



*Legal and Legislative Services Department
Tel. 604-432-6200 Fax 604-436-6707*

WASTE DISCHARGE PERMIT
No. SC-100051-LIWSA
(the "Permit")

Under the provisions of the

Greater Vancouver Sewerage & Drainage District Sewer Use Bylaw No. 299, 2007 (as amended)
(the "Bylaw")

Crown Corrugated Company
(the "Permittee")

is authorized to discharge Wastewater to Sewer from
a paper box manufacturing plant located at

13911 South Foot Garden City Road, Richmond, BC

This Permit has been issued under the terms and conditions prescribed in the attached
Schedules A, B, C, D and E for discharge sources and works existing or planned on

August 11, 2015

All previous versions of this Waste Discharge Permit are hereby rescinded and rendered null and void.

Issued: December 15, 1992
Amended: August 11, 2015

Grant McGillivray
Deputy Sewage Control Manager

SCHEDULE A

This Schedule sets out requirements for the quantity and quality of the discharge to Sewer.

1. AUTHORIZED RATE OF DISCHARGE

The Permittee shall not exceed the following:

Sample Point: 1

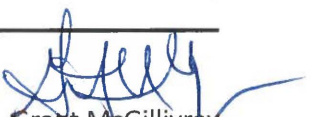
- Maximum daily discharge flow rate: **350.00 m³/day**
- Maximum instantaneous peak flow rate: **16.70 L/second**

2. AUTHORIZED DISCHARGE CRITERIA

- a) The Permittee shall not discharge Restricted Waste or other Waste, as defined in the Bylaw, including but not limited to the following (regardless of sample type):

Parameter	Authorized Limit	Notes
pH	5.5 - 10.5 pH Units	
Total Suspended Solids	600 mg/L	
Oil & Grease Hydrocarbon	15 mg/L	
Aluminum - total	50 mg/L	
Arsenic - total	1 mg/L	
Boron - total	50 mg/L	
Cadmium - total	0.2 mg/L	
Chromium - total	4 mg/L	
Cobalt - total	5 mg/L	
Copper - total	2 mg/L	
Iron - total	10 mg/L	
Lead - total	1 mg/L	
Manganese - total	5 mg/L	
Molybdenum - total	1 mg/L	
Nickel - total	2 mg/L	
Selenium - total	1 mg/L	
Silver - total	1 mg/L	
Zinc - total	3 mg/L	

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Waste Discharge Permit No. SC-100051-LIWSA

SCHEDULE A

- b) The Permittee shall not discharge Restricted Waste or other Waste, as defined in the Bylaw, with the following exceptions (regardless of sample type):

Parameter	Authorized Limit	Notes
Biochemical Oxygen Demand	No Limit	

- c) The Permittee shall not discharge Prohibited Waste, Storm Water or Uncontaminated Water, as defined in the bylaw, with the exception of:

- Contaminated storm water run-off from the wax storage tank farm and bunker oil storage tank farm containment areas.
- Non-contact cooling water from two plant air compressors and the "Single Facer" production line.

- d) The Permittee shall not discharge Hazardous Waste, or effluent from the treatment of Hazardous Waste which exceeds the Effluent Standards for Hazardous Waste Facilities, as stipulated in Schedule 1.2, Column 3, of the BC Environmental Management Act Hazardous Waste Regulation.

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SCHEDULE B

This Schedule sets out requirements and locations for the approved sample points, waste sources, and works and procedures to treat and/or control the discharges to Sewer.

1. SAMPLE POINTS, WASTE SOURCES, WORKS & PROCEDURES

SAMPLE POINT: 1

This sample point is considered to be a point of discharge to Sewer. The approved sample point location is described and is illustrated in the photo(s) below.

Description: The discharge line from the main sump located under the starch deck in south-central area of the plant.

Source: Process Water Discharges

- Box plant operations
- Converting plant operations
- Starch/ adhesive process clean out
- Excess water from water reuse holding tank
- Boiler blow-down

Type: Continuous

Works and Procedures	Completion Date
Wastewater collection system	Completed
Machine centre ink wash sump pits	Completed
Ink pans soak tank	Completed
Ink pans wash containment area	Completed
Box plant/ converting plant main sump	Completed
Wastewater treatment system	Completed
-pH adjustment	Completed
-Oil separation	Completed
-Flocculation	Completed
-Filter press	Completed
-Water reuse holding tank	Completed
-Emergency bypass line	Completed
-Emergency spill tanks	Completed
Good operating practices	Completed

