will contain a raised seal to certify authenticity. Modification or reproduction of these reports by anyone other than St. Louis Testing Laboratories, Inc. is prohibited. An additional copy will be provided on request.

If during or after the performing of these tests it is subsequently necessary for St. Louis Testing Laboratories to recreate reports, assemble materials, gather additional information, or perform other work with regard to these test results to assist in the preparation for any investigation, civil proceeding, or criminal action, regardless of who makes such a request or issues a subpoena, client shall reimburse Laboratory for out of pocket expenses incurred in relation to such work. Client further agrees to compensate Laboratory at a rate of $100.00 per hour for any such work which is required, including any time devoted to testifying in depositions, at hearings, or in court.

The only tests requested by the client are those that are set forth on the front of this report. There may be additional tests which can be performed on the sample but which client has not requested that St. Louis Testing Laboratories perform. Client releases and holds St. Louis Testing Laboratories harmless for any damages which may have been discovered, avoided, or mitigated as a result of any additional testing not requested by client.

Samples will be destroyed by the laboratory 30 days after issuance of a formal report, unless specifically requested in writing by the client or their representative to return the samples to them. Samples may be stored at St. Louis Testing Laboratories, Inc. for an extended period of time, provided a written agreement incorporating monetary considerations is executed.

Founded 1929 St. Louis Testing Laboratories INCORPORATED

2810 Clark Avenue • St. Louis, MO 63103-2574 • (314) 531-8080 • FAX (314) 531-8085

WASHINGTON UNIVERSITY

September 16, 2002
Lab No. 02E-0890
P.O. No. 29760W

Attention: Mike Kershaw

REPORT OF TESTS

RESULTS: µg/L or parts per Billion (PPB) **VOLATILES EPA 600 METHOD 624**

ANALYTE	001	003	005	006	MDL
Acrolein (G) KA	ND	ND	ND	ND	100
Methylene Chloride (G) KP	ND	ND	23.0	ND	5
Chloroform (G) KP	ND	7.0	12.0	5.6	5
Carbon Tetrachloride (G) KP	ND	ND	ND	ND	5
Benzene (G) KP	ND	ND	ND	ND	2
Toluene (G) KP	ND	ND	10.7	ND	5

RESULTS: mg/L or parts per million (PPM) **SEMI-VOLATILES EPA 600 METHOD 625**

ANALYTE	001	003	005	006	MDL
Phenol (G) KP	ND	ND	ND	ND	0.005
2,4 – Dinitrophenol (G) KP	ND	ND	ND	ND	0.010
Benzidine (G) KA	ND	ND	ND	ND	0.040

ND: Not Detected / MDL: Minimum Detection Limit

(C) Composite, (G) Grab

Identification of tested specimens provided by the client.

Carmen S. DeBlass, Director
Environmental Testing

CSD/cmh

RECEIVED
OCT 26 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

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.

St. Louis Testing Laboratories, Inc., warrants that the testing services provided herein have been performed, findings obtained and reports prepared in accordance with generally accepted testing laboratory principles and practices, subject to generally accepted margins of error for the instruments used in performing the tests. No other warranties are either expressed or implied. No opinions, conclusions or warranties are rendered by St. Louis Testing Laboratories as to fitness of the sample for any particular purpose other than compliance with the specific code standards to the extent that such code standards are specifically set forth on the front of this report.

These tests were conducted in accordance with the standards and procedures specified. The analysis and/or tests have been made and report prepared, based upon results from specific samples identified and supplied by the client or their representatives. We assume no responsibility for, nor make any warranties for any extrapolation of data from the test results and relating such test results to any batch or lot or material from which we had no control of sample acquisition.

This report is furnished in strict confidence for the exclusive use of the client or their representive, and no distribution of all or part of the report shall be made to third parties without the prior written approval of the company or individual ordering the work. Official reports will be provided only by St. Louis Testing Laboratories, Inc. and will contain a raised seal to certify authenticity. Modification or reproduction of these reports by anyone other than St. Louis Testing Laboratories, Inc. is prohibited. An additional copy will be provided on request.

If during or after the performing of these tests it is subsequently necessary for St. Louis Testing Laboratories to recreate reports, assemble materials, gather additional information, or perform other work with regard to these test results to assist in the preparation for any investigation, civil proceeding, or criminal action, regardless of who makes such a request or issues a subpoena, client shall reimburse Laboratory for out of pocket expenses incurred in relation to such work. Client further agrees to compensate Laboratory at a rate of $100.00 per hour for any such work which is required, including any time devoted to testifying in depositions, at hearings, or in court.

