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Public Works Director

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MEMO

To: Burlington Board of Finance
From: Laurie Adams, Assistant Director Water Quality
Date: July 12, 2013

Re: Agreement with Switchback Brewery

Switchback Brewery started up in Burlington in 2002. At the time they were a small brewer for restaurants and bars only. Since that time they have grown and become a large bottling operation. Approximately eight months ago we were approached by another business that desires to set up a large brewery on Pine Street. This contact caused us to step back, and gather information from both Switchback and other towns that have breweries such as South Burlington and Middlebury. Much back and forth ensued between DPW and Switchback resulting in a proposal from DPW to continue to take the waste but with a charge above and beyond the regular wastewater rate for the extra cost to treat this higher strength waste. This charge was calculated based on our actual costs to treat this higher strength BOD and an administration cost. Switchback also believes this is fair and a better alternative for them than either pretreating on site or hauling the waste to another facility for treatment. Based upon water usage from Switchback we estimate this will cost Switchback an additional \$3,800 - \$5,500/year.

Breweries can cause problems for small wastewater plants in that their waste has a high biochemical oxygen demand or (BOD). In Chapter 26 of the Burlington Code of Ordinances, there are limits set on BOD that are considered typical. For Burlington the BOD is 400 mg/l. If a higher strength BOD is expected then the Director of Public Works has various options available such as requiring pretreatment of the waste before discharging to the sanitary sewer line.

We are requesting your approval of this agreement and resolution for DPW Director Steven Goodkind to execute. We believe this agreement can then become a blueprint for other brewers should they follow through on locating in Burlington.

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AGREEMENT FOR DISCHARGE PRETREATMENT

This Agreement for Discharge Pretreatment ("Agreement"), by and between the Department of Public Works, Wastewater Division, a Department of the City of Burlington, Vermont, a Vermont municipal corporation organized under laws of the State of Vermont, ("DPW") and Switchback Brewing Company, a Vermont corporation organized under the laws of the State of Vermont, and located at 160 Flynn Avenue, Burlington, Vermont ("Switchback"), is entered into this day of 2013 for the purpose of establishing the conditions under which Switchback may discharge its wastewater to DPW's Main Wastewater Treatment Plant.

WITNESSETH

WHEREAS, Switchback has been operating a brewery at the above address since 2002; and

WHEREAS, DPW's Main Wastewater Treatment Plant has been receiving and treating Switchback's wastewater discharge since it started; and

WHEREAS § 26-71 of the Burlington Code of Ordinances ("BCO") prohibits, limits, restricts or otherwise regulates wastes or waters that may be discharged to the City's public sewers, including but not limited to limitations on pH, temperature, Biochemical Oxygen Demand (BOD) and total Suspended Solids (TSS); and

WHEREAS, due to the nature of its business, Switchback generates a waste with a BOD that can exceed the concentration limit of four hundred (400) milligrams per liter set by BCO § 26-71(f)(3); and

WHEREAS, pursuant to BCO § 26-71(g), when discharges exceed limits set by the ordinance and in the DPW Director's judgment the discharges may have a deleterious effect, the Director may in his or her discretion use any of the following remedies to address the harmful effects: 1) reject the wastes; 2) require pretreatment to an acceptable condition for discharge to the public sewers; and 3) require control over the quantities and rates of discharge; and

WHEREAS, pursuant to BCO § 26-71(g)(4), if the director permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the DPW Director as well as be subject to the requirements of all applicable codes, ordinances, laws, the City's municipal discharge permit, and be consistent with the requirements of any state pretreatment permit issued to the owner; and

WHEREAS BCO § 26-71(m) allows for a special agreement between the City and any industrial concerns whereby an industrial waste of unusual strength or character may be

accepted by the city for treatment under conditions with respect to payment or other conditions which are needed to compensate the City for any additional costs of treatment so long as such an agreement (1) does not violate any requirements of existing federal laws, (2) is compatible with any user charge and industrial cost recovery system in effect and (3) is approved by the State of Vermont Department of Environmental Conservation (DEC) and DEC has determined that Switchback does not require a National Pollutant Discharge Elimination System (NPDES) pretreatment permit (such NPDES permit is required for discharges that either exceed 5% of a wastewater plant's design flow or 5% of a wastewater plant's design organic loading as measured by BOD);