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SCHEDULE B

Source: Cooling Water Discharges

Plant air compressors
Single facer production line

Type: Continuous

Works and Procedures	Completion Date
Box plant/ converting plant main sump	Completed
Wastewater treatment system (see description in Process Water Discharges)	Completed
Good operating practices	Completed

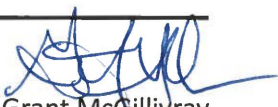
Source: Storm Water Discharges

Wax storage tank containment area
Bunker oil storage tank containment area

Type: Continuous

Works and Procedures	Completion Date
Common sump	Completed
Sedimentation	Completed
Good operating practices	Completed

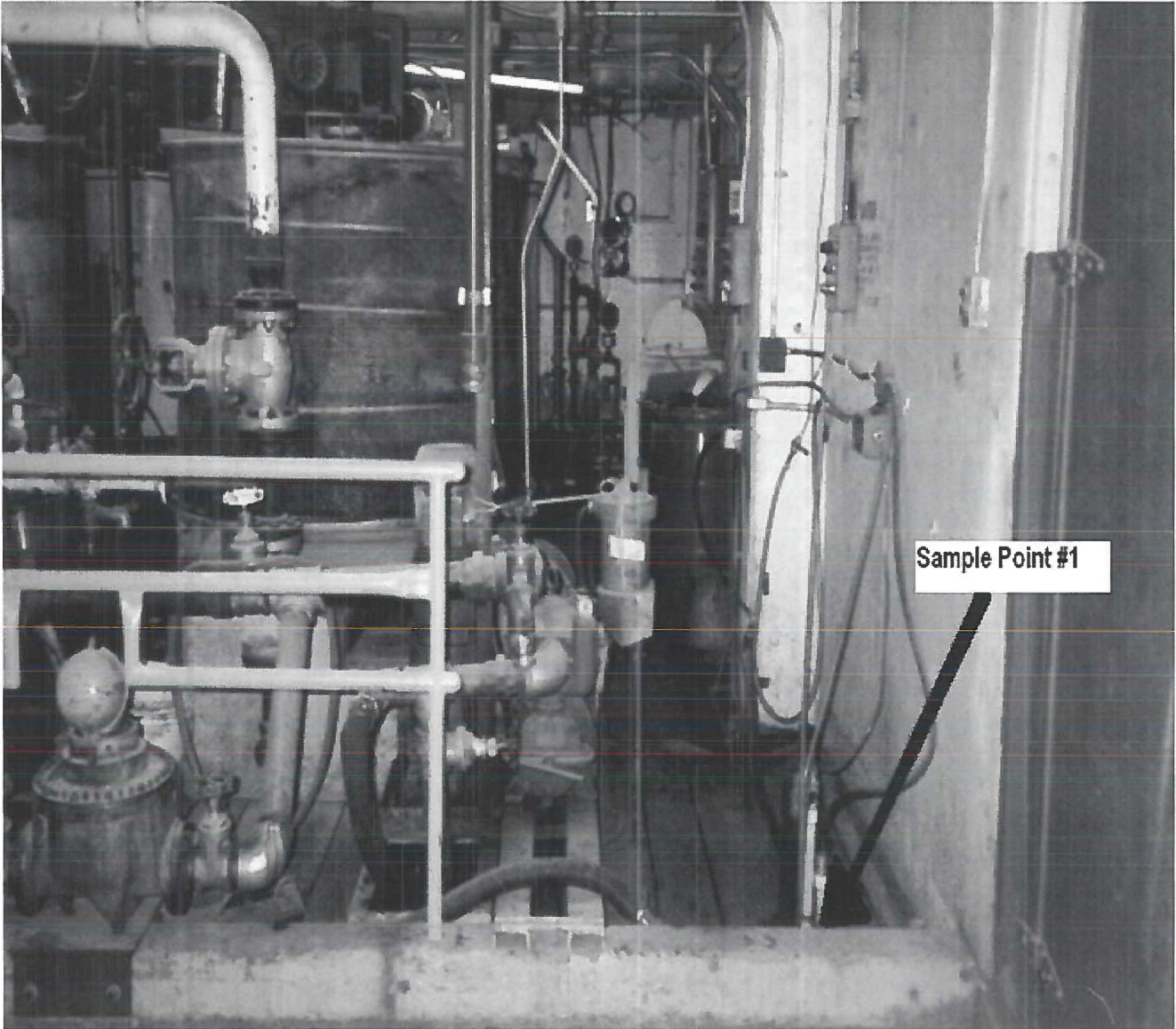
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Waste Discharge Permit No. SC-100051-LIWSA

SCHEDULE B

Photograph of Sample Point 1:



