



Application for a State Waste Discharge Permit to Discharge Industrial Wastewater to a Publicly-Owned Treatment Works (POTW)

This application is for a state waste discharge permit for a discharge of industrial wastewater to a publicly-owned treatment works (POTW) as required by Chapter 90.48 RCW and Chapter 173-216 WAC. It is designed to provide Ecology with information on pollutants in the waste stream, materials that may enter the waste stream, and the flow characteristics of the discharge.

Ecology may request additional information to clarify the conditions of this discharge. The applicant should reference information previously submitted to Ecology that applies to this application in the appropriate section.

SECTION A. GENERAL INFORMATION

1. Applicant Name: Eastern Washington University - Permit No. ST-8098

2. Facility Name: Eastern Washington University
(if different from Applicant)

3. Applicant Mail Address: 101 Rozell
Street

Cheney, WA City/State 99004 Zip

4. Facility Location Address: Same as Above
(if different from 3 above) Street

City/State Zip

5. UBI No. 3210007
80 Sometimes called a registration, tax, "C," or resale number, the Unified Business Identifier (UBI) number is a nine-digit number used to identify persons engaging in business activities. The number is assigned when a person completes a [Master Business Application](#) to register with or obtain a license from state agencies. The Departments of Revenue, Licensing, Employment Security, Labor and Industries, and the Corporations Division of the Secretary of State are among the state agencies participating in the UBI program.

6. Latitude/longitude of the facility as decimal degrees (NAD83/WGS84):
47.4941 N / 117.5857 W

FOR OFFICE USE ONLY		Check One:		New/Renewal <input type="checkbox"/>	Modification <input type="checkbox"/>
Date Application Received _____	Date Fee Paid _____	Application/ Permit No. _____	Date Application Accepted _____		

7. Person to contact who is familiar with the information contained in this application:

Chad Johnson

Environmental Health & Safety
Manager

Name

Title

509-395-6455

509-359-4690

Telephone number

Fax number

8. Check One:

Permit Renewal (including renewal of temporary permits)

Does this application request a greater amount of wastewater discharge, a greater amount of pollutant discharge, or a discharge of different pollutants than specified in the last permit application for this facility? YES NO

For permit renewals, the current permit is an attachment, by reference, to this application.

Permit Modification

Existing Unpermitted Discharge

Proposed Discharge

Anticipated date of discharge: _____

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 a fine and/or imprisonment for knowing violations.



Signature*

1/30/2024

Date

Associate Vice President of Facilities &
Planning

Title

Shawn King

Printed Name

*Applications must be signed as follows: corporations, by a principal executive officer of at least the level of vice-president; partnership, by a general partner; sole proprietorship, by the proprietor. If these titles do not apply to your organization, the person who makes budget decisions for this facility must sign the application.

The application signatory may delegate signature authority for submittals required by the permit, such as monthly reports, to a suitable employee. You can delegate this authority to a qualified individual or to a position, which you expect to fill with a qualified individual. If you wish to delegate signature authority, please complete the following:

Signature of delegated employee

Date

Title or function at the facility

SECTION B. PRODUCT INFORMATION

- Briefly describe all manufacturing processes and products, and/or commercial activities, at this facility. Provide the applicable Standard Industrial Category (SIC) and the North American Industry Classification System (NAICS) Code(s) for each activity (see *North American Industrial Classification System*, 2007 ed.). You can find the 1997 NAICS codes and the corresponding 1987 Standard Industry Category (SIC) codes at (<http://www.census.gov/epcd/naics/frames3.htm>).

Description:

Eastern Washington University (EWU) includes the following facilities:

- (1) Pence Union Building (PUB) - SIC Code 5812 - Eating Places
- (2) Tawanka (TAW) - SIC Code 5812 - Eating Places
- (3) University Recreation Center (URC) - SIC Code 5812 - Eating Places (not currently in use)
- (4) Rozell Heating Plant (ROZ) - SIC Code 4911/4941 - Electric Services / Water Supply
- (5) Science Building (SCI) - SIC Code 8221 - Colleges, Universities and Professional Schools and NAICS Code 611310 - Colleges, Universities, and Professional Schools
- (6) Interdisciplinary Science Center (ISC) - SIC Code 8221 - Colleges, Universities and Professional Schools and NAICS Code 611310 - Colleges, Universities, and Professional Schools
- (7) Cheney Hall (CHN) - SIC Code 8221 - Colleges, Universities and Professional Schools and NAICS Code 611310 - Colleges, Universities, and Professional Schools

- List raw materials and products used at his facility:

Type	RAW MATERIALS	Quantity
<i>Grapes (Example)</i>		<i>1,000 tons per year</i>
Waste Food Product		
Type	PRODUCTS	Quantity
<i>Grape Juice(Example)</i>		<i>300,000 gallons per year</i>
Waste Chemical Water from Boilers and Chillers to include Amines		

SECTION C. PLANT OPERATIONAL CHARACTERISTICS

1. For each process listed in B.1. that generates wastewater, list the process, assign the waste stream a name and an ID # and describe whether it is a batch or continuous flow.

Process	Waste Stream Name	Waste Stream ID#	Batch (B) or Continuous (C) Process
Pence Union Building	Food Service Discharge	FSD #1	C
Pence Union Building	Food Service Discharge	FSD #2	C
Tawanka	Food Service Discharge	FSD #3	C
Rozell Heating Plant	Blow down from boilers	Steam Plant	C
Science Building	Science	Science #1 and Science #2	C
Interdisciplinary Science Center	Science	Science #3	C
Cheney Hall	Science	Science #4	C

2. On a separate sheet, produce a schematic drawing showing production processes, water flow through the facility, wastewater treatment devices and waste streams as named above. The drawing should indicate the source of intake water and show the operations contributing wastewater to the effluent. The treatment units should be labeled. Construct a water balance by showing average flows between intakes, operations, treatment units, and points of discharge to the POTW. (*See the example on page 16 of this application form.*)
3. What is the maximum daily wastewater discharge flow? See Attachment gallons/day
- What is the maximum average monthly wastewater discharge flow (daily flows averaged over a month)? See Attachment gallons/day
4. Describe any planned wastewater treatment improvements or changes in wastewater disposal methods, and the schedule for these improvements. (*Use additional sheets, if necessary and label as attachment C4.*)

Cheney Hall will need to have a sewer manhole designated as the monitoring manhole where a flow meter sensor will be installed.

Address sewer monitoring equipment issues / failures identified in 2023 with the assistance of the equipment representative. Project will include replacing failing sensors with newer, more reliable models.

5. If production processes are subject to seasonal variations, provide the following information. The combined value for each month should equal the estimated total monthly flow. Please indicate the proper flow unit by checking one of the following boxes:

gallons per day

gallons per month

million gallons per month

Waste Stream ID#	MONTHS											
	J	F	M	A	M	J	J	A	S	O	N	D
Steam Plant	0.22	0.10	0.23	0.51	1.02	1.21	1.21	0.93	0.62	0.31	0.14	0.09
FSD #1 & FSD #2	0.09	0.10	0.12	0.15	0.18	0.12	0.11	0.10	0.09	0.04	0.11	0.10
FSD #3	0.00	0.00	0.15	0.66	0.44	0.10	0.10	0.01	0.09	0.19	0.12	0.04
SCI #1, SCI #2, SCI #3*	0.07	0.21	0.07	0.11	0.10	0.07	0.02	0.11	0.07	0.10	0.06	0.16
SCI #4	0.05	0.10	0.10	0.10	0.10	0.10	0.05	0.05	0.10	0.10	0.10	0.05
Estimated Total Monthly Flow (GPD)	0.43	0.51	0.67	1.53	1.84	1.60	1.49	1.20	0.97	0.74	0.53	0.44

6. How many hours a day does this facility typically operate? 24

How many days a week does this facility typically operate? 7

How many weeks per year does this facility typically operate? 52

7. List all incidental materials, such as oil, paint, grease, solvents, and cleaners, that are used or stored on site (*list only those with quantities greater than 10 gallons for liquids and 50 pounds for solids*). For solvents and solvent-based cleaners, include a copy of the material safety data sheet and estimate the quantity used. (*Use additional sheets, if necessary, and label as attachment C.7.*)

Materials/Quantity Stored: Ethanol, Isopropanol, Motor oil, anitfreeze, grease, cleaners. The Solid Waste Control Plan (SWCP), Spill Control and Slug Discharge Control Plan (SPCSDCP), and Operations and Maintenance Manual (O&M) include the specific materials used and stored. These plans were filed with DOE in compliance with Section S4.A.a.2, S7.C, S10.A.1, and S11.A.1 of the current permit. The Safety Data Sheets for the Ethanol and Isopropanol are included in Attachment C.7.

- | 8. | Some types of facilities are required to have spill or waste control plans. Does this facility have: | Yes | No |
|----|--|-------------------------------------|--------------------------|
| a. | A spill prevention, control, and countermeasure plan (40 CFR 112)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. | An Oil Spill Contingency Plan (chapter 173-182 WAC)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. | An emergency response plan (per WAC 173-303-350)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. | A runoff, spillage, or leak control plan (per WAC 173-216-110(f))? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e. | Any spill or pollution prevention plan required by local, state or federal authorities? If yes specify: <u>WSDOE Pollution Prevention Plan</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f. | A solid waste control plan? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g. | A Slug Discharge Control Plan (40 CFR 403.8(f)(2)(v))? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

SECTION E. WASTEWATER INFORMATION

1. How are the water intake and effluent flows measured?

Intake: Metered

Effluent Flow meters are installed at each of the permitted buildings except Cheney Hall as it has only been recently remodeled to include a science lab.

2. Describe the collection method for the samples analyzed below. (*i.e.*, grab, 24-hour composite). Applicants must collect grab samples (not composites) for analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform (including *E. coli*), and Enterococci (previously known as fecal streptococcus at § 122.26 (d)(2)(iii)(A)(3)), or volatile organics.

Samplers are installed at each of the monitoring sites for the permitted buildings, except Cheney Hall. This allows for 24-hour composite samples to be taken. Grab samples are obtained by EWU personnel. Composite samples for Cheney Hall will be spaced interval for a 24 hour composite sample.

