King County
Wastewater Treatment Division
Industrial Waste Program
Department of Natural Resources and Parks
201 South Jackson Street, Suite 513
Seattle, WA 98104-3855
206-477-5300 Fax 206-263-3001
TTY Relay: 711

July 25, 2017

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Douglas Gallucci
Harborview Medical Center
325 Ninth Avenue, Box 354110
Seattle, WA 98104

Issuance of Wastewater Discharge Authorization No. 712-04 to Harborview Medical Center

Dear Mr. Gallucci:

The King County Industrial Waste Program (KCIW) has reviewed your application to discharge industrial wastewater to the sewer system from the Harborview Medical Center facility located at 325 Ninth Avenue, Seattle, Washington, and has issued the enclosed Minor Discharge Authorization. The enclosed Discharge Authorization No. 712-04 supersedes and cancels Discharge Authorization No. 712-03, effective September 7, 2017.

This authorization permits you to discharge limited amounts of industrial wastewater into King County's sewer system in accordance with the effluent limitations and other requirements and conditions set forth in the document and the regulations outlined in King County Code 28.84.060 (copy available on the Internet at: www.kingcounty.gov/council/legislation/kc_code.aspx). As long as you maintain good compliance and do not change the nature and volume of your discharge, the formal requirements and fees of a full wastewater permit will not be required.

If you propose to increase the volume of your discharge or change the type or quantities of substances discharged, you must contact KCIW at least 60 days before making these changes.

King County Code 28.84 authorizes a fee for each Minor Discharge Authorization issued by the King County Department of Natural Resources and Parks. The current fee for issuance of a Minor Discharge Authorization is $1,500. King County will send you an invoice for this amount.

If at any time you have questions about this discharge authorization, or other questions about your discharge, please call me at 206-477-5433 or email me at lydia.eng@kingcounty.gov. You may also wish to visit our program's Internet pages at: www.kingcounty.gov/industrialwaste.

Thank you for helping support our mission to protect public health and enhance the environment.

Sincerely,

Lydia Eng
Compliance Investigator

Enclosure

cc: John Wallace, University of Washington (via email)
Liz Kindred, Harborview Medical Center (via email)
Julie Howell, Seattle Public Utilities

King County

MINOR DISCHARGE AUTHORIZATION

King County Industrial Waste Program
201 S. Jackson Street, Room 513
Seattle, WA 98104-3855

NUMBER 712-04

for

Harborview Medical Center

Facility address: 325 Ninth Avenue
Seattle, WA 98104

Mailing address: 385 Ninth Avenue
Seattle, WA 98104

Emergency (24-hour) phone: 206-616-5837

Industry type: Hospital

SIC code: 8062 **EPA Id. No.:** WAD 096767967

Discharge to: West Point Treatment Plant

*Note: This authorization is valid only for the specific discharges shown below:

Discharge process: Wastewater generated by hospital/clinical laboratory operations.

Pretreatment process: Waste Management Best Management Practices

Effective date: September 7, 2017
Expiration date: September 6, 2022

Permission is hereby granted to discharge industrial wastewater from the above-identified facility into the King County sewer system in accordance with the effluent limitations and monitoring requirements set forth in this authorization.

If the industrial user wishes to continue to discharge after the expiration date, an application must be filed for re-issuance of this discharge authorization at least 90 days prior to the expiration date. For information concerning this King County Discharge Authorization please call Industrial Waste Compliance Investigator Lydia Eng at 206-477-5433.

24-HOUR EMERGENCY NOTIFICATION
West Point Treatment Plant: 206-263-3801
Washington State Department of Ecology: 425-649-7000

GENERAL DISCHARGE LIMITATIONS

Wastewater Discharge

All wastewater discharged to the sanitary sewer system must comply with local, state, and federal standards designed to protect surface waters, health, and safety in the treatment works and to maintain the quality of biosolids from wastewater treatment plants. Hospital or clinical laboratory operations often generate hazardous waste (defined by Chapter 173-303 WAC) or contain dilutions and mixtures of chemicals in very low concentrations or in small quantities. Table 1 of this document contains King County local sewer limits and best management practices (BMPs).