The only tests requested by the client are those that are set forth on the front of this report. There may be additional tests which can be performed on the sample but which client has not requested that St. Louis Testing Laboratories perform. Client releases and holds St. Louis Testing Laboratories harmless for any damages which may have been discovered, avoided, or mitigated as a result of any additional testing not requested by client.

Samples will be destroyed by the laboratory 30 days after issuance of a formal report, unless specifically requested in writing by the client or their representative to return the samples to them. Samples may be stored at St. Louis Testing Laboratories, Inc. for an extended period of time, provided a written agreement incorporating monetary considerations is executed.

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash. U. School of Medicine - Bldg East of Euclid Ave.

Permit No: 511224 12-00

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)
C-14	0.717
Fe-55	0.039
H-3	54.184
I-125	0.023
Ni-63	0.320
P-32	0.260
P-33	0.005
S-35	0.039
TOTAL ACTIVITY DISCHARGED:	55.587 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

DJS 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 JUL 25 2002 MSD ENVIRONMENTAL COMPLIANCE

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: Health Physicist II Telephone: 314 362 3479

Signature: Daniel J Szatkowski Date: 7-23-02

radrpt.doc 2/00

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PC 9/26 PC

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 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 5/9/02 C 5/9-10/02		G 5/9/02 C 5/9-10/02		G 5/8/02 C 5/8-9/02		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 10:45 a.m. C 11:00 a.m.		G 11:05 a.m. C 11:15 a.m.		G 11:15 a.m. C 5/8-9/02 11:30		
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	55,850	E	3,445	E	555,150	GPD
Biological Oxygen Demand		C	37	C	327	C	31	mg/l
Chemical Oxygen Demand		C	76	C	512	C	78	mg/l
Total Suspended Solid		C	38	C	86	C	43	mg/l
pH		G	7.44	G	7.93	G	8.53	std. ph units
Oil & Grease		G	<5	G	<5	G	<5	mg/l
Temperature		G	24.4	G	25.6	G	23.9	C°
Silver		C	<0.05	C	0.29	C	<0.05	mg/l

RECEIVED NOV 25 2002

You must complete and sign the certification statements on the reverse side.

MSD 045736

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. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: [signature] Date: 7/22/02

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 S. Euclid, 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 5/8/02 C 5/8-9/02						
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 10:55 a.m. C 11:00 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	2,665					GPD
Biological Oxygen Demand		C	54					mg/l
Chemical Oxygen Demand		C	95					mg/l
Total Suspended Solid		C	39					mg/l
pH		G	7.84					~~S.U.~~ pH units
Oil & Grease		G	<5					mg/l
Temperature		G	26.2					C°
Silver		C	<0.05					mg/l

RECEIVED
JUL 25 2002
OFFICE 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 T. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: Michael T. Kershaw Date: 7/22/02

SMF 1093

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash U. School of Medicine - Bldg West of Euclid Ave.

Permit No: S1122168-00

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)
C-14	0.017
H-3	2.295
I-125	0.055
In-111	0.009
P-32	0.595
P-33	0.066
S-35	0.277
TOTAL ACTIVITY DISCHARGED:	3.314 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

DJS 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 JUL 25 2002

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: Health Physicist II Telephone: 314 362 3479

Signature: Daniel J Szatkowski Date: 7-23-02

radrpt.doc 2/00

Washington University in St. Louis
SCHOOL OF MEDICINE
Environmental Health & Safety

May 13, 2002

RE: Notice of Permit Violations

Department of Environmental Compliance
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

To Whom It May Concern:

On May 1, 2002, Washington University School of Medicine received a correspondence from Mr. Fabian T. Grabski of the Metropolitan St. Louis Sewer District (MSD). The correspondence was a Notice of Permit Violations (NOPV) in reference to discharge permit number 51122162-00. In response to the NOPV, Mr. Grabski requested that Washington University School of Medicine (WUSM) resample the discharge point and submit a report of corrective actions taken by WUSM to correct the violation cited as Violations of Permit Limitations in the NOPV.