3. Has the effluent been analyzed for any other parameters than those identified in question E.4.? YES NO
If yes, attach results and label as attachment E.4. This data must clearly show the date, method and location of sampling. (*Note: Ecology may require additional testing.*)

4. Provide measurements or range of measurements for treated wastewater prior to discharge to the POTW for the parameters with an "X" in the left column. If you obtain the application from the internet, contact Ecology's regional office to see if testing for a subset of these parameters is permissible. All analyses (except pH) must be conducted by a laboratory registered or accredited by Ecology (WAC 173-216-125). If this is an application for permit renewal, provide data for the last year for those parameters that are routinely measured. For parameters measured only for this application, place the values under "Maximum." Report the values with units as specified in the parameter name or in the detection level.

The Permittee must use the specified analytical methods, detection limits (DLs) and quantitation levels (QLs) in the following table unless Ecology approves an alternate method or the method used produces measurable results in the sample and EPA has listed it as an EPA approved method in 40 CFR Part 136. If the Permittee uses an alternative method as allowed above, it must report the test method, DL, and QL on the discharge monitoring report or in the required report.

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19 th , 20 th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
X	BOD (5 day)	770	1335	1011	4	SM 5210 B	/2 mg/l
	COD					SM 5220 D	/10 mg/l
X	Total suspended solids	77	524	258.5	4	SM 2540 D	/5 mg/l
	Fixed Dissolved Solids					SM 2540 E	
	Total dissolved solids					SM 2540 C	
	Conductivity (micromhos/cm)					SM 2510 B	
	Ammonia-N as N					SM 4500-NH ₃ C	/0.3 mg/L
X	pH	6.25 (Grab) 7.9 (Cont.)	7 (Grab) 9.39 (Cont.)	6.625 8.72 (Con.)	4 (Grab) 792 (Continuous)	SM 4500-H	0.1 standard units
	Fecal coliform (organisms/100 mL)					SM 9221 E or 9222 D	
	Total coliform (organisms/100 mL)					SM 9221 B or 9222 B	
	Dissolved oxygen					SM 4500-O C/G	
X	Nitrate + nitrite-N as N	1.85	3.3	2.48	4	SM 4500-NO ₃ E	100 µg/L
X	Total kjeldahl N as N					SM 4500-N _{org} C/E/FG	300 µg/l
	Ortho-phosphate-P as P					SM 4500-P E/F	10 µg/l
X	Total-phosphorous-P as P	7.37	22.9	14.77	4	SM 4500-P E/P/F	10 µg/l
X	Total Oil & grease	20.6	187.2	113.7	4	EPA 1664A	1.4/5 mg/l
	NWTPH - Dx					Ecology NWTPH Dx	250/250 µg/l
	NWTPH - Gx					Ecology NWTPH Gx	250/250 µg/l
	Calcium					EPA 200.7	-10 µg/l
	Chloride					SM 4500-Cl C	0.15 µg/l
X	Fluoride					SM 4500-F E	.025/0.1 mg/l
	Magnesium					EPA 200.7	10/50 µg/l
	Potassium					EPA 200.7	700/ µg/l

X	Parameter	Measurement Values			Number of Analyses	Analytical Method Std. Methods 19 th , 20 th edition or EPA	Detection Limit/Quantitation Level
		Minimum	Maximum	Average			
	Sodium					EPA 200.7	29/ µg/l
X	Sulfate					SM 4500-SO ₄ C/D	/200 µg/l
X	Arsenic(total)					EPA 200.8	0.1/0.5 µg/l
X	Barium (total)					EPA 200.8	0.5/2 µg/l
X	Cadmium (total)					EPA 200.8	.05/.25 µg/l
X	Chromium (total)					EPA 200.8	0.2/1 µg/l
X	Copper (total)					EPA 200.8	0.4/2 µg/l
X	Lead (total)					EPA 200.8	0.1/.5 µg/l
X	Mercury (total) pg/L					EPA 1631E	0.2/0.5 pg/l
X	Molybdenum(total)					EPA 200.8	0.1/0.5 µg/l
X	Nickel(total)					EPA 200.8	0.1/0.5 µg/l
X	Selenium (total)					EPA 200.8	1/1 µg/l
X	Silver (total)					EPA 200.8	.04/.2 µg/l
X	Zinc (total)					EPA 200.8	0.5/2.5 µg/l

6. Does this facility use any of the following chemicals as raw materials or produce them as part of the manufacturing process, or are they present in the wastewater? YES NO

(The number in the column next to the chemical name is the Chemical Abstract Service (CAS) reference number to aid in identifying the compound.)

If yes, specify how the chemical is used and the quantity used or produced: Chemicals are used in the Science & Technology labs, vehicle shop, paint shop, and grounds and landscaping. A master chemical inventory for the permitted Science Building is included in Appendix A of the Spill Control & Slug Discharge Control Plan labeled as attachment C-8 of this document.

METALS, CYANIDE & TOTAL PHENOLS			
Antimony, Total	7440-36-0	Nickel, Total	7440-02-0
Arsenic, Total	7440-38-2	Selenium, Total	7782-49-2
Beryllium, Total	7440-41-7	Silver, Total	7440-22-4
Cadmium, Total	7440-43-9	Thallium, Total	7440-28-0
Chromium (hex) dissolved	18540-29-9	Zinc, Total	7440-66-6
Chromium, Total	7440-47-3		
Copper, Total	7440-50-8	Cyanide, Total	57-12-5
Lead, Total	7439-92-1	Cyanide, Weak Acid Dissociable	
Mercury, Total	7439-97-6)	Phenols, Total	

PESTICIDES			
Aldrin	309-00-2	Endrin	72-20-8
alpha-BHC	319-84-6	Endrin Aldehyde	7421-93-4
beta-BHC	319-85-7	Heptachlor	76-44-8
gamma-BHC	58-89-9	Heptachlor Epoxide	1024-57-3
delta-BHC	319-86-8	PCB-1242	53469-21-9
Chlordane	57-74-9	PCB-1254	11097-69-1
4,4'-DDT	50-29-3	PCB-1221	11104-28-2
4,4'-DDE	72-55-9	PCB-1232	11141-16-5
4,4' DDD	72-54-8	PCB-1248	12672-29-6
Dieldrin	60-57-1	PCB-1260	11096-82-5
alpha-Endosulfan	959-98-8	PCB-1016	12674-11-2
beta-Endosulfan	33213-65-9	Toxaphene	8001-35-2
Endosulfan Sulfate	1031-07-8		

VOLATILE COMPOUNDS			
Acrolein	107-02-8		
Acrylonitrile	107-13-1	1,1-Dichloroethylene	75-35-4
Benzene	71-43-2	1,2-Dichloropropane	78-87-5
Bromoform	75-25-2	1,3-dichloropropene (mixed isomers) (1,2-dichloropropylene)	542-75-6
Carbon tetrachloride	56-23-5	Ethylbenzene	100-41-4
Chlorobenzene	108-90-7	Methyl bromide (Bromomethane)	74-83-9
Chloroethane	75-00-3	Methyl chloride (Chloromethane)	74-87-3
2-Chloroethylvinyl Ether	110-75-8	Methylene chloride)	75-09-2
Chloroform	67-66-3	1,1,2,2-Tetrachloroethane	79-34-5
Dibromochloromethane	124-48-1	Tetrachloroethylene	127-18-4
1,2-Dichlorobenzene	95-50-1	Toluene (108-88-3)	
1,3-Dichlorobenzene	(541-73-1)	1,2-Trans-Dichloroethylene (Ethylene dichloride)	156-60-5
1,4-Dichlorobenzene	106-46-7	1,1,1-Trichloroethane	71-55-6
Dichlorobromomethane	75-27-4	1,1,2-Trichloroethane	79-00-5
1,1-Dichloroethane	75-34-3	Trichloroethylene	79-01-6
1,2-Dichloroethane	107-06-2	Vinyl chloride	75-01-4

ACID COMPOUNDS			
2-Chlorophenol	95-57-8	4-nitrophenol	100-02-7
2,4-Dichlorophenol	120-83-2	Parachlorometa cresol (4-chloro-3-methylphenol)	59-50-7
2,4-Dimethylphenol	105-67-9	Pentachlorophenol	87-86-5
4,6-dinitro-o-cresol (2-methyl-4,6,-dinitrophenol)	534-52-1	Phenol	108-95-2
2,4 dinitrophenol	51-28-5	2,4,6-Trichlorophenol	88-06-2
2-Nitrophenol	88-75-5		

BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Acenaphthene	83-32-9	3,3-Dichlorobenzidine	91-94-1
Acenaphthylene	208-96-8	Diethyl phthalate	84-66-2
Anthracene	120-12-7	Dimethyl phthalate	131-11-3
Benzidine	92-87-5	Di-n-butyl phthalate)	84-74-2
Benzyl butyl phthalate	85-68-7	2,4-dinitrotoluene	121-14-2
Benzo(a)anthracene	56-55-3	2,6-dinitrotoluene	606-20-2
Benzo(b)fluoranthene (3,4-benzofluoranthene)	205-99-2	Di-n-octyl phthalate	117-84-0
Benzo(j)fluoranthene	205-82-3	1,2-Diphenylhydrazine (as <i>Azobenzene</i>)	122-66-7
Benzo(k)fluoranthene (11,12-benzofluoranthene)	207-08-9	Fluoranthene	206-44-0
Benzo(r,s,t)pentaphene	189-55-9	Fluorene	86-73-7
Benzo(a)pyrene	50-32-8	Hexachlorobenzene	118-74-1
Benzo(ghi)Perylene	191-24-2	Hexachlorobutadiene	87-68-3
Bis(2-chloroethoxy)methane	111-91-1	Hexachlorocyclopentadiene	77-47-4
Bis(2-chloroethyl)ether	111-44-4	Hexachloroethane	67-72-1
Bis(2-chloroisopropyl)ether	39638-32-9	Indeno(1,2,3-cd)Pyrene	193-39-5
Bis(2-ethylhexyl)phthalate	117-81-7	Isophorone	78-59-1
4-Bromophenyl phenyl ether	101-55-3	3-Methyl cholanthrene	56-49-5
2-Chloronaphthalene	91-58-7	Naphthalene	91-20-3
4-Chlorophenyl phenyl ether	7005-72-3	Nitrobenzene	98-95-3
Chrysene	218-01-9	N-Nitrosodimethylamine	62-75-9
Dibenzo (a,j)acridine	224-42-0	N-Nitrosodi-n-propylamine	621-64-7
Dibenzo (a,h)acridine	226-36-8	N-Nitrosodiphenylamine	86-30-6
Dibenzo(a-h)anthracene (1,2,5,6-dibenzanthracene)	53-70-3	Perylene	198-55-0
Dibenzo(a,e)pyrene	192-65-4	Phenanthrene	85-01-8
Dibenzo(a,h)pyrene	189-64-0	Pyrene	129-00-0
		1,2,4-Trichlorobenzene	120-82-1

7. Are any other pesticides, herbicides or fungicides used at this facility? YES NO

If yes, specify the material and quantity used:

See Attachments C-7.