For additional guidance on proper waste disposal practices and information on reducing the amount of hazardous waste generated and disposed, see the **Laboratory Waste Management Guide** (www.labwasteguide.org), published by the Local Hazardous Waste Management Program in King County, and **Best Management Practices for Hospital Waste,** (https://fortress.wa.gov/ecy/publications/documents/0504013.pdf), published by the Washington State Department of Ecology (Ecology).

If you are unsure whether a wastestream is suitable for discharge to the sewer, contact KCIW at 206-477-5300 or info.kciw@kingcounty.gov.

Some important considerations in the discharge of laboratory wastewater include:

- Using process water or other liquids to dilute a discharge, as a partial or complete substitute for adequate treatment, is not allowed.
- Your discharge must meet regulations at the point prior to mixing with non-process water.

Treatment of hazardous wastes, such as elementary neutralization of solutions with pH ranges below 2.0 or above 12.5, is also regulated under the Dangerous Waste Regulations (WAC 173-303-170). For specific guidance, see Ecology standards listed in Technical Information Memorandum No. 96-412: Treatment by Generator available at: www.ecy.wa.gov/pubs/96412.pdf.

The industrial user shall not discharge waste, which exceeds the following limitations:

Heavy Metals & Cyanide	Instantaneous Maximum ppm (mg/L)[1]	Daily Average ppm (mg/L)[2]
Arsenic	4.0	1.0
Cadmium	0.6	0.5
Chromium	5.0	2.75
Copper	8.0	3.0

[1] The instantaneous maximum is violated whenever the concentration of any sample, including a grab within a series used to calculate daily average concentrations, exceeds the limitation.

[2] The daily average limit is violated: a) for a continuous flow system when a composite sample consisting of four or more consecutive samples collected during a 24-hour period over intervals of 15 minutes or greater exceeds the limitation, or b) for a batch system when any sample exceeds the limitation. A composite sample is defined as at least four grab samples of equal volume taken throughout the processing day from a well-mixed final effluent chamber, and analyzed as a single sample.

Heavy Metals & Cyanide	Instantaneous Maximum ppm (mg/L)[1]	Daily Average ppm (mg/L)[2]
Lead	4.0	2.0
Mercury	0.2	0.1
Nickel	5.0	2.5
Silver	3.0	1.0
Zinc	10.0	5.0
Cyanide	3.0	2.0

Best Management Practices

The chemicals/compounds listed in the table below, were found to be commonly used in hospitals and their laboratories. Not all chemicals or compounds used at hospitals are listed in this discharge authorization. King County also recognizes that "best management practices" can be improved upon over time. At this time, the BMP listed is what is considered the BMP at this time. When BMPs do change, King County's intention is to notify you and send addendums detailing the new BMP(s). All wastewater discharged to the sanitary sewer system must comply with local, state, and federal standards.

Common Hospital Waste/Best Management Practices (BMPs)			
Chemical/ Compound	**Source/Location**	**Acceptable to sewer at the following levels (end of process concentration)**	**BMPs**
Total chromium	Chromic acid used for glassware cleaning, x-ray tank cleaning	5.0 mg/L - instantaneous 2.75 mg/L - daily average	Substitute with a less toxic cleaning solution
Total mercury	Thermometers, blood pressure reservoirs, stains	0.2 mg/L - instantaneous 0.1 mg/L - daily average	Replace with digital equipment or products that do not contain mercury
Total mercury/Total silver	Rinse waters from dental offices – removal and/or placement of amalgam fillings	It is not acceptable to send amalgam to the sewer without treatment (contains mercury and silver).	Follow King County Guidelines for Dental Offices; Install ISO certified amalgam separator
Total silver	X-ray fixer solution – Radiology	3.0 mg/L - instantaneous 1.0 mg/L - daily average	Silver recovery unit, metallic replacement units, minimum two cartridges[3] in series or collect and recycle off site
Glutaraldehyde cold sterilant solution	Used as a disinfectant in Hematology, Pathology, Histology, and dental offices	Less than 4.0% Spent cold sterilant solutions containing less than 4.0% glutaraldehyde may be discharged to the sanitary sewer provided the solution is used per manufacturer's directions and only in quantities	Treatment (detoxify) with a commercially available chemical deactivation compound that breaks the aldehyde bond. For spent solutions (less than 4.0% follow procedures found in King County Glutaraldehyde Policy.

