



Wastewater Management Department
Industrial Pretreatment Program
Riverside Park Water Reclamation Facility
4401 North Aubrey L. White Parkway
Spokane, WA 99205

FACT SHEET
FOR WASTEWATER DISCHARGE PERMIT #SIU-2077-01

A. INDUSTRIAL USER INFORMATION

Facility Name: Baker Commodities

Location/Mailing Address: 4423 East Hutton Ave
Spokane, WA 99212

Contact Person: Stuart Palmer, Branch Manager

Phone number: (509)535-5435

Email: SPalmer@bakercommodities.com

B. DESCRIPTION OF FACILITY OPERATIONS

Baker Commodities is a rendering service, SIC 2077 and NAICS Code 311613.

Baker Commodities processes three types of waste:

- Used cooking oil. The water is extracted in heated tanks to lower viscosity. Entrained impurities settle to the bottom of the tank.
- Restaurant grease trap waste. Approximately 70% of this product is water and 4-6% is oil and grease. The remainder is solids. The trap waste is passed through a screen trap. Lime is added to the product to raise pH to about 10.0 and polymer is added before the product is sent through a fine screen box (less than 1mm) to remove solids. Separated water is discharged to sanitary sewer and solid sludge and most of the grease are taken offsite to be used as compost.
- Hard material/scrap. Hard material includes grocery store meat waste, butchers' wastes, etc. and dead animals. Hard material goes through grinders first and then goes through one of two steam heated cookers. The moisture coming out of the product goes to the condenser and then the sump. The water in the sump is then pumped to the raised paddle skimmer and flows to the wastewater monitoring station located near the office. The solids separated within the cooker are ground into meat/bone meal.

Baker Commodities is a Significant Industrial User due to the requested maximum daily permit authorized flow of 50,000 gpd and their potential to negatively impact the Publicly Owned Treatment Works (POTW) with excessive fats entering the collection system. Fats, oils, and grease have both the potential to cause obstruction when collecting in the pipes and interference when the fats chemically breakdown the concrete sewer lines.

Baker Commodities began operations at the facility in 1960. Baker Commodities employs twenty-six personnel and operates five days per week. Hours of operation are 0800-1730.

C. SAMPLE POINT DESCRIPTION/ FACILITY FLOW INFORMATION

SAMPLE POINT	FLOW PER OPERATIONAL DAY (Gallons per day, GPD) ¹		DESCRIPTION
	TOTAL	PROCESS	
Sampling Chamber	32,300	25,500	Covered Sampling chamber located to the west of the office building, near the sampling unit

¹ As provided in Baker's application.

D. PROCESS UNIT OPERATION / FLOW INFORMATION

Process wastewater is generated from condensing steam from the rendering and oil clarification processes. Grease traps and interceptors from restaurants are collected and serviced. The solid product is then separated from water using polymers and a screening box. Solids from the screening box are sent to a composting facility.

The total amount of process wastewater generated from the above operations is 25,500 gallons per day, based on 5 operational days per week.

SAMPLE POINT	PROCESS UNIT OPERATION CODE	PROCESS DESCRIPTION
Sample Chamber on the west end of main admin building	SIC 2077 NAICS 311613	Rendering

E. DILUTION / AUXILIARY OPERATION / FLOW INFORMATION

There are no dilution wastestreams that combine with process wastewater.

F. FLOW MEASURING DEVICE

Baker Commodities has installed an ISCO 4230 to monitor the wastewater flow discharged to the sanitary sewer.

G. PRETREATMENT UNIT OPERATIONS

Wastewater is treated from the process with an oil skimmer and clarifier.

H. RATIONALE FOR MONITORING LOCATIONS / SAMPLING POINTS

Baker Commodities is subject to Riverside Park Water Reclamation Facility (RPWRF) local limits. The sample point designated as **Sample Chamber** is therefore appropriate for sampling for the purposes of this permit, as it is representative of the end-of-pipe.

I. RATIONALE FOR MONITORING FREQUENCY REQUIREMENTS

The City of Spokane must establish the monitoring frequency that can adequately demonstrate that the industrial user is continuously in compliance with the applicable standards. The City of Spokane has compiled data from required permit sampling at twice yearly increments which indicate that this periodicity is adequate, therefore the City of Spokane will perform twice yearly sampling at the Sample Chamber to confirm compliance with applicable limits. Baker Commodities will be required to self-monitor for flow volumes and pH values on a daily basis.