8. Are there other pollutants that you know of or believe to be present? YES NO

If yes, specify the pollutants and their concentration if known
(attach laboratory analyses if available as Attachment E8):

9. Is the wastewater being discharged, or proposed for discharge, to the POTW designated as a dangerous waste according to the procedures in Chapter 173-303 WAC?

YES NO DON'T KNOW

10. If the answer to question 9 above is yes, how did the waste designate as a dangerous waste (check appropriate box)?

For Listed and TCLP Characteristic Wastes only, also provide the Dangerous Waste Number(s).

Listed Waste Dangerous Waste Number(s) _____

Characteristic Wastes Dangerous Waste Number(s) _____

Ignitable

Reactive

Corrosive

TCLP

State Only Dangerous Wastes Dangerous Waste Number(s) _____

Toxicity

Persistent

For questions about waste designation under the *Dangerous Waste Regulations*, Chapter 173-303 WAC, contact Ecology's Hazardous Waste and Toxics Program at:

Northwest Regional Office - Bellevue (425) 649-7000

Southwest Regional Office - Lacey (360) 407-6300

Central Regional Office - Yakima (509) 575-2490

Eastern Regional Office - Spokane (509) 329-3400

SECTION F. SEWER INFORMATION

1. Is an inspection and sampling manhole or similar structure available on-site? YES NO
*If yes, attach a map or hand drawing of the facility that shows the location of these structures
(Label as attachment F1 or this may be combined with map in H8, if H8 is applicable to your
facility.)*

SECTION G. OTHER PERMITS

1. List all environmental control permits or approvals needed for this facility; for example, air emission permits.

SRCAA permits for: Boiler 3, Boiler 5, Rozell Emergency Generator, Surbeck Paint Booth, Emissions Limits for the EWU Main Campus.

Other Permits: WSDOH Radiation Section Xray License, WSDOE RCRA Large Quantity Generator (Not TSD)

SECTION H. STORMWATER

1. Do you have coverage under the Washington State Industrial Stormwater NPDES General Permit? YES NO
If yes, please list the permit number here. _____

If no, have you applied for a Washington State Stormwater Industrial Stormwater General Permit? YES NO

If you answered no to both questions above, complete the following questions 2 through 5.

2. Does your facility discharge stormwater: *(Check all that apply)*

- To storm sewer system *(provide name of storm sewer system operator: City of Cheney)*
- Directly to any surface waters of Washington State *(e.g., river, lake, creek, estuary, ocean).*

Specify waterbody name(s) _____

- Indirectly to surface waters of Washington State *(i.e., flows over adjacent properties first).*
- To a Sanitary Sewer
- Directly to ground waters of Washington State via:
 - Dry well
 - Drainfield
 - Other

3. Areas with industrial activities at facility: *(check all that apply)*

- Manufacturing Building
- Material Handling
- Material Storage
- Hazardous Waste Treatment, Storage, or Disposal *(Refers to RCRA, Subtitle C Facilities Only)*
- Waste Treatment, Storage, or Disposal
- Application or Disposal of Wastewaters
- Storage and Maintenance of Material Handling Equipment
- Vehicle Maintenance
- Areas Where Significant Materials Remain
- Access Roads and Rail Lines for Shipping and Receiving
-

Other (please specify): _____

4. Material handling/management practices

a. Types of materials handled and/or stored outdoors: *(check all that apply)*

- | | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | Solvents | <input type="checkbox"/> | Hazardous Wastes |
| <input checked="" type="checkbox"/> | Scrap Metal | <input type="checkbox"/> | Acids or Alkalies |
| <input checked="" type="checkbox"/> | Petroleum or Petrochemical Products | <input type="checkbox"/> | Paints/Coatings |
| <input type="checkbox"/> | Plating Products | <input type="checkbox"/> | Woodtreating Products |
| <input type="checkbox"/> | Pesticides | <input checked="" type="checkbox"/> | Other <i>(please list):</i> <u>Evacuated compressor units and misc. wood are stored externally prior to recycling.</u> |

b. Identify existing management practices employed to reduce pollutants in industrial stormwater discharges: *(check all that apply)*

- | | | | |
|-------------------------------------|-----------------------------|-------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> | Oil/Water Separator | <input checked="" type="checkbox"/> | Detention Facilities |
| <input checked="" type="checkbox"/> | Containment | <input checked="" type="checkbox"/> | Infiltration Basins |
| <input checked="" type="checkbox"/> | Spill Prevention | <input checked="" type="checkbox"/> | Operational BMPs |
| <input type="checkbox"/> | Surface Leachate Collection | <input checked="" type="checkbox"/> | Vegetation Management |
| <input checked="" type="checkbox"/> | Overhead Coverage | <input type="checkbox"/> | Other <i>(please list):</i> _____ |

5. Attach a facility site map showing stormwater drainage/collection areas, disposal areas and discharge points. This may be a hand-drawn map if no other site map is available *(See example on page 16 of this application)*. Label this as attachment H.5.

SECTION I. OTHER INFORMATION

1. Describe liquid wastes or sludges being generated by your facility that are not disposed of in the waste stream(s) and how they are being disposed of. For each type of waste, provide type of waste and the name, address, and phone number of the hauler.

Hazardous / dangerous wastes to include waste chemicals and waste/contaminated materials. Used products are disposed through the state hazardous waste contractor. EWU is contracted with Clean Harbors for hazardous waste, petroleum and antifreeze.

2. Describe storage areas for raw materials, products, and wastes.

Chemical storage rooms located in the permitted buildings. Waste accumulation areas located within or adjacent to the permitted buildings. Hazardous materials disposal facility is designated on campus.

3. Have you designated the wastes described above according to the applicable YES NO procedures of Dangerous Waste Regulations, Chapter 173-303 WAC?

SECTION J. CERTIFICATIONS

1. Approval by Publicly-Owned Treatment Works [required by WAC 173-216-070(4)(b)]

I approve of the discharge as described in this application. The applicant is:

(Please check the appropriate box below.)

A Significant Industrial User (see Definitions at the end of this Section)

A Categorical Industrial User

Neither of the above

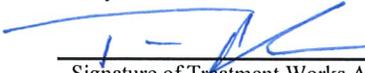
Name and location of sewer system to which this project will be tributary:

City of Cheney

Treatment Works Owner: City of Cheney

Street: 112 Anderson Road

City/State: Cheney, WA Zip: 99004

 2/5/24 Public Works Director
 Signature of Treatment Works Authority Date Title

Todd Ableman
 Printed Name

2. Application review by Intermediate Sewer Owner at point of discharge (if applicable)

I hereby acknowledge that I have reviewed the application for discharge to this sewer system.

Name and location of sewer system to which this project will be tributary:

Sewer System Owner: _____

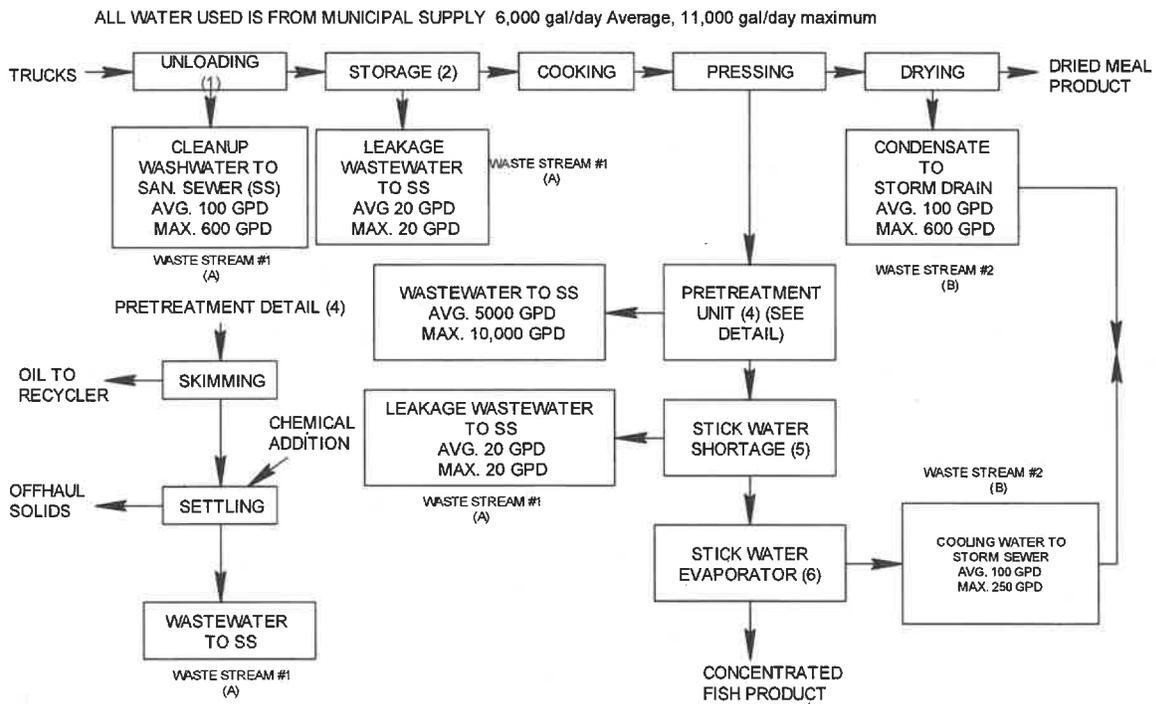
Street: _____

City/State: _____ Zip: _____

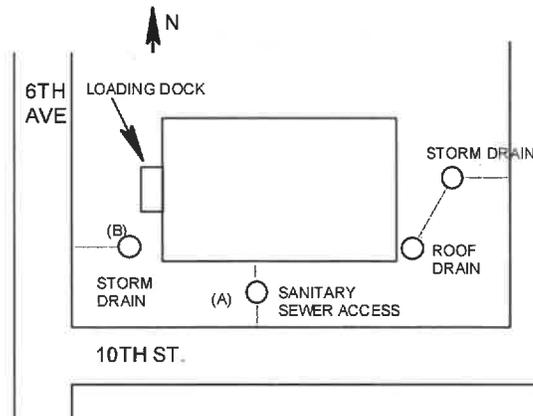
 Signature of Sewer System Authority Date Title

 Printed Name

Example 1 for application section C.2. (SCHEMATIC DIAGRAM)



Example 2 for application section F1 or H8 (FACILITY SITE MAP)



DEFINITIONS

Significant Industrial User (SIU)--

- 1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and
- 2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

Control Authority - means the Washington State Department of Ecology in the case of non-delegated POTWs or means the POTW in the case of delegated POTWs.