[3] Cartridges must be sized and maintained according to the manufacturer's recommendations.

Common Hospital Waste/Best Management Practices (BMPs)			
Chemical/ Compound	**Source/Location**	**Acceptable to sewer at the following levels (end of process concentration)**	**BMPs**
		needed. After discharging the solution down the drain, flush with several gallons of water so it does not sit in the sink trap.	
OPA (ortho-phthalaldehyde)	Used as a disinfectant	Less than 0.01%	Deactivate by treating with glycine. Add 25 grams (or two tablespoons) of glycine per one gallon of waste OPA.
Formaldehyde	Used as a preservative and or a disinfectant in Hematology, Pathology, and Histology	0.1% in water	Treatment (detoxify) with a commercially available chemical deactivation compound
Total xylenes (CAS No. 1330-20-7)	Extractions and slide cleaning	2.2 mg/l	Recycling via distillation or disposed of as ignitable hazardous waste
Ethanol	Stain lines in Cytology, Hematology, and Pathology	Less than 24.0% in water	Use filtration device that removes impurities and allows re-use of the reagent, or dispose of as ignitable hazardous waste.
Methanol	Stain lines in Cytology, Hematology, and Pathology	Less than 10.0% in water	
Isopropanol	Stain lines in Cytology, Hematology, and Pathology	Less than 10.0% in water	
Various pharmaceuticals, including waste controlled substances (partially used, expired, or unused drugs)	Pharmacy/Patient rooms and patient care areas facility-wide	Not acceptable to the sewer	Various options; see pharmaceuticals section below.

Pharmaceuticals

The Washington State Department of Ecology has an interim enforcement policy for pharmaceutical waste (publication number 07-04-024). With this interim policy, Ecology will use discretion in enforcing portions of the Dangerous Waste Regulations at facilities following the requirements of this policy. Hospital facilities may use this policy to manage all pharmaceuticals, as defined by RCW 69.04.009, that are (1) non-viable or (2) discarded for any reason. Any pharmaceutical waste not managed according to Ecology's interim policy (enclosed) is subject to full regulation under the Dangerous Waste Regulations.

Most unused, expired, or partially used drugs are categorized as hazardous waste and are not acceptable for discharge to the sewer. Other management options include returning to reverse distributors or designating the drugs and working with a hazardous waste or controlled substances disposal company.

Radioactive Compounds

Only radioactive compounds with very short half-lives are allowed to the sewer at concentrations approved by the Washington State Department of Health. Most radioactive waste will need to be collected and disposed of as low level radioactive waste. For specific guidance, contact the Washington State Department of Health at 425-576-8945.

Operating Criteria

There shall be no odor of solvent, gasoline, or hydrogen sulfide (rotten egg odor), oil sheen, unusual color, or visible turbidity. The discharge must remain translucent. If any of the discharge limits are exceeded, you must stop discharging and notify KCIW 206-477-5300.

Corrosive Substances

Limits	
Maximum:	pH 12.0 (s.u.)
Daily minimum:	pH 5.5 (s.u.)
Instantaneous minimum:	pH 5.0 (s.u.)

The instantaneous minimum pH limit is violated whenever any single grab sample or any instantaneous recording is less than pH 5.0.

The daily minimum pH limit is violated whenever any continuous recording of 15 minutes or longer remains below pH 5.5 or when each pH value of four consecutive grab samples collected at 15-minute intervals or longer within a 24-hour period remains below pH 5.5.

Discharges of more than 50 gallons per day of caustic solutions equivalent to more than 5 percent NaOH by weight or greater than pH 12.0 are prohibited unless authorized by KCIW and subject to special conditions to protect worker safety, the collection system, and treatment works.

Fats, Oils, and Grease (FOG)

Discharge of FOG shall not result in significant accumulations that either alone or in combination with other wastes are capable of obstructing flow or interfere with the operation or performance of sewer works or treatment facilities.