The NOPV is for a violation of the permit limit for silver at sample point 003. The limit is 0.5 mg/l and the value reported for sample point 003 in the first quarter of 2002 was 0.52 mg/l. Subsequent sampling and analysis for silver at sample point 003 reveals a level of 0.29 mg/l for silver. This is below the limit set by MSD for the permit. results?

Washington University School of Medicine will take corrective actions to ensure compliance with the Industrial Wastewater Discharge permit. The potential source for the silver effluent is most likely a result of x-ray and photographic development processes located in buildings upstream from the sample point. Washington University School of Medicine Environmental Health and Safety (EH&S) personnel will do a physical inspection of the upstream buildings for these processes. EH&S personnel will council those responsible for film developing on proper disposal and reclamation techniques for the silver contaminated photographic development liquid waste.

If you have any questions or further concerns, please contact me at 362-6735.

RECEIVED
MAY 16 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

Sincerely,

Michael T. Kershaw

Washington University School of Medicine at Washington University Medical Center, 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

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 29, 2002

Michael T. Kershaw
Hazardous Materials Manager
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
660 S. Euclid Avenue
Campus Box 8229
St. Louis, MO 63110

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 51122162-00
For premises at: 660 S. Euclid Avenue

Dear Mr. Kershaw:

We have reviewed the first quarter 2002 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
02-14-02	1110	003	24-hr comp	Silver (T)	0.5 mg/l	DA	0.52 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 for Silver at sampling point 003.

Submit a report of corrective actions, which you have initiated to ensure compliance with the permitted discharge limitation for Silver.

Refer to the enclosure for information on potential enforcement actions should noncompliance continue. You should consider the percentages applicable to Significant Noncompliance when planning for additional sampling.

Please submit your response on the above items by May 27, 2002.

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: Doug Mendoza
Permit file

RECEIVED
MAY 16 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

Metropolitan
St. Louis Sewer
District

Office of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
(314) 436-8710
FAX (314) 436-8753

April 29, 2002

Michael T. Kershaw
Hazardous Materials Manager
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
660 S. Euclid Avenue
Campus Box 8229
St. Louis, MO 63110

RE: NOTICE OF PERMIT VIOLATIONS

Discharge Permit No: 51122162-00
For premises at: 660 S. Euclid Avenue

Dear Mr. Kershaw:

We have reviewed the first quarter 2002 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
02-14-02	1110	003	24-hr comp	Silver (T)	0.5 mg/l	DA	0.52 mg/l

(T) = Total substance
mg/l = milligrams per liter
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REQUIRED ACTION/RESPONSE:

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Please submit your response on the above items by May 27, 2002.

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: Doug Mendoza
Permit file

PMT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash.U. School of Medicine bldgs West of Euclid

Permit No: S1122160-00

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)
C-14	0.017
Ca-45	0.003
Cr-51	0.001
H-3	3.105
I-125	0.144
In-111	0.002
P-32	0.431
P-33	0.087
S-35	0.330
TOTAL ACTIVITY DISCHARGED:	4.120 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

DJS

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 APR 29 2002 OFFICE OF ENVIRONMENTAL COMPLIANCE

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: 4-24-02

radrpt.doc 2/00

PMT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash. U. School of Medicine - bldg East of Euclid Ave.

Permit No: 51122162-00

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)
C-14	0.649
Ca-45	0.657
Fe-55	0.120
H-3	~~54.194~~ 55.776
I-125	0.003
Mn-54	0.010
P-32	0.273
S-35	0.145
Zn-65	0.005
TOTAL ACTIVITY DISCHARGED:	57.638 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

DJS I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

RECEIVED APR 30 2002 OFFICE OF 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: 4-24-02

radrpt.doc 2/00

FC 9/11/02

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 S. Euclid, 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 2/13/02 C 2/13-14/02		G 2/13/02 C 2/13-14/02		G 2/12/02 C 2/12-13/02		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 10:42 a.m. C 10:50 a.m.		G 11:02 a.m. C 11:10 a.m.		G 10:26 a.m. C 10:30 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	55,850	E	3,445	E	555,150	GPD
Biological Oxygen Demand		C	45	C	422	C	38	mg/l
Chemical Oxygen Demand		C	127	C	705	C	121	mg/l
Total Suspended Solids		C	59	C	61	C	42	mg/l
pH		G	8.25	G	8.71	G	9.18	Std. pH units
Oil & Grease		G	<5	G	<5	G	<5	mg/l
Temperature		G	26.0	G	21.0	G	19.9	C°
Silver		C	<0.05	C	0.52	C	<0.05	mg/l