Categoric Industrial User (CIU): An industrial user subject to national categorical pretreatment standards promulgated by EPA (40 CFR 403.6 and 40 CFR parts 405-471).

Summary of Attachments That May be Required for This Application:

(Please check those attachments that are included)

- | | | | |
|-------------------------------------|--------------------------|------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | C.2. | Production schematic flow diagram and water balance |
| <input type="checkbox"/> | <input type="checkbox"/> | C.4. | Wastewater treatment improvements |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | C.7. | Additional incidental materials |
| <input type="checkbox"/> | <input type="checkbox"/> | E.8. | Additional results of effluent testing |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | F.1. | Facility site map |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | H.5. | Stormwater drainage map |

If you need this document in a format for the visually impaired, call the Water Quality Program at 360-407-6600. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

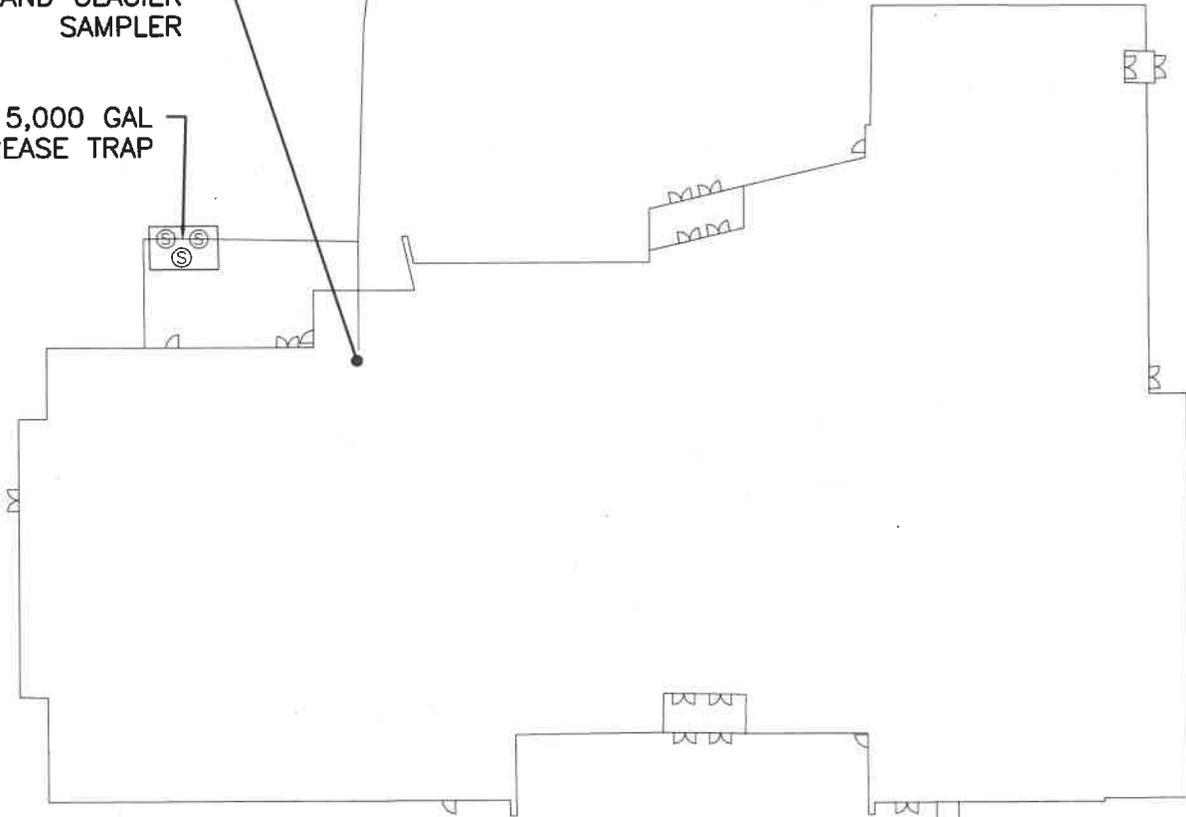
ATTACHMENT C.2 PERMITTED BUILDINGS FLOW SCHEMATIC

SAMPLING MANHOLE WITH
FLUME AND CONTINUOUS
FLOW METER TUBE

EWU SEWER TO CITY OF
CHENEY SYSTEM

ISCO SIGNATURE FLOW
METER READOUT UNIT
AND GLACIER
SAMPLER

5,000 GAL
GREASE TRAP



250 GAL
ENDURA XLG
GREASE
INTERCEPTOR

SAMPLING MANHOLE USED WITH
ISCO SIGNATURE SERIES FLOW
METER AND GLACIER SAMPLER;
READOUT UNIT AND SAMPLER
LOCATED IN ENCLOSED SHELTER
NEAR PATTERSON HALL.

EWU SEWER TO CITY OF
CHENEY SYSTEM

STATE WASTE DISCHARGE PERMIT NUMBER ST-8098
EASTERN WASHINGTON UNIVERSITY

PENCE UNION BUILDING
FIRST LEVEL FLOOR PLAN



THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS

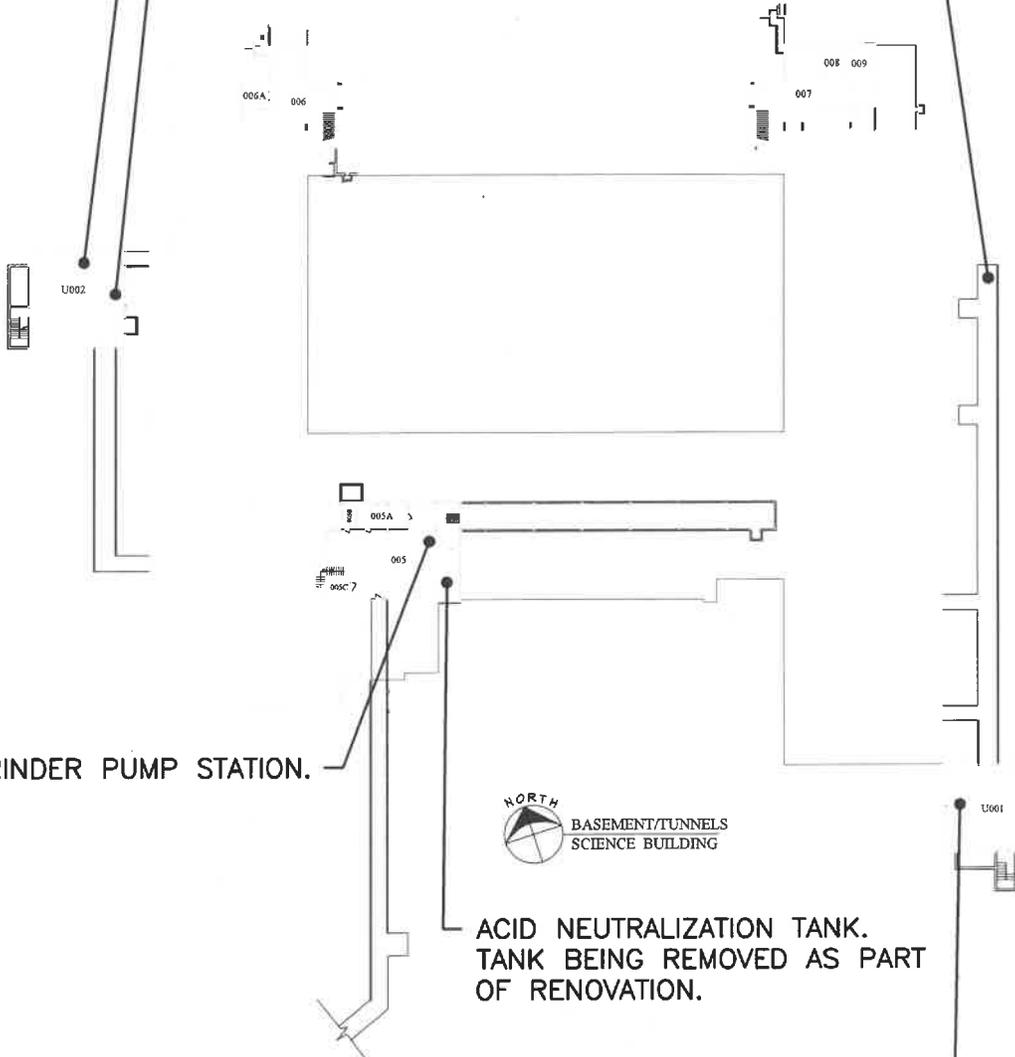
GREAT FALLS—BOZEMAN—KALISPELL
SPOKANE
LEWISTON

MONTANA
WASHINGTON
IDAHO

DRAWN BY:	MAS	DATE:	1/26/2024
DESIGNED BY:		JOB NO.	S20-024
QUALITY CHECK:		CAD NO.	FLOOR PLANS FOR O&M

DUPLEX GRINDER PUMP STATION.
NEW PUMP TO BE INSTALLED AS
PART OF RENOVATION.

ACID NEUTRALIZATION TANKS WITH MADGETECH
pHTEMP2000 MONITORING UNITS ARE BEING
REMOVED AS PART OF SCIENCE BUILDING
RENOVATIONS. RENOVATIONS OCCURRING OVER 2
PHASES WITH WORK STARTING IN 2022/2023.