Issued: December 15, 1992
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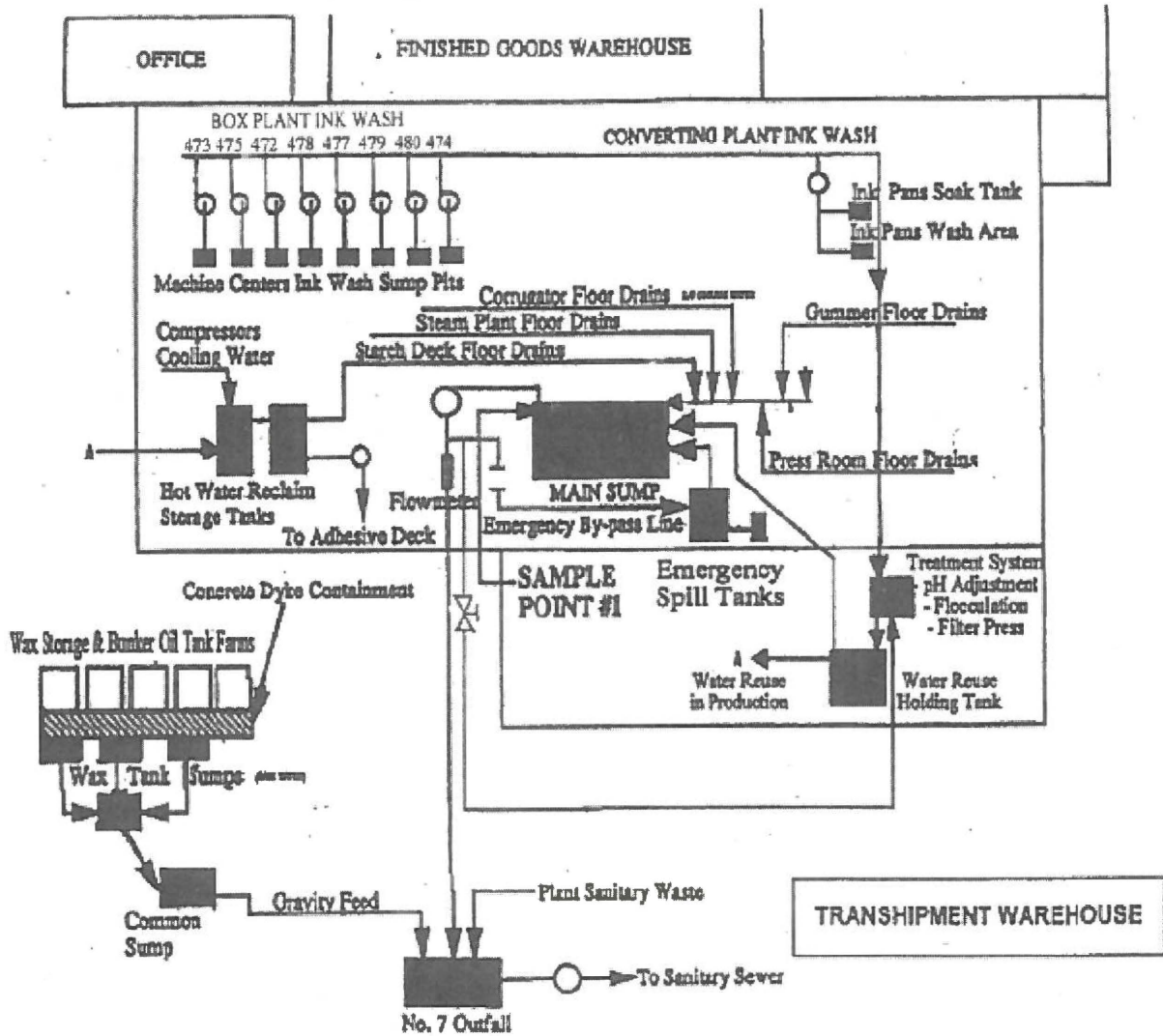
Waste Discharge Permit No. SC-100051-LIWSA


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GREATER VANCOUVER SEWERAGE & DRAINAGE DISTRICT

SCHEDULE B

2. SITE PLAN(S)



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[Signature]
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Deputy Sewage Control Manager

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SCHEDULE C

This Schedule sets out standard conditions and requirements for emergency procedures.

1. STANDARD CONDITIONS

- a) Except as otherwise provided in this Permit, all terms, conditions and definitions stipulated in the Bylaw shall apply to this Permit.
- b) Pursuant to the Bylaw, the Sewage Control Manager (the Manager) may amend the terms and conditions of this Permit.
- c) All records required by this permit shall be kept available for a minimum period of one year.