J. RATIONALE FOR REPORTING REQUIREMENTS

1. Signatory Requirements (SMC 13.03A.0305(A))

All discharge permit applications and user reports or information submitted to the City must be signed and certified by an authorized representative as defined in SMC 13.03A.0103. Baker Commodities has designated the following individuals as authorized facility representative(s).

Name	Title
Stuart Palmer	Branch Manager

2. Discharge Monitoring Report (SMC 13.03A.0403)

The City of Spokane requires monthly reporting from Significant Industrial Users in the form of discharge monitoring reports. This report will include those pollutants for which the industry self-monitors. For Baker Commodities, this will include flow and pH. If the industry monitors any regulated pollutant at the appropriate sampling location more frequently than required, the results of the monitoring shall be included in the report. (40 CFR §403.12(g)(6)).

K. RATIONALE FOR SPECIAL CONDITIONS

1. Slug Discharge Evaluation

RPWRF conducted a slug discharge evaluation of Baker Commodities on 2/21/2024.

The City of Spokane RPWRF has determined that Baker Commodities is required to develop and implement a slug discharge control plan due to the fact that the volume of the used cooking oil tanks (2 at 25,000 gallons each) has the capacity to overwhelm the skimming system (8,000 gallon capacity).

2. Operation and Maintenance Manual

In those cases where the facility includes mechanical components, a detailed Operation and Maintenance (O&M) manual must be prepared before completing the construction. The purpose of the manual is to present technical guidance and regulatory requirements to the operator to enhance operation under both normal and emergency conditions. [WAC 173-240-080]

3. AKART

Washington State requires all dischargers to treat wastewater using all known, available, and reasonable methods of prevention, control, and treatment (AKART). AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and 520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

An AKART evaluation was provided in Baker Commodities' Engineering Report. The methods utilized at this facility include a recycle line between the last stage of pretreatment and the sanitary sewer, for additional removal of Hexane Extractable Material (HEM) from discharge.

L. RATIONALE FOR EFFLUENT LIMITATIONS

All Industrial Users of the City of Spokane sanitary sewer are subject to local limits (SMC 13.03A.0204). Local Limits will apply at the Sampling Chamber.

Table 1: City of Spokane Local Limits:

Parameter	Maximum Allowable Discharge Limit ¹
Arsenic, total	0.12 mg/L

Cadmium, total	0.093 mg/L
Chromium, total	<5.0 (WAC 173-303-90)
Copper, total	0.74 mg/L
Lead, total	0.32 mg/L
Mercury, total	0.012 mg/L
Molybdenum, total	0.66 mg/L
Nickel, total	1.74 mg/L
Selenium, total	0.40 mg/L
Silver, total	0.46 mg/L
Zinc, total	2.59 mg/L
Cyanide, total	1.01 mg/L
Benzene	<0.5 (WAC 173-303-90)
pH	Between 5.0-12.0 SU

- ¹ Maximum Allowable Discharge Limit is defined as the maximum concentration or loading of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.

Table 2. Discharge Flow Limits

Total Daily Maximum Flow Limit	Shall not exceed 115,500 gallons per day
Monthly Average Flow Limit	Shall not exceed 50,000 gallons per day

Notes for Discharge Flow Limits

1. The Monthly average flow limit is per user request. No Maximum Instantaneous Flow limit is needed, as the pretreatment system is designed for a maximum flow of

50gpm. The Total Daily Maximum Flow limit is derived from the maximum daily volume noted in the permit application, plus a safety margin of 10%.

M. RATIONALE FOR SAMPLE TYPE

Continuous pH and flow monitoring are required for this facility. Continuous pH monitoring will ensure pH entering the sanitary sewer is within specifications. Flow and pH should be recorded at least every 2 minutes during process wastewater discharge. Continuous flow monitoring is required to track effluent discharge volumes to the City of Spokane sanitary sewer.

Grab samples are used when storing or compositing a sample would alter the concentration or characteristics of pollutants being measured. Grab samples must be used for pH, cyanide, oil and grease, and volatile organic compounds [40 CFR 403.12(g)(3)].

A Priority Pollutant Scan will be performed once during the permit cycle for the pollutants listed in Section 8 of Wastewater Discharge Permit #SIU-2077-01. Samples shall be taken in 2028 for use in permit renewal process.

For all other pollutants, composite samples will be used to determined compliance with applicable pretreatment standards.

ATTACHMENT A – Industry Submittals

Industry submittals include a Permit Application, and a plant schematic. All documents are on file with City of Spokane RPWRF.