DUPLEX GRINDER PUMP STATION.



ACID NEUTRALIZATION TANK.
TANK BEING REMOVED AS PART
OF RENOVATION.

DUPLEX GRINDER PUMP STATION.
NEW PUMP TO BE INSTALLED AS
PART OF RENOVATION.

STATE WASTE DISCHARGE PERMIT NUMBER ST-8098
EASTERN WASHINGTON UNIVERSITY

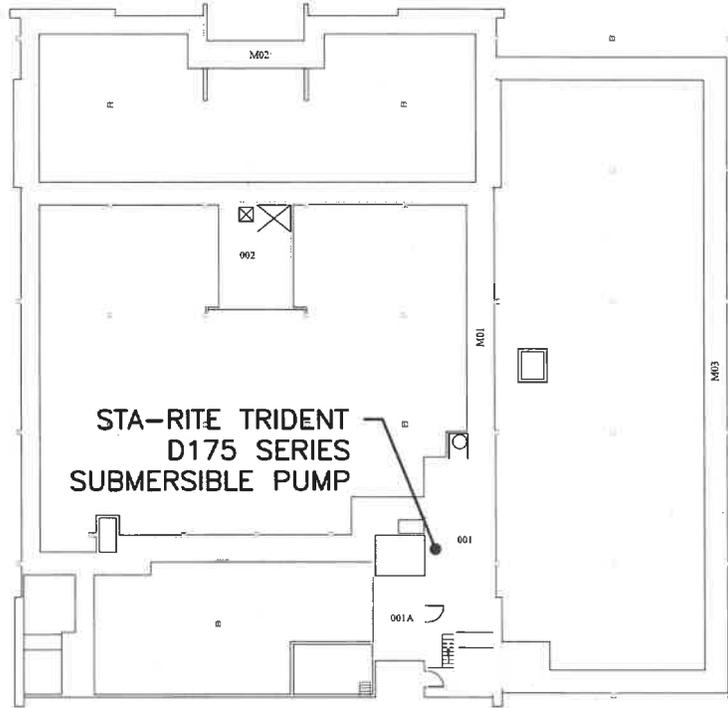
SCIENCE BUILDING
BASEMENT LEVEL FLOOR PLAN



THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS
GREAT FALLS—BOZEMAN—KALISPELL
SPOKANE
LEWISTON
MONTANA
WASHINGTON
IDAHO

DRAWN BY:	MAS	DATE:	01/28/2024
DESIGNED BY:		JOB NO.	S20-024
QUALITY CHECK:		CAD NO.	FLOOR PLANS FOR O&M

2,500 GAL
GREASE TRAP



STA-RITE TRIDENT
D175 SERIES
SUBMERSIBLE PUMP

BASEMENT
TAWANKA COMMONS

SAMPLING MANHOLE WITH
FLUME AND CONTINUOUS
FLOW METER TUBE. ISCO
SIGNATURE FLOW METER
READOUT UNIT AND GLACIER
SAMPLER LOCATED TO THE
WEST IN HUSTON HALL.

EWU SEWER TO CITY OF
CHENEY SYSTEM

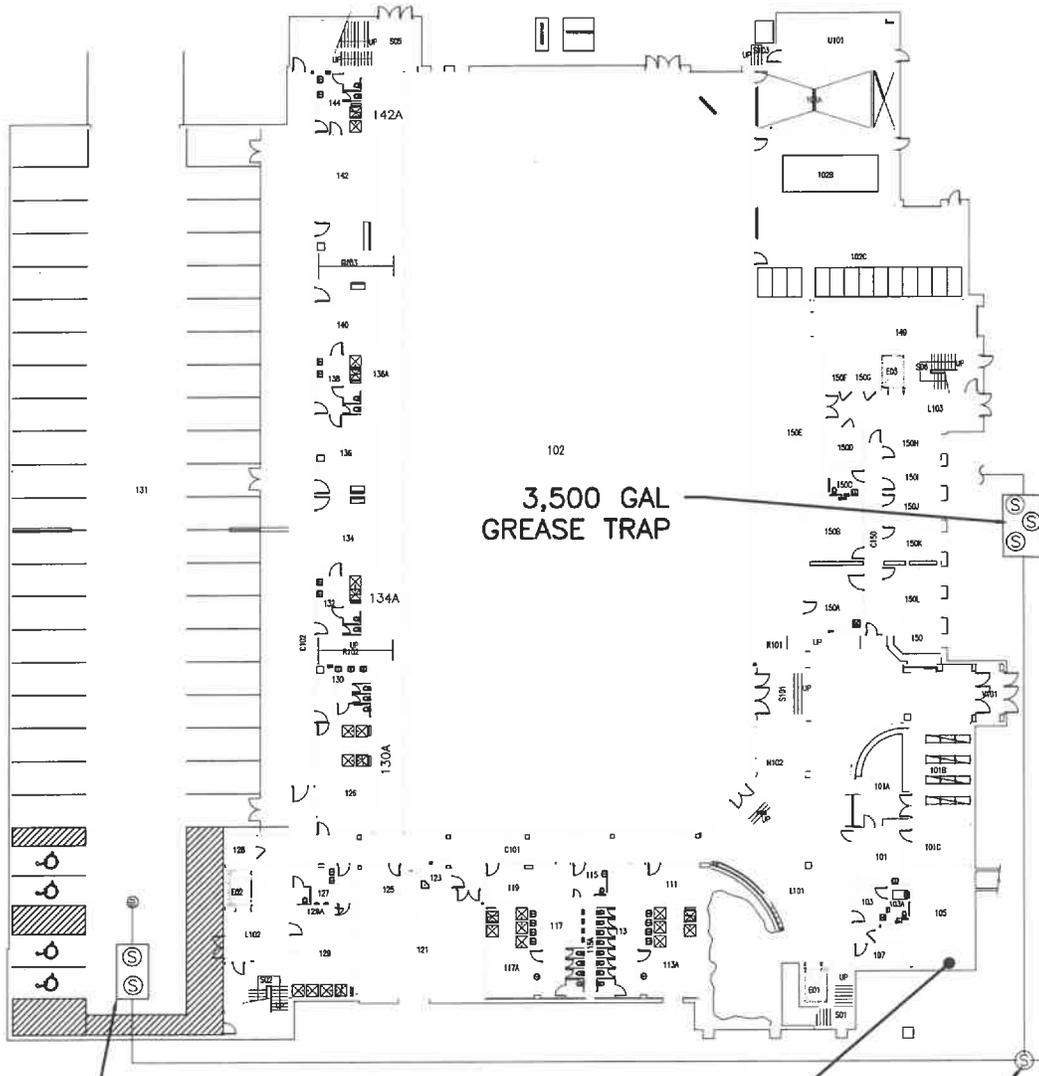
STATE WASTE DISCHARGE PERMIT NUMBER ST-8098
EASTERN WASHINGTON UNIVERSITY

TAWANKA HALL
BASEMENT LEVEL FLOOR PLAN



THOMAS, DEAN & HOSKINS, INC.
ENGINEERING CONSULTANTS
GREAT FALLS—BOZEMAN—KALISPELL
SPOKANE
LEWISTON
MONTANA
WASHINGTON
IDAHO

DRAWN BY:	MAS	DATE:	02/27/2023
DESIGNED BY:		JOB NO.	S20-024
QUALITY CHECK:		CAD NO.	FLOOR PLANS FOR O&M



FIRST FLOOR
UNIVERSITY RECREATION CENTER

300 GAL OIL/SAND INTERCEPTOR

3,500 GAL GREASE TRAP

ISCO SIGNATURE FLOW METER READOUT UNIT AND GLACIER SAMPLER

SAMPLING MANHOLE USED WITH ISCO SIGNATURE FLOW METER AND GLACIER SAMPLER.

EWU SEWER TO CITY OF CHENEY SYSTEM

STATE WASTE DISCHARGE PERMIT NUMBER ST-8098
EASTERN WASHINGTON UNIVERSITY

UNIVERSITY RECREATION CENTER
FIRST LEVEL FLOOR PLAN

	THOMAS, DEAN & HOSKINS, INC. ENGINEERING CONSULTANTS GREAT FALLS—BOZEMAN—KALISPELL SPOKANE LEWISTON		MONTANA WASHINGTON IDAHO
	DRAWN BY: MAS	DATE: 2/27/2023	
	DESIGNED BY:	JOB NO. S20-024	
	QUALITY CHECK:	CAD NO. FLOOR PLANS FOR O&M	

ATTACHMENT C.3 ESTIMATED WASTE WATER DISCHARGES

**STATE WASTE DISCHARGE PERMIT APPLICATION - PERMIT #8098
ATTACHMENT C-3**

Estimated Average Daily Waste Water Discharge (gpd) - Existing Permitted Sites

	Rozell	Science (East and West)	URC	Tawanka	PUB (East and West)	Monthly Totals
Oct-21	10,181	2,162	10,809	8,156	5,302	36,610
Nov-21	7,810	2,707	9,075	435	1,064	21,091
Dec-21	7,928	3,133	7,733	57	1,998	20,848
Jan-22	1,696	2,161	8,319	104	1,075	13,356
Feb-22	1,546	7,406	35,564	446	34,304	79,266
Mar-22	780	2,395	617	818	101	4,711
Apr-22	1,193	3,672	241	5,593	224	10,924
May-22	4,550	3,365	19,694	19,694	617	47,920
Jun-22	10,997	2,355	17	1,484	952	15,805
Jul-22	19,370	554	324	467	966	21,682
Aug-22	20,387	3,554	82	356	5,870	30,250
Sep-22	12,043	2,294	661	431	5,475	20,904
Oct-22	9,938	3,116	1,212	5,976	1,212	21,454
Nov-22	4,560	2,013	1,860	4,160	3,688	16,281
Dec-22	3,039	5,089	0	1,292	3,129	12,550
Jan-23	7,176	546	0	28	3,053	10,802
Feb-23	3,514	0	0	51	3,419	6,983
Mar-23	7,297	0	0	4,844	3,977	16,117
Apr-23	17,057	0	0	22,148	4,864	44,070
May-23	32,837	0	0	14,130	5,806	52,773
Jun-23	40,230	0	0	3,269	3,952	47,451
Jul-23	38,933	0	0	3,164	3,690	45,786
Aug-23	30,070	0	0	435	3,140	33,645
Sep-23	20,717	0	0	2,833	3,014	26,564