Nonpolar FOG (oil and grease from petroleum sources): The industrial user shall not discharge wastes that contain in excess of 100 milligrams per liter (mg/L) of nonpolar FOG.

Polar FOG (oil and grease from animal and/or vegetable origin): Dischargers of polar FOG shall minimize free-floating polar FOG. Dischargers may not add emulsifying agents exclusively for the purpose of emulsifying free-floating FOG.

Flammable or Explosive Materials

No person shall discharge any pollutant, as defined in 40 CFR 403.5, that creates a fire or explosion hazard in any sewer or treatment works, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140° Fahrenheit or 60° Centigrade using the test methods specified in 40 CFR 261.21.

At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the system (or at any point in the system), be more than 5 percent nor any single reading be more than 10 percent of the lower explosive limit (LEL) of the meter.

Pollutants subject to this prohibition include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, and sulfides, and any other substances that King County, the fire department, the State, or the U.S. Environmental Protection Agency have notified the user are a fire hazard or a hazard to the system.

High Temperature

The industrial user shall not discharge material with a temperature in excess of 65 °C (150 °F).

Hydrogen Sulfide

Atmospheric hydrogen sulfide: 10.0 ppm
(As measured at a monitoring manhole designated by King County)

Soluble sulfide limits may be established on a case-by-case basis depending upon volume of discharge and conditions in the receiving sewer, including oxygen content and existing sulfide concentrations.

Organic Compounds

No person shall discharge any organic pollutants that result in the presence of toxic gases, vapors, or fumes within a public or private sewer or treatment works in a quantity that may cause worker health and safety problems.

Organic pollutants subject to this restriction include, but are not limited to: Any organic pollutant compound listed in 40 CFR Section 433.11 (e) (total toxic organics [TTO] definition), acetone, 2-butanone (MEK), 4-methyl-2-pentanone (MIBK), and xylenes.

Settleable Solids

Settleable solids concentrations: 7.0 ml/L

GENERAL CONDITIONS

A. All requirements of King County Code pertaining to the discharge of wastes into the municipal sewer system are hereby made a condition of this discharge authorization.

B. The industrial discharger shall implement measures to prevent accidental spills or discharges of prohibited substances to the municipal sewer system. Such measures include, but are not limited to, secondary containment of chemicals and wastes, elimination of connections to the municipal sewer system, and spill response equipment.

C. Any facility changes, which will result in a change in the character or volume of the pollutants discharged to the municipal sewer system, must be reported to your KCIW representative. Any facility changes that will cause the violation of the effluent limitations specified herein will not be allowed.

D. In the event the permittee is unable to comply with any of the conditions of this discharge authorization because of breakdown of equipment or facilities, an accident caused by human error, negligence, or any other cause, such as an act of nature the company shall:

1. Take immediate action to stop, contain, and clean up the unauthorized discharges and correct the problem.
2. Immediately notify KCIW so steps can be taken to prevent damage to the sewer system.
3. Submit a written report within 14 days describing the breakdown, the actual quantity and quality of resulting waste discharged, corrective action taken, and the steps taken to prevent recurrence.

E. Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this discharge authorization or the resulting liability for failure to comply.

F. The permittee shall, at all reasonable times, allow authorized representatives of KCIW to enter that portion of the premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this discharge authorization.

G. Nothing in this discharge authorization shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including discharge into waters of the state. Any such discharge is subject to regulation and enforcement action by the Washington State Department of Ecology.

H. This discharge authorization does not authorize discharge after its expiration date. If the permittee wishes to continue to discharge after the expiration date, an application must be filed for reissuance of this discharge authorization at least 90 days prior to the expiration date. If the permittee submits its reapplication in the time specified herein, the permittee shall be deemed to have an effective wastewater discharge authorization until KCIW issues or denies the new wastewater discharge authorization. If the permittee fails to file its reapplication in the time period specified herein, the permittee will be deemed to be discharging without authorization.

Compliance Investigator: _____ Date: July 25, 2017
Lydia Eng