WHEREAS, DEC has reviewed the treatment capacity of the city's main waste water treatment facility and the current production from Switchback and determined that it is highly unlikely that Switchback will require a pretreatment permit from DEC;

Now therefore, in consideration of the mutual promises and good and valuable consideration contained in this Agreement, it is agreed as follows:

TERMS AND CONDITIONS

1. Switchback shall be permitted to discharge wastes to DPW's Main Wastewater Plant from this agreement date forward subject to the following conditions:
 - a. DPW agrees to treat Switchback's wastes over and above the Ordinance limit of 400 mg/l so long and provided that the concentration of these wastes do not in the judgment of the DPW Director adversely impact Main Plant's NPDES permit limits and Switchback agrees to pay for said treatment as described herein.
 - b. Switchback agrees to have its discharge periodically tested for BOD on the days that most accurately represent the range of discharges associated with its brewery operations. Switchback shall provide the information required by the DPW Director in order for the Director to determine the appropriate testing dates. Switchback shall also provide the DPW Director with the information required by the DPW Director to determine the appropriate testing location. DPW shall notify Switchback in writing of the date, time and location of the testing 5 days in advance of the date. The decision as to the time, date and location of the testing shall be in the discretion of the DPW Director and Switchback shall allow access to the location selected by the Director.
 - c. Testing samples for BOD from the periodic tests required by 1(b) above shall be taken during two (2) six (6) day periods annually in order to calculate waste strengths. DPW shall take the samples and perform the tests and the sampling/testing costs for these 2 periodic tests shall be funded through the pretreatment surcharge rate described in this Agreement without any additional charge to Switchback. If the testing results indicate that equipment, lab or like error has occurred, DPW shall give Switchback notice and schedule a new test.

- d. Additional sampling/testing by either party shall be at their own expense. Switchback shall allow access to the City to perform added testing in the event that the City determines that additional testing is wanted. The parties shall share all testing data. In the event the City would like to use the additional testing to redetermine the surcharge, it shall give Switchback notice and an opportunity to respond in order to ensure that the testing reflects the most accurate range of discharges associated with its brewery operations.
- e. Given the expense and difficulty of accurately measuring wastewater discharges, average BOD concentrations above the Ordinance limit of 400 mg/l from twice annual periodic DPW testing samples described above along with monthly water meter readings and estimated water to waste ratios shall be used to calculate monthly pretreatment pounds of BOD using the following formulae:

Monthly water usage in cuft x 7.48 gals/cuft / 1,000,000 = million gals (MG) of water used.

Based upon historical data provided by Switchback, the Parties agree that it takes an average of 4.5 gals of water to make a gallon of beer, so every 4.5 gals of water generates approximately 3.5 gals of waste (neglecting immeasurable sidestream evaporation/condensation effects). Therefore, the estimated waste-to-water ratio is 3.5/4.5 or 0.78.

Test results of the ave brewery BOD in mg/l – 400 mg/l allowance =
Surcharge BOD in mg/l

Monthly pounds (lb) of Surcharge BOD = MG water used x 0.78 (waste ratio)
x Surcharge BOD in mg/l x 8.34 lbs/gal of water.