**STATE WASTE DISCHARGE PERMIT APPLICATION - PERMIT #8098
ATTACHMENT C-3**

Estimated Monthly Waste Water Discharge (gpm) - Existing Permitted Sites

	Rozell	Science (East and West)	URC	Tawanka	PUB (East and West)	Monthly Totals
Oct-21	315,600	67,025	335,074	252,828	164,368	1,134,896
Nov-21	234,300	81,217	272,257	13,045	31,925	632,744
Dec-21	245,755	97,109	239,712	1,773	61,930	646,278
Jan-22	52,589	67,003	257,895	3,233	33,317	414,038
Feb-22	43,295	207,373	995,784	12,500	960,501	2,219,452
Mar-22	24,193	74,243	19,133	25,347	3,129	146,044
Apr-22	35,789	110,170	7,240	167,801	6,714	327,714
May-22	141,044	104,317	610,520	610,520	19,128	1,485,528
Jun-22	329,911	70,664	500	44,523	28,546	474,143
Jul-22	600,469	17,171	10,055	14,487	29,949	672,130
Aug-22	611,607	106,631	2,470	10,680	176,099	907,486
Sep-22	361,296	68,828	19,819	12,932	164,236	627,110
Oct-22	308,079	96,581	37,582	185,244	37,582	665,069
Nov-22	136,813	60,381	55,800	124,794	110,635	488,422
Dec-22	94,221	157,760	0	40,049	97,012	389,043
Jan-23	222,442	16,915	0	862	94,652	334,871
Feb-23	98,383	0	0	1,420	95,725	195,528
Mar-23	226,208	0	0	150,157	123,277	499,642
Apr-23	511,724	0	0	664,446	145,933	1,322,102
May-23	1,017,961	0	0	438,016	179,990	1,635,967
Jun-23	1,206,909	0	0	98,071	118,565	1,423,544
Jul-23	1,206,909	0	0	98,071	114,394	1,419,373
Aug-23	932,171	0	0	13,498	97,337	1,043,006
Sep-23	621,511	0	0	85,003	90,413	796,927

ATTACHMENT C.7

ATTACHMENT C-7
PESTICIDES LIST

<u>Brand</u>	<u>Active Ingredients</u>
TRIPLET SF (Selective Herbicide) EPA 228-312	2,-4-D, Dicamba
VANQUISH (Selective Herbicide) EPA 228-397	Diglycolamine
ESPLANADE EZ EPA 432-1520	Indaziflam, Diquat, Didromide, Glyphosphate
AMINE 4 EPA 4275-19-55467	2, 4-D
Glystar Plus EPA 42750-61	Glyphosphate
TRIMEC 992 EPA 2217-656	2, 4-D, Dicamba
SCYTHE EPA 10163-325	Pelorgonic Acid
TORDON EPA 62719-6	Picloram
MILESTONE VM EPA 62719-537	Trip Salt 2,4,3,6
KOCIDE 4.5 LF (fungicide) EPA 1812-303	Copper Hydroxide
R-11 (Surfactant) WA REG 2935-50142	Alkylphenol ethoxylate
AXXE (Broad Spectrum Herbicide) EPA 70299-23	Ammonium Nonanoate
WEEDAR 64 (Selective) EPA 71368-1	2, 4-D
FOUNDATION (Selective) EPA 2217-921-2935	Triclopyr, Sulfentrazone, 2,4-D Dicamba

ATTACHMENT C-7
PESTICIDES LIST

<u>Brand</u>	<u>Active Ingredients</u>
SYLTAC-EA (Surfactant) WA Reg- 2935-15004	Vegetable Oil/Silicone
LADA (Insecticide) EPA 83100-6-83979	Imidocloprid
AVID .15 EC EPA 100-896	Abamectia
IMIDA STAR 2L T&O (Insecticide) EPA 42750-115	Imidocloprid
TENGARD (Insecticide) EPA 70506-6	Permethrin
Astro (Insecticide) EPA 279-3141	Permethrin
PERM-UP EPA 70506-9	Permethrin
FUSILADE II (Herbicide) EPA 100-1084	Fluazifop-P-butyl
LONTREL (Herbicide) EPA 62719-305	Clopyralid
CASORON EPA 400-168-59807	Dichlobeuil
SNAPSHOT EPA 62719-175	Trifluralin

SAFETY DATA SHEET

Creation Date 09-Jul-2009

Revision Date 07-Jan-2022

Revision Number 7

1. Identification

Product Name Ethanol, Anhydrous (Histological)

Cat No. : A405-20; A405F-1GAL; A405P-4

Synonyms Grain alcohol, denatured; Ethyl alcohol, denatured; Ethyl hydroxide, denatured.

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) Identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Carcinogenicity	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 2 Category 3
Target Organs - Central nervous system (CNS), Optic nerve, Respiratory system.	

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor
Causes serious eye irritation
Suspected of causing cancer
Suspected of damaging fertility or the unborn child

May cause damage to organs
May cause drowsiness or dizziness



Precautionary Statements

Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Response

IF exposed or concerned: Get medical attention/advice

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store locked up
Store in a well-ventilated place. Keep cool

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Repeated exposure may cause skin dryness or cracking

Other hazards

Poison, may be fatal or cause blindness if swallowed. Vapor harmful. CANNOT BE MADE NON-POISONOUS.
WARNING. Cancer and Reproductive Harm - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Ethyl alcohol	64-17-5	90-95
Methyl alcohol	67-56-1	3-5
Methylisobutyl ketone	108-10-1	1-3
Ethyl acetate	141-78-6	1-2
Solvent naphtha (petroleum), light aliphatic	64742-89-8	1

4. First-aid measures

General Advice	If symptoms persist, call a physician.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms and effects	None reasonably foreseeable. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	Water may be ineffective, Do not use a solid water stream as it may scatter and spread fire
Flash Point	13.9 °C / 57 °F
Method -	Estimated
Autoignition Temperature	362.8 °C / 685 °F
Explosion Limits	
Upper	18.0 vol %
Lower	3.3 vol %
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
3	3	0	N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Ensure adequate ventilation.
Environmental Precautions	Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

Storage. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Strong oxidizing agents. Acids. Acid anhydrides. Acid chlorides. Peroxides. Alkali metals.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Ethyl alcohol	STEL: 1000 ppm	(Vacated) TWA: 1000 ppm (Vacated) TWA: 1900 mg/m ³ TWA: 1000 ppm TWA: 1900 mg/m ³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³	STEL: 1000 ppm
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m ³ Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³	TWA: 200 ppm STEL: 250 ppm
Methylisobutyl ketone	TWA: 20 ppm STEL: 75 ppm	(Vacated) TWA: 50 ppm (Vacated) TWA: 205 mg/m ³ (Vacated) STEL: 75 ppm (Vacated) STEL: 300 mg/m ³ TWA: 100 ppm TWA: 410 mg/m ³	IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m ³ STEL: 75 ppm STEL: 300 mg/m ³	TWA: 20 ppm STEL: 75 ppm
Ethyl acetate	TWA: 400 ppm	(Vacated) TWA: 400 ppm (Vacated) TWA: 1400 mg/m ³ TWA: 400 ppm TWA: 1400 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m ³	TWA: 400 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State Liquid
Appearance Clear

Odor	Alcohol-like
Odor Threshold	No information available
pH	Not applicable
Melting Point/Range	< -90 °C / -130 °F
Boiling Point/Range	77.1 °C / 170.8 °F
Flash Point	13.9 °C / 57 °F
Method -	Estimated
Evaporation Rate	3.6 (Butyl acetate = 1.0)
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	18.0 vol %
Lower	3.3 vol %
Vapor Pressure	48 mmHg
Vapor Density	1.5
Specific Gravity	0.785 - 0.792
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	362.8 °C / 685 °F
Decomposition Temperature	No information available
Viscosity	No information available
VOC Content(%)	100

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents, Acids, Acid anhydrides, Acid chlorides, Peroxides, Alkali metals
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50

Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	LD50 = 10470 mg/kg OECD 401 (Rat) 3450 mg/kg (Mouse)	Not listed	LC50 = 117-125 mg/l (4h) OECD 403 (rat) 20000 ppm/10H (rat)
Methyl alcohol	LD50 = 1187 – 2769 mg/kg (Rat)	LD50 = 17100 mg/kg (Rabbit)	LC50 = 128.2 mg/L (Rat) 4 h
Methylisobutyl ketone	LD50 = 2080 mg/kg (Rat)	LD50 = 3000 mg/kg (Rabbit)	LC50 2000 - 4000 ppm (Rat) 4 h
Ethyl acetate	10,200 mg/kg (Rat)	> 20 mL/kg (Rabbit) > 18000 mg/kg (Rabbit)	58 mg/l (rat; 8 h)
Solvent naphtha (petroleum), light aliphatic	Not listed	LD50 = 3000 mg/kg (Rabbit)	Not listed

Toxicologically Synergistic No information available

Products**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Irritation** Severe eye irritant**Sensitization** No information available**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Ethyl alcohol	64-17-5	Not listed	Known	A3	Not listed	A3
Methyl alcohol	67-56-1	Not listed				
Methylisobutyl ketone	108-10-1	Group 2B	Not listed	A3	X	A3
Ethyl acetate	141-78-6	Not listed				
Solvent naphtha (petroleum), light aliphatic	64742-89-8	Not listed				

IARC (International Agency for Research on Cancer)**IARC (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

Mexico - Occupational Exposure Limits - Carcinogens

A1 - Confirmed Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Confirmed Animal Carcinogen

A4 - Not Classifiable as a Human Carcinogen

A5 - Not Suspected as a Human Carcinogen

NTP: (National Toxicity Program)**ACGIH: (American Conference of Governmental Industrial Hygienists)****Mexico - Occupational Exposure Limits - Carcinogens****Mutagenic Effects** Mutagenic effects have occurred in experimental animals.**Reproductive Effects** No information available.**Developmental Effects** No information available.**Teratogenicity** No information available.**STOT - single exposure** Central nervous system (CNS) Optic nerve Respiratory system**STOT - repeated exposure** None known**Aspiration hazard** No information available**Symptoms / effects, both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting**Endocrine Disruptor Information** No information available**Other Adverse Effects** The toxicological properties have not been fully investigated.**12. Ecological Information****Ecotoxicity**