2. WORKS AND PROCEDURES

- a) All authorized works, procedures and requirements shall be employed at all times during any discharge to sewer. As applicable, all such works shall be inspected and calibrated regularly and maintained in good working condition.
- b) The Manager may require that additional works be installed if the existing works do not provide an acceptable level of treatment. The Manager must authorize new works or alterations to existing works. The Manager must authorize new waste sources.

3. NOTIFICATION PROCEDURES

The Permittee shall immediately report to Metro Vancouver at 604-643-8488 (24 hours):

- a) Spills with the potential to be discharged to the Sanitary Sewer.
- b) Failure of authorized works or conditions and/or failure to carry out authorized procedures that will or have the potential to result in a Permit limit being exceeded.
- c) Discharge pH less than 2 or greater than 12.5.

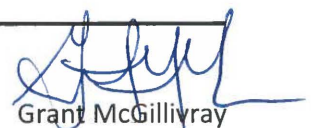
4. BY-PASSES

The discharge of Wastes that by-pass any authorized works or is not in accordance with procedures designated by the Permit is prohibited, unless prior authorization of the Manager is obtained.

5. DISCHARGE MONITORING

- a) All sampling, measurements, tests and analyses of waste discharges shall be carried out in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, or an alternate method authorized by the Manager. With the exception of pH measurements, all samples shall be analyzed by an independent laboratory unless otherwise authorized by the Manager. The pH shall be measured immediately using Standard Method 4500-H+.
- b) Laboratories used by the Permittee must be accredited by the Canadian Association for Laboratory Accreditation and/or the Standards Council of Canada for all parameters analyzed.
- c) Any changes in method or location of monitoring must be authorized by the Manager.
- d) Additional monitoring and/or reporting shall be undertaken by the Permittee when required by the Manager.

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SCHEDULE D

This Schedule sets out the requirements for the monitoring of the discharge to Sewer.

DISCHARGE SAMPLING AND ANALYSES

1. FLOW MEASUREMENTS

The Permittee shall measure or estimate the discharge flow to sanitary sewer during each month of operation using the method(s) authorized in Schedule B and record for reporting purposes the following:

- Total discharge volume (m³) for the month for sample point(s) 1
- Number of days of discharge to sewer during the month for sample point(s) 1
- Maximum daily discharge flow rate (m³/day) during the month for sample point(s) 1

2. CONTINUOUS MEASUREMENTS

The Permittee shall continuously measure the discharge pH during the period of discharge to sewer for sample point(s) 1 and record for reporting purposes the following:

- The total number of hours of discharge below the authorized pH range and the total number of hours of discharge above the authorized pH range during each month of operation.
- Total number of hours of discharge during the month.

3. SAMPLING PROGRAM

Continuous Discharge Sampling:

The Permittee shall record for reporting purposes for each sample the following:

- Sample date
- Sample collection time or sample collection start and stop time(s) if applicable
- Total daily discharge volume (m³) on the date of sampling

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SCHEDULE D

SAMPLE POINT: 1

Continuous Discharges:

On one normal operating day once per month collect 1 set of composite samples and analyze for:

- Biochemical Oxygen Demand
- Total Suspended Solids

On one normal operating day once per month collect 1 set of grab samples and analyze for:

- Oil & Grease Hydrocarbon

On one normal operating day once per quarter collect 1 set of composite samples during the period that the monthly composite sample is taken and analyze for:

- Total Metals by ICP Scan including:
Aluminum, Arsenic, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Lead,
Manganese, Molybdenum, Nickel, Selenium, Silver, Zinc

Unless otherwise specified, composite samples shall consist of equal portions of grab samples, collected at a frequency of at least one per hour during discharge to sewer.

If composite sampling is specified, grab samples shall be taken during the period of composite sampling unless noted otherwise in this Schedule.

Unless otherwise specified, all samples should be taken during normal operations.

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SCHEDULE E

This Schedule sets out reporting requirements for this Permit.

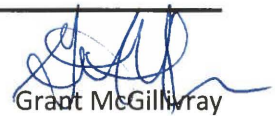
1. REPORTING REQUIREMENTS

By October 31, 2015 and quarterly thereafter for the term of this permit:

The Permittee shall submit a report detailing the results of the discharge sampling and analyses program, as specified, for the previous calendar quarter including lab reports. This information shall be submitted electronically using the supplied password-enabled web based application.

Should a violation of any term or condition of the Permit be noted, the report shall include a summary of the investigation into the cause of the violation and the corrective actions taken or proposed to prevent future violations. This does not preclude the immediate notification requirements specified in Schedule C.

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