ATTACHMENT B – Monitoring Data

Monitoring Done 8/23/2023	
Pollutant	Concentration
pH (standard units)	6.80
Flow	5,522.53 GPD

Arsenic, total	<.020 mg/L
Benzene	<0.001 mg/L
Cadmium, total	<.0040 mg/L
Chromium, total	.0098 mg/L
Copper, total	.00094 mg/L
Cyanide, total	<0.020 mg/L
Lead, total	<.014 mg/L
Mercury, total	<.00020 mg/L
Molybdenum, total	<.020 mg/L
Nickel, total	.052 mg/L
Selenium, total	<.050 mg/L
Silver, total	<.020 mg/L
Zinc, total	1.20 mg/L

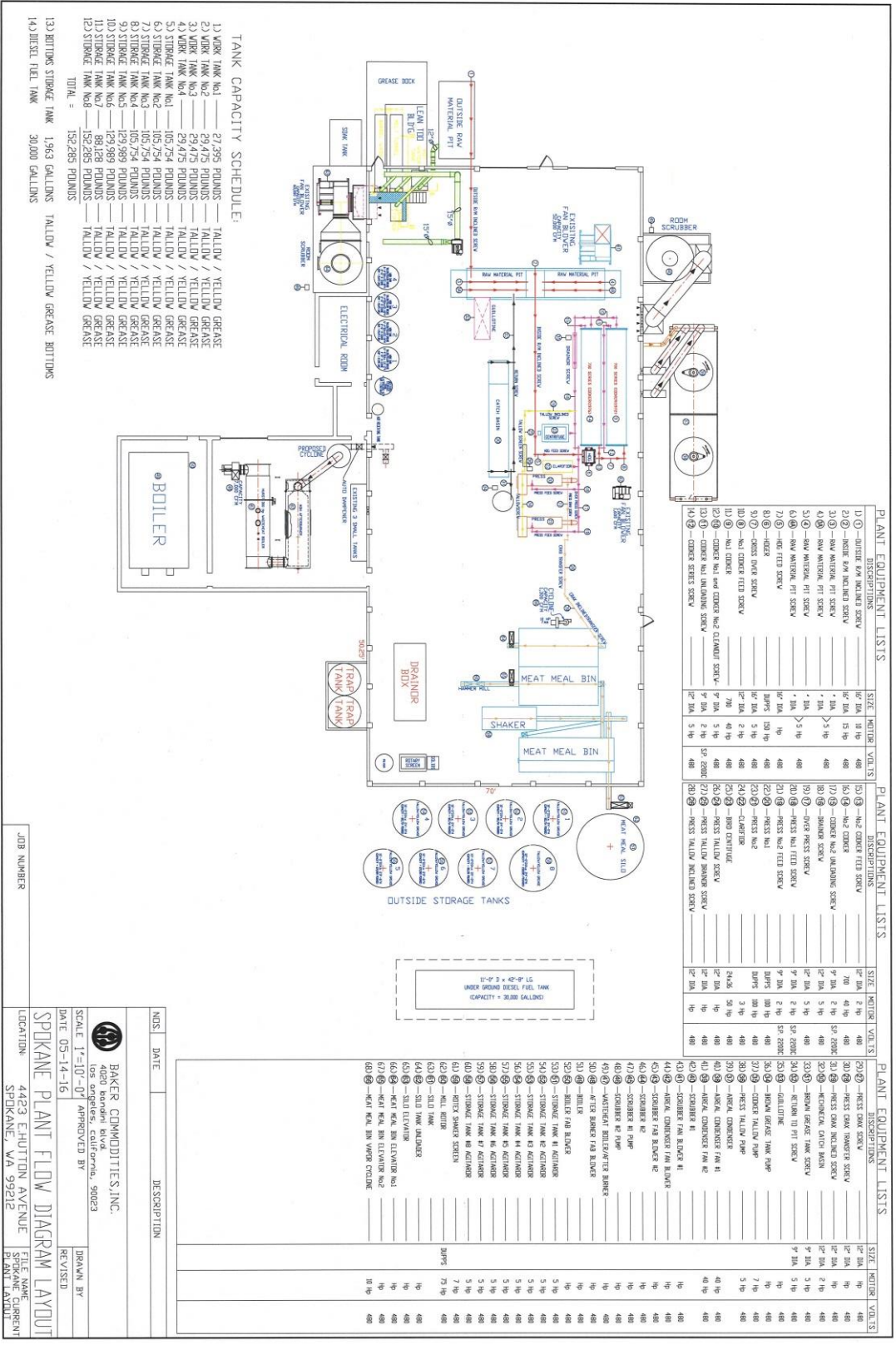
ATTACHMENT C – Maps (GIS, Side Sewer, etc.)



