

## PERMIT GVA1093

**Pursuant to:**

Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008  
and the BC Environmental Management Act, S.B.C 2003, c.53

**Issued to:**

Ebco Metal Finishing L.P.  
(the "Permittee")

**To Authorize:**

the discharge of air contaminants to the air from  
a hot dip zinc galvanizing facility

**Located at:**

18699 25 Avenue, Surrey, BC

**Effective Period:**

The terms and conditions set out in the Permit apply to the existing or planned works as of  
July 03, 2020 and this Permit will expire on February 28, 2033.

All previous versions of this Permit are invalid.

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Issued: March 28, 2018  
Amended: July 03, 2020

  
R.H. (Ray) Robb, P. Eng.  
District Director

**METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT**

**SECTION 1 – AUTHORIZED EMISSION SOURCES**

Authorization to discharge air contaminants from the authorized Emission Sources and Works listed below is subject to the specified terms and conditions.

Approximate locations of the emission sources are shown on the Site Plan in section 4.

**EMISSION SOURCE 01a: Galvanizing kettle enclosure - Baghouse A discharging through a Stack(s).**

MAXIMUM EMISSION FLOW RATE: **142 m<sup>3</sup>/min**  
MAXIMUM ANNUAL OPERATING HOURS: **8000 h/y**

MAXIMUM EMISSION QUALITY:

1. 3.25 mg/m<sup>3</sup> Ammonia
2. 1 mg/m<sup>3</sup> Ammonium Chloride
3. 0.5 mg/m<sup>3</sup> Chlorine
4. 3 mg/m<sup>3</sup> Hydrogen Chloride
5. 0.005 mg/m<sup>3</sup> Nickel
6. 2.5 mg/m<sup>3</sup> Zinc
7. 5 mg/m<sup>3</sup> Particulate Matter
8. 5% Opacity

WORKS AND PROCEDURES:

When dipping, the kettle enclosure must be operated as described in the approved Fugitive Emission Management Plan. All air emissions from the kettle must be collected and directed to all three baghouses ES01a, ES01b, and ES01c. The bags in the baghouse are to be pre-treated with a coating powder which has been approved in writing by the District Director. The baghouse is to be operated with a leak detector installed.


- Baghouse A is a Murphy Model CP
- Stack height above ground level = 21.9 metres
- Internal stack diameter at top = 0.3 metres
- Minimum stack exit temperature = 20 °C
- Stack is not capped

**EMISSION SOURCE 01b: Galvanizing kettle enclosure - Baghouse B discharging through a Stack(s).**

MAXIMUM EMISSION FLOW RATE: **142 m<sup>3</sup>/min**  
MAXIMUM ANNUAL OPERATING HOURS: **8000 h/y**

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### MAXIMUM EMISSION QUALITY:

1. 3.25 mg/m<sup>3</sup> Ammonia
2. 1 mg/m<sup>3</sup> Ammonium Chloride
3. 0.5 mg/m<sup>3</sup> Chlorine
4. 3 mg/m<sup>3</sup> Hydrogen Chloride
5. 0.005 mg/m<sup>3</sup> Nickel
6. 2.5 mg/m<sup>3</sup> Zinc
7. 5 mg/m<sup>3</sup> Particulate Matter
8. 5% Opacity

### WORKS AND PROCEDURES:

When dipping, the kettle enclosure must be operated as described in the approved Fugitive Emission Management Plan. All air emissions from the kettle must be collected and directed to all three baghouses ES01a, ES01b, and ES01c. The bags in the baghouse are to be pre-treated with a coating powder which has been approved in writing by the District Director. The baghouse is to be operated with a leak detector installed.

- Baghouse B is a Murphy Model CP
- Stack height above ground level = 21.9 metres
- Internal stack diameter at top = 0.3 metres
- Minimum stack exit temperature = 20 °C
- Stack is not capped

### EMISSION SOURCE 01c: Galvanizing kettle enclosure - Baghouse C discharging through a Stack(s).

MAXIMUM EMISSION FLOW RATE: 396 m<sup>3</sup>/min

MAXIMUM ANNUAL OPERATING HOURS: 8000 h/y

### MAXIMUM EMISSION QUALITY:

1. 3.25 mg/m<sup>3</sup> Ammonia
2. 1 mg/m<sup>3</sup> Ammonium Chloride
3. 0.5 mg/m<sup>3</sup> Chlorine
4. 3 mg/m<sup>3</sup> Hydrogen Chloride
5. 0.005 mg/m<sup>3</sup> Nickel
6. 2.5 mg/m<sup>3</sup> Zinc
7. 5 mg/m<sup>3</sup> Particulate Matter

### WORKS AND PROCEDURES:

When dipping, the kettle enclosure must be operated as described in the approved Fugitive Emission Management Plan. All air emissions from the kettle must be collected and directed to all three

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baghouses ES01a, ES01b, and ES01c. The bags in the baghouse are to be pre-treated with a coating powder which has been approved in writing by the District Director. The baghouse is to be operated with a leak detector installed.

- Baghouse C is Donaldson Torit Model 243MBT8 Dust collector
- Stack height above ground level = 21.9 metres
- Internal stack diameter at top = 0.508 metres
- Minimum stack exit temperature = 20 °C
- Stack is not capped

**EMISSION SOURCE 02: Degrease tank, pickling tanks, flux tank, and general room air discharging through a Vent(s).**

MAXIMUM EMISSION FLOW RATE: **1825** m<sup>3</sup>/min  
MAXIMUM ANNUAL OPERATING HOURS: **8760** h/y

MAXIMUM EMISSION QUALITY:

1. 0.055 mg/m<sup>3</sup> Sulphuric Acid

WORKS AND PROCEDURES:

A maximum of 6 out of 8 vents is authorised to be in operation at any time.

An additive must be used to suppress misting. The amount of mist suppressant added is to be monitored and recorded in a log, which includes dates. The log is to be maintained and made available for inspection.

For each vent:

- Stack height above ground level = 12.4 metres
- Internal stack diameter at top = 0.91 metres
- Minimum stack exit temperature = 15 °C
- Vent is not rain-capped

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**SECTION 2 – GENERAL REQUIREMENTS AND CONDITIONS**

**A. AUTHORIZED WORKS, PROCEDURES AND SOURCES**

Works and procedures, which this permit authorizes in order to control the discharge of air contaminants, shall be employed during all operating periods of the related sources. The Permittee shall regularly inspect and maintain all such works, procedures and sources.

The District Director must be provided with reasonable notice of any changes to or replacement of authorized works, procedures or sources. Any changes to or replacement of authorized works, procedures or sources must be approved by the District Director in advance of operation. For certainty, this does not include routine maintenance or repair.

The discharge criteria described in Section 1 of this permit are applicable on the issued or last amended date of this permit unless specified otherwise. If a date different to the issued or last amended date is specified, the existing works, procedures and sources must be maintained in good operating condition and operated in a manner to minimize emissions.

**B. NOTIFICATION OF MONITORING NON-COMPLIANCE**

The District Director must be notified immediately of any emission monitoring results, whether from a continuous emissions monitor or periodic testing, which exceed the quantity or quality authorized in Section 1 of this permit. Notification shall be made to Metro Vancouver's 24