- f. Switchback agrees to pay DPW a current surcharge rate of \$0.11/lb of BOD as calculated above. This surcharge shall be included with the monthly water/sewer bill sent to Switchback. Both parties shall agree that this rate will change in the same proportion as any future changes to Burlington's sewer/waste water charges/rates. The parties also agree that the test results from the January 2013 test sampling will be used as the basis for determining the average brewery BOD for the initial billing of the surcharge under this Agreement. The parties further agree that the billing will be adjusted based on the latest periodic annual test sampling results or the additional testing results to redetermine the rate as set forth above.
- g. Should Switchback plan a substantive change to its operation, either in volume or characteristics of its discharge, pursuant to BCO § 26-71(k), Switchback shall provide DPW a 45 day notification of the proposed change in volume or character of pollutants that are being discharged to the treatment plant.
- h. Should DPW determine that Switchback's discharge is adversely impacting the treatment plant's ability to meet its NPDES permit obligations, then it shall notify Switchback and both parties shall cooperatively develop a plan to rectify the situation. This plan shall be completed no later than 45 days from

knowledge of said impact.

- i. Should DPW determine that Switchback's discharge exceeds the State of Vermont Pretreatment Program thresholds (265,000 gals/day flow (5% of the Main wastewater plant's design flow) or 553 lbs BOD/day (5% of the Main wastewater plant's design organic loading as measured by BOD)), then it shall provide notice to both Switchback and the State of Vermont Wastewater Management Division.
 - j. Switchback shall comply with all applicable federal, state, and local laws and permits, including the Clean Water Act and BCO Chapter 26, Article II.
2. This Agreement contains the entire agreement between DPW and Switchback and there is no agreement on the part of either party to do any act or thing other than as expressly stated in this Agreement. There shall be no modifications or amendments to this Agreement unless they are in writing, signed by all of the parties.
3. If any part of this Agreement is found to be invalid, the remainder shall still be binding, in effect, and enforceable.
4. This Agreement is made in Vermont between Vermont corporations and as such, will be interpreted in accordance with Vermont law. This Agreement shall be given its plain and ordinary meaning and shall not be construed against its drafter, the City.
5. This Agreement can be executed non-simultaneously by the parties. If a party executes this Agreement through an agent, the party acknowledges that its agent is a duly authorized representative and is duly authorized to execute this Agreement on behalf of the party.
6. This Agreement is valid for a period of three (3) years from the Agreement date provide in the first paragraph of this document. It shall be reviewed by both parties and modified as deemed necessary such that a new Agreement is in place by this document's expiration date.
7. The Parties agree that this agreement shall only become effective and valid upon the approval of the Vermont Department of Environmental Conservation.
8. This Agreement is entered into upon the date first written above.

By:_____

Duly Authorized Switchback Brewing

By:_____

Duly Authorized Burlington DPW

Resolution Related to Authorization of an Agreement with Switchback Brewery
for the Acceptance of Waste at the Main Wastewater Treatment Plant

Sponsor BOF (Shannon, Bushor, Knodell, Aubin); Consent

WHEREAS, the Switchback Brewing Company ("Switchback") has been operating a brewery in Burlington since 2002; and

WHEREAS, the Department of Public Work's (DPW) Main Wastewater Treatment Plant (MWTP) has been receiving and treating Switchback's wastewater discharge since it started; and

WHEREAS, due to the nature of its business, Switchback generates industrial wastes of unusual strength and character that are subject to the City's wastewater regulations; and

WHEREAS, the City's wastewater regulations allow the City to enter into a special agreement with Switchback in order for the City to accept its wastes for treatment and compensate the City for any additional costs of treatment; and

WHEREAS, DPW Director Goodkind has determined that the MWTP has the capacity and capability to continue treating Switchback's waste within the requirements of the plant's permits and the agreement negotiated with Switchback fairly compensates the City for the additional costs of treatment, does not violate any requirements of existing law, has safeguards to ensure continued compliance with all permit requirements, is compatible with the City's user charges and industrial cost recovery system, and has been reviewed by the Vermont Department of Environmental Conservation;

WHEREAS, the agreement was reviewed and unanimously recommended for City Council approval by the Board of Finance at its July __, 2013 meeting;

NOW THEREFORE BE IT RESOLVED that the DPW Director or the director's designee is authorized to execute an agreement with Switchback in substantially the same form and substance as the attached agreement, subject to the prior review and approval of the City Attorney.