RECEIVED
APR 26 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

MSD 045746

Certified mail P074 202 302

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:

MK 2/22/02 ☐ 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:

MK 2/22/02 ☐ 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. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: Michael T. Kershaw Date: 4/23/02

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 S. Euclid, 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 2/12/02 C 2/12-13/02					
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 10:06 a.m. C 10:08 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	2,665				GPD
Biological Oxygen Demand		C	78				mg/l
Chemical Oxygen Demand		C	167				mg/l
Total Suspended Solids		C	22				mg/l
pH		G	7.81				std pH units
Oil & Grease		G	<5				mg/l
Temperature		G	15.9				C°
Silver		C	<0.05				mg/l

RECEIVED
APR 26 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

MSD 045748

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash.U. School of Medicine - bldgs East of Euclid Ave.

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	53.569
P-32	0.515
S-35	0.297
C-14	0.119
I-125	0.002
Co-57	0.060
Mn-54	0.066
TOTAL ACTIVITY DISCHARGED:	54.628 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

[DJS] I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print/type name of signing official: Daniel J Szatkowski

Title: Assistant Radiation Safety Officer Telephone: (314) 362-3479

Signature: Daniel J Szatkowski Date: 1-23-02

RECEIVED JAN 2 3 2002 ENVIRONMENTAL COMPLIANCE

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

PART I: IDENTIFYING INFORMATION

Company Name: Wash.U. 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	4.434
P-32	0.495
S-35	0.425
C-14	0.011
I-125	0.100
P-33	0.090
TOTAL ACTIVITY DISCHARGED:	5.555 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

DJS

I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20.2003 and 19 CSR Part 20-10.090 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission and the Missouri Department of Health, respectively, have been met for the period covered by this report.

B. RADIOACTIVE MATERIALS DISCHARGE REPORT CERTIFICATION

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

RECEIVED JAN 23 2002 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: 1-23-02

radrpt.doc 2/00

FG 9/30/02

B2

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

FG 1/25/02

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 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 11/15/01 Comp 11/14-15/01		G 11/14/01 C 11/15-16/01		G 11/13/01 C 11/13-14/01		
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 9:12 a.m. C 10:02 a.m.		G 2:44 p.m. C 9:30 a.m.		G 9:16 a.m. C 9:28 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	55,850	E	3,445	E	555,150	GPD
Biological Oxygen Demand		C	38	C	244	C	124	mg/l
Chemical Oxygen Demand		C	98	C	454	C	221	mg/l
Total Suspended Solids		C	39	C	41	C	51	mg/l
pH		G	7.62	G	7.18	G	7.31	std. pH units
Oil & Grease		G	<5	G	14	G	<5	mg/l
Temperature		G	28.4	G	22.4	G	21.3	C°
Silver		C	<0.05	C	<0.05	C	<0.05	mg/l

You must complete and sign the certification statements on the reverse side.

RECEIVED JAN 24 2002

MSD 045751

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. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: Mike Kershaw Date: 1/18/02

SMF 10/93

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT

PART I: IDENTIFYING INFORMATION

Company Name: 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 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 11/13/01 C 11/13-14/01						
TIMES AT WHICH SAMPLES WERE COLLECTED ——>		G 8:51 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	2,665					GPD
Biological Oxygen Demand		C	30					mg/l
Chemical Oxygen Demand		C	85					mg/l
Total Suspended Solids		C	31					mg/l
pH		G	6.54					std pH units
Oil & Grease		G	<5					mg/l
Temperature		G	17.5					C°
Silver		C	<0.05					mg/l

RECEIVED
JAN 24 2002
OFFICE OF ENVIRONMENTAL COMPLIANCE

You must complete and sign the certification statements on the reverse side.

MSD 045753

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. Kershaw

Title: Hazardous Materials Division Manager Telephone: (314) 362-6735

Signature: Mike Kersh Date: 1/18/08

SMF 10/93

ACCOUNT NUMBER:

COMPANY NAME:

5112-2162-00
WASHINGTON UNIV SCHOOL OF MEDICINE
660 South Euclid
St. Louis, MO 63110

CORRESPONDENCE

FROM 1999 **THRU** 2001

☑ **CORRESPONDENCE LOCATED IN OVERFLOW FILE**

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