Contains a substance which is: Toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethyl alcohol	EC50 (72h) = 275 mg/l (Chlorella vulgaris)	Fathead minnow (Pimephales promelas)	Photobacterium phosphoreum: EC50 = 34634	EC50 = 9268 mg/L/48h EC50 = 10800 mg/L/24h

		LC50 = 14200 mg/l/96h	mg/L/30 min Photobacterium phosphoreum:EC50 = 35470 mg/L/5 min	
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h
Methylisobutyl ketone	EC50: 400 mg/L/96h	LC50: 496 - 514 mg/L, 96h flow-through (Pimephales promelas)	EC50 = 79.6 mg/L 5 min	EC50: 4280.0 mg/L/24h EC50: 170 mg/L/48h EC50: 4280.0 mg/L/24h
Ethyl acetate	EC50 = 3300 mg/L/48h	Fathead minnow: LC50: 230 mg/l/ 96h Gold orfe: LC50: 270 mg/L/48h	EC50 = 1180 mg/L 5 min EC50 = 1500 mg/L 15 min EC50 = 5870 mg/L 15 min EC50 = 7400 mg/L 2 h	EC50 = 717 mg/L/48h
Solvent naphtha (petroleum), light aliphatic	EC50: = 4700 mg/L, 72h (Pseudokirchneriella subcapitata)	Not listed	Not listed	Not listed

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
Ethyl alcohol	-0.32
Methyl alcohol	-0.74
Methylisobutyl ketone	1.19
Ethyl acetate	0.6

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methyl alcohol - 67-56-1	U154	-
Methylisobutyl ketone - 108-10-1	U161	-
Ethyl acetate - 141-78-6	U112	-

14. Transport Information

DOT

UN-No UN1170
 Proper Shipping Name ETHANOL SOLUTION
 Hazard Class 3
 Packing Group II

TDG

UN-No UN1170
 Proper Shipping Name ETHANOL SOLUTION
 Hazard Class 3
 Packing Group II

IATA

UN-No UN1170
 Proper Shipping Name ETHANOL SOLUTION
 Hazard Class 3
 Packing Group II

IMDG/IMO

UN-No UN1170
 Proper Shipping Name ETHANOL SOLUTION
 Hazard Class 3

Packing Group

II

15. Regulatory Information**United States of America Inventory**

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Ethyl alcohol	64-17-5	X	ACTIVE	-
Methyl alcohol	67-56-1	X	ACTIVE	-
Methylisobutyl ketone	108-10-1	X	ACTIVE	-
Ethyl acetate	141-78-6	X	ACTIVE	-
Solvent naphtha (petroleum), light aliphatic	64742-89-8	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Ethyl alcohol	64-17-5	X	-	200-578-6	X	X	X	X	X	KE-13217
Methyl alcohol	67-56-1	X	-	200-659-6	X	X	X	X	X	KE-23193
Methylisobutyl ketone	108-10-1	X	-	203-550-1	X	X	X	X	X	KE-24725
Ethyl acetate	141-78-6	X	-	205-500-4	X	X	X	X	X	KE-00047
Solvent naphtha (petroleum), light aliphatic	64742-89-8	X	-	265-192-2	X	-		X	X	KE-31661

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations****SARA 313**

Component	CAS No	Weight %	SARA 313 - Threshold Values %
Methyl alcohol	67-56-1	3-5	1.0
Methylisobutyl ketone	108-10-1	1-3	0.1

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methyl alcohol	X		-
Methylisobutyl ketone	X		-

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methyl alcohol	5000 lb	-
Methylisobutyl ketone	5000 lb	-

Ethyl acetate	5000 lb	-
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California Proposition 65

Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage. This product contains the following Proposition 65 chemicals.

Component	CAS No	California Prop. 65	Prop 65 NSRL	Category
Ethyl alcohol	64-17-5	Development (alcoholic beverages only) Carcinogen	-	Developmental Carcinogen
Methyl alcohol	67-56-1	Developmental	-	Developmental
Methylisobutyl ketone	108-10-1	Carcinogen Developmental	-	Developmental Carcinogen

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethyl alcohol	X	X	X	X	X
Methyl alcohol	X	X	X	X	X
Methylisobutyl ketone	X	X	X	X	X
Ethyl acetate	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations**Mexico - Grade**

Serious risk, Grade 3

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Methyl alcohol	-	Use restricted. See item 69. (see link for restriction details)	-
Methylisobutyl ketone	-	Use restricted. See item 75. (see link for restriction details)	-
Ethyl acetate	-	Use restricted. See item 75. (see link for restriction details)	-
Solvent naphtha (petroleum), light aliphatic	-	Use restricted. See item 28. (see link for restriction details) Use restricted. See item 29. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Ethyl alcohol	64-17-5	Listed	Not applicable	Not applicable	Not applicable
Methyl alcohol	67-56-1	Listed	Not applicable	Not applicable	Not applicable

Methylisobutyl ketone	108-10-1	Listed	Not applicable	Not applicable	Not applicable
Ethyl acetate	141-78-6	Listed	Not applicable	Not applicable	Not applicable
Solvent naphtha (petroleum), light aliphatic	64742-89-8	Listed	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Ethyl alcohol	64-17-5	Not applicable	Not applicable	Not applicable	Annex I - Y42
Methyl alcohol	67-56-1	500 tonne	5000 tonne	Not applicable	Not applicable
Methylisobutyl ketone	108-10-1	Not applicable	Not applicable	Not applicable	Annex I - Y42
Ethyl acetate	141-78-6	Not applicable	Not applicable	Not applicable	Annex I - Y42
Solvent naphtha (petroleum), light aliphatic	64742-89-8	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 09-Jul-2009
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Print Date 07-Jan-2022

Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

SAFETY DATA SHEET

Creation Date 01-Sep-2009

Revision Date 24-Dec-2021

Revision Number 5

1. Identification

Product Name Isopropanol

Cat No. : AC149320000; AC149320010; AC149320025; AC149320050;
AC149320100; AC149320250

CAS No 67-63-0

Synonyms 2-Propanol; IPA; Isopropyl alcohol; Propan-2-ol; Isopropanol

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) Identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system, Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Kidney, Liver.	

Label Elements

Signal Word
Danger

Hazard Statements

Highly flammable liquid and vapor
 Causes serious eye irritation
 May cause respiratory irritation
 May cause drowsiness or dizziness
 May cause damage to organs through prolonged or repeated exposure



Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection
 Keep cool

Response

Get medical attention/advice if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell

Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Isopropyl alcohol	67-63-0	>95

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Inhalation	Remove to fresh air. Get medical attention. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Get medical attention.
Most important symptoms and effects	Difficulty in breathing. May cause central nervous system depression: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	CO ₂ , dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	Water may be ineffective
Flash Point	12 °C / 53.6 °F
Method -	Abel Closed Cup (BS 2000 Part 170, IP 170, AS/NZS 2106)
Autoignition Temperature	425 °C / 797 °F
Explosion Limits	
Upper	12 vol %
Lower	2 vol %
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), peroxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health 2	Flammability 3	Instability 0	Physical hazards N/A
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6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional Ecological Information.
Methods for Containment and Clean Up	Prevent further leakage or spillage if safe to do so. Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment/face protection. Keep away from open flames, hot surfaces and sources of ignition. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage. Keep away from heat, sparks and flame. Flammables area. Keep container tightly closed in a dry and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Acids. Halogens. Acid anhydrides.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Isopropyl alcohol	TWA: 200 ppm STEL: 400 ppm	(Vacated) TWA: 400 ppm (Vacated) TWA: 980 mg/m ³ (Vacated) STEL: 500 ppm (Vacated) STEL: 1225 mg/m ³ TWA: 400 ppm TWA: 980 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³	TWA: 200 ppm STEL: 400 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

- Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.
- Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Alcohol-like
Odor Threshold	No information available
pH	7 1% aq. sol
Melting Point/Range	-89.5 °C / -129.1 °F
Boiling Point/Range	81 - 83 °C / 177.8 - 181.4 °F @ 760 mmHg
Flash Point	12 °C / 53.6 °F
Method -	Abel Closed Cup (BS 2000 Part 170, IP 170, AS/NZS 2106)
Evaporation Rate	1.7
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	12 vol %

Lower	2 vol %
Vapor Pressure	43 mmHg @ 20 °C
Vapor Density	2.1 @ 20 °C / 68 °F
Specific Gravity	0.785
Solubility	Miscible with water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	425 °C / 797 °F
Decomposition Temperature	No information available
Viscosity	2.27 mPa.s at 20 °C
Molecular Formula	C3 H8 O
Molecular Weight	60.1
VOC Content(%)	100% (Organic Carbon (by mass) = 59.9 %) (EC/1999/13)
Refractive index	1.377 at 20 °C / 68 °F (ASTM D-1218)
Surface tension	22.7 mN/m at 20 °C / 68 °F
Coefficient of expansion	0.0009 / °C
Dielectric constant	18.6 at 20 °C / 68 °F
Heat of vapourisation	665 J/g
Specific heat capacity	3 kJ/kg °C at 20 °C / 68 °F
Thermal conductivity	0.137 W/m °C at 20 °C / 68 °F

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents, Acids, Halogens, Acid anhydrides
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), peroxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological Information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropyl alcohol	5045 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat)	72.6 mg/L (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Irritating to eyes and skin
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Isopropyl alcohol	67-63-0	Not listed				

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects	No information available.
Teratogenicity	No information available.
STOT - single exposure	Respiratory system Central nervous system (CNS)
STOT - repeated exposure	Kidney Liver
Aspiration hazard	No information available
Symptoms / effects, both acute and delayed	May cause central nervous system depression: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Endocrine Disruptor Information	No information available
Other Adverse Effects	The toxicological properties have not been fully investigated.