Figure 1 Baker Sample Chamber



Figure 2 Baker Sewer Connection



TANK CAPACITY SCHEDULE:

1) WVRK TANK No.1	27,295 POUNDS	TALLOW / YELLOW GREASE
2) WVRK TANK No.2	29,475 POUNDS	TALLOW / YELLOW GREASE
3) WVRK TANK No.3	29,475 POUNDS	TALLOW / YELLOW GREASE
4) WVRK TANK No.4	29,475 POUNDS	TALLOW / YELLOW GREASE
5) STORAGE TANK No.1	105,754 POUNDS	TALLOW / YELLOW GREASE
6) STORAGE TANK No.2	105,754 POUNDS	TALLOW / YELLOW GREASE
7) STORAGE TANK No.3	105,754 POUNDS	TALLOW / YELLOW GREASE
8) STORAGE TANK No.4	105,754 POUNDS	TALLOW / YELLOW GREASE
9) STORAGE TANK No.5	105,754 POUNDS	TALLOW / YELLOW GREASE
10) STORAGE TANK No.6	105,754 POUNDS	TALLOW / YELLOW GREASE
11) STORAGE TANK No.7	105,754 POUNDS	TALLOW / YELLOW GREASE
12) STORAGE TANK No.8	105,754 POUNDS	TALLOW / YELLOW GREASE
13) BOTTOMS STORAGE TANK	1,963 GALLONS	TALLOW / YELLOW GREASE BOTTOMS
14) DIESEL FUEL TANK	30,000 GALLONS	

TOTAL = 152,285 POUNDS

PLANT EQUIPMENT LISTS

DESCRIPTION	SIZE	MEASURE	VOLTS
1) ① - OUTSIDE FAN MOTOR SERVO	1/2 DIA	18 1/2"	480
2) ② - INSIDE FAN MOTOR SERVO	1/2 DIA	15 1/2"	480
3) ③ - SAW MATERIAL FT SERVO	1/2 DIA	15 1/2"	480
4) ④ - SAW MATERIAL FT SERVO	1/2 DIA	15 1/2"	480
5) ⑤ - SAW MATERIAL FT SERVO	1/2 DIA	15 1/2"	480
6) ⑥ - SAW MATERIAL FT SERVO	1/2 DIA	15 1/2"	480
7) ⑦ - HOT FEES SERVO	1/2 DIA	15 1/2"	480
8) ⑧ - HOT FEES SERVO	1/2 DIA	15 1/2"	480
9) ⑨ - CRACK MARK SERVO	1/2 DIA	15 1/2"	480
10) ⑩ - HOT FEES SERVO	1/2 DIA	15 1/2"	480
11) ⑪ - HOT FEES SERVO	1/2 DIA	15 1/2"	480
12) ⑫ - CRACKER HOT AND CRACKER HOT CLEANING SERVO	1/2 DIA	15 1/2"	480
13) ⑬ - CRACKER HOT CLEANING SERVO	1/2 DIA	15 1/2"	480
14) ⑭ - CRACKER SERVO	1/2 DIA	15 1/2"	480
15) ⑮ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
16) ⑯ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
17) ⑰ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
18) ⑱ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
19) ⑲ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
20) ⑳ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
21) ㉑ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
22) ㉒ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
23) ㉓ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
24) ㉔ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
25) ㉕ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
26) ㉖ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
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29) ㉙ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
30) ㉚ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
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40) ㊵ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
41) ㊶ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
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49) ㊾ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
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51) ① - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
52) ② - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
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54) ④ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
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57) ⑦ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
58) ⑧ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
59) ⑨ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
60) ⑩ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
61) ⑪ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
62) ⑫ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
63) ⑬ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
64) ⑭ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
65) ⑮ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
66) ⑯ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
67) ⑰ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
68) ⑱ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480
69) ⑲ - CRACKER FEES SERVO	1/2 DIA	15 1/2"	480

SPokane Plant Flow Diagram Layout

DATE 05-14-16
 SCALE 1"=10'-0"
 APPROVED BY [Signature]
 DRAWN BY [Signature]

BAKER COMMUNITIES, INC.
 4020 Broadway Blvd.
 Los Angeles, California, 90023

4423 EHLITON AVENUE
 SPOKANE, WA 99212

Figure 3 Baker Schematic

APPENDICES

Appendix A- Response to Comments

Appendix B- Additional Changes