12. Ecological Information

Ecotoxicity

- Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Isopropyl alcohol	EC50: > 1000 mg/L, 96h (Desmodesmus subspicatus) EC50: > 1000 mg/L, 72h (Desmodesmus subspicatus)	LC50: = 9640 mg/L, 96h flow-through (Pimephales promelas) LC50: > 1400000 µg/L, 96h (Lepomis macrochirus) LC50: = 11130 mg/L, 96h static (Pimephales promelas) LC50: = 10000000 µg/L, 96h (Daphnia)	= 35390 mg/L EC50 Photobacterium phosphoreum 5 min	13299 mg/L EC50 = 48 h 9714 mg/L EC50 = 24 h

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
Isopropyl alcohol	0.05

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport Information

DOT

UN-No	UN1219
Proper Shipping Name	Isopropanol
Hazard Class	3
Packing Group	II

TDG

UN-No	UN1219
Proper Shipping Name	ISOPROPANOL
Hazard Class	3
Packing Group	II

IATA

UN-No	UN1219
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Proper Shipping Name	Isopropanol
Hazard Class	3
Packing Group	II
IMDG/IMO	
UN-No	UN1219
Proper Shipping Name	Isopropanol (Isopropyl alcohol)
Hazard Class	3
Packing Group	II

15. Regulatory Information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Isopropyl alcohol	67-63-0	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Isopropyl alcohol	67-63-0	X	-	200-661-7	X	X	X	X	X	KE-29363

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

Component	CAS No	Weight %	SARA 313 - Threshold Values %
Isopropyl alcohol	67-63-0	>95	1.0

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Isopropyl alcohol	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Serious risk, Grade 3

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Isopropyl alcohol	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Isopropyl alcohol	67-63-0	Listed	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Isopropyl alcohol	67-63-0	Not applicable	Not applicable	Not applicable	Annex I - Y42

16. Other Information

Prepared By Regulatory Affairs
 Thermo Fisher Scientific
 Email: EMSDS.RA@thermofisher.com

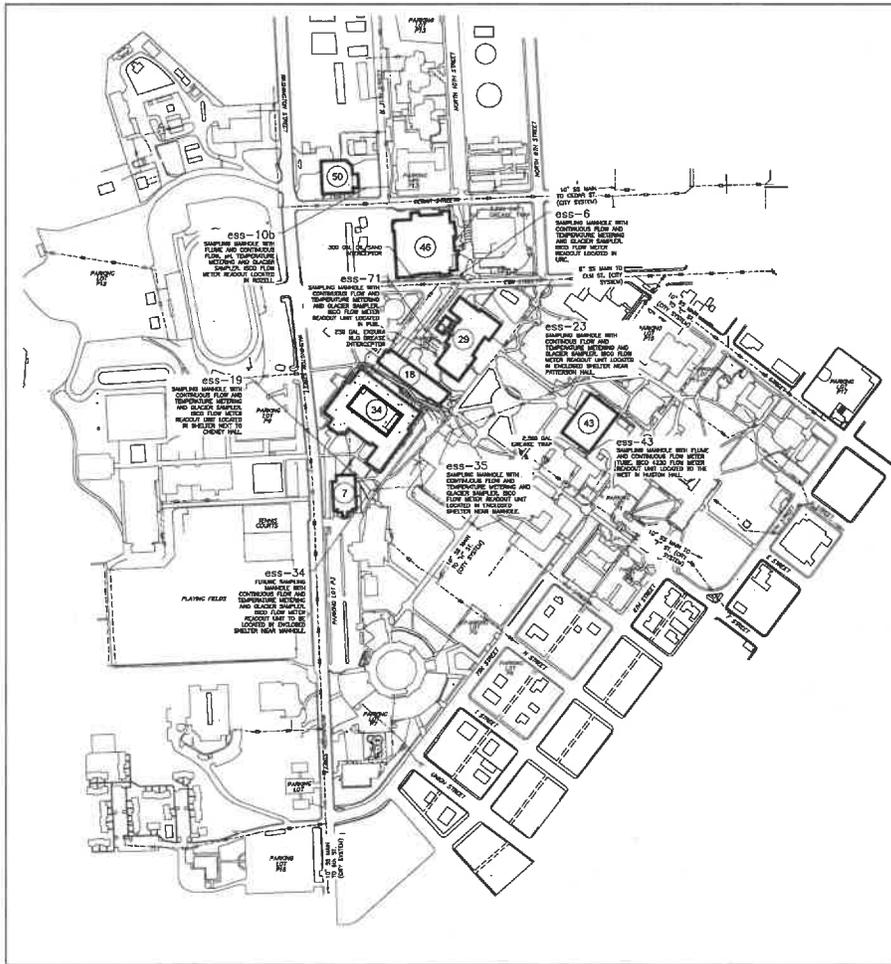
Creation Date 01-Sep-2009
Revision Date 24-Dec-2021
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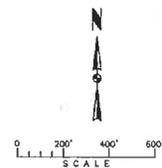
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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

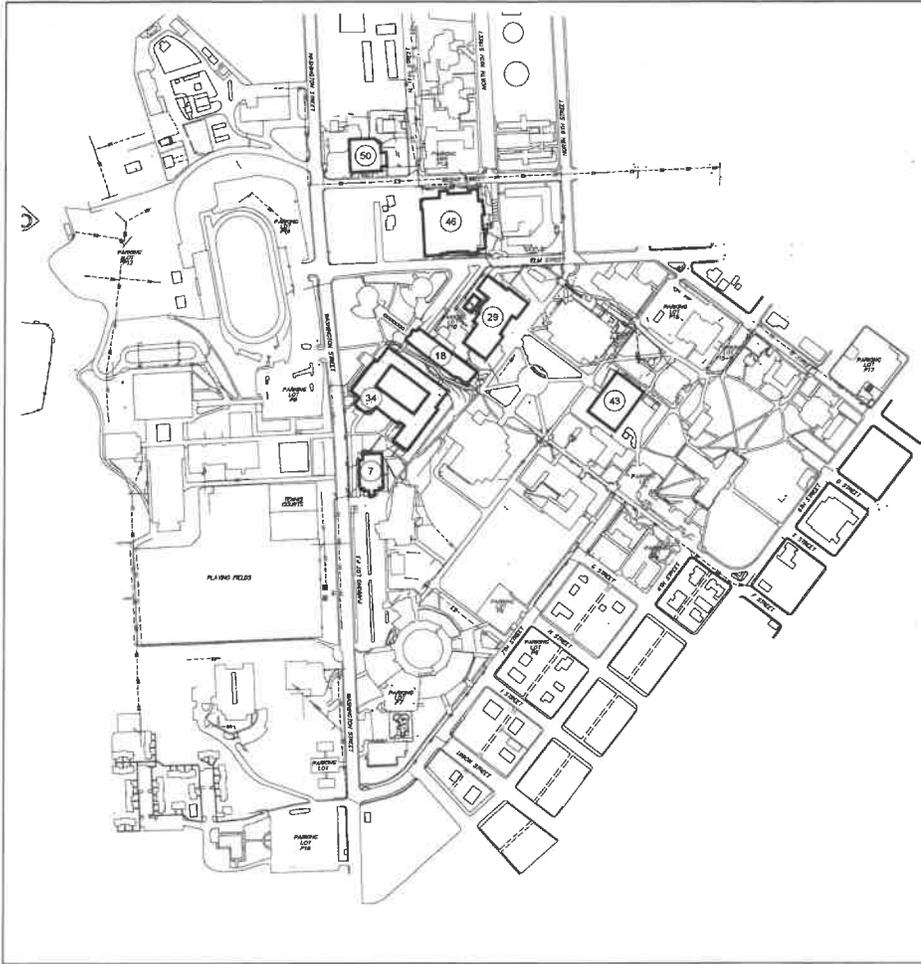
End of SDS



- PERMITTED FACILITIES**
- 7 CHENEY HALL
 - 18 INTERDISCIPLINARY SCIENCE CENTER (ISC)
 - 29 PENCE UNION BUILDING (PUB)
 - 34 SCIENCE BUILDING
 - 43 TAWANNA C COMMONS
 - 48 UNIVERSITY RECREATION CENTER (URC)
 - 50 WIZELL PLANT
- SYMBOL LEGEND**
- ess-10 CHENEY SANITARY SEWER STRUCTURE NUMBER
 - ess-15 EASTERN SANITARY SEWER STRUCTURE NUMBER
 - 49 EWU CAMPUS BUILDING NUMBER

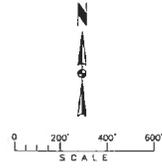


<p>DESIGNED BY: _____</p> <p>CHECKED BY: _____</p> <p>DATE: _____</p> <p>BY: _____</p> <p>DATE: _____</p> <p>PROJECT NO.: 119283</p> <p>SHEET NO. 22424</p>	<p>THOMAS, DEAN & HOSKINS, INC.</p> <p>ENGINEERING CONSULTANTS</p> <p>1100 S. 15TH AVENUE - SUITE 100</p> <p>SPRINGFIELD, MASSACHUSETTS 01103</p> <p>TEL: (413) 264-1111</p> <p>FAX: (413) 264-1112</p>
<p>EWU STATE WASTE DISCHARGE PERMIT # 8098</p> <p>CHENEY, WA.</p> <p>ATTACHMENT F1:</p> <p>SANITARY SEWER MONITORING FACILITIES</p>	
<p>DRAWN BY: M61</p> <p>ORDERED BY: M61</p> <p>QUALITY CHECK: M61</p> <p>DATE: 11/19/2003</p> <p>JOB NO. 22424</p> <p>SHEET 1 OF 1</p>	



- PERMITTED FACILITIES**
- 7 CHENEY HALL
 - 16 INTERDISCIPLINARY SCIENCE CENTER (ISC)
 - 29 PENCE UNION BUILDING (PUB)
 - 34 SCIENCE BUILDING
 - 43 TAWANKA COMMONS
 - 46 UNIVERSITY RECREATION CENTER (URC)
 - 50 ROZELL PLANT

- SYMBOL LEGEND**
- (46) EWU CAMPUS BUILDING NUMBER



<p>EWU STATE WASTE DISCHARGE PERMIT # 8038 CHENEY, WA.</p>	<p>ATTACHMENT HS: STORM DRAIN FACILITIES MAP</p>
<p>BY: DATE: DRAWN BY: 3613 CHECKED: DATE: DECK: QUALITY CHECK: MMS DATE: 1/16/2024 JOB NO. 2204-24</p>	
<p>TD&H THOMAS DEAN & HOSKINS, INC. ENGINEERING CONSULTANTS 1000 UNIVERSITY AVENUE CHENEY, WA 99004</p>	
<p>SHEET 1 OF 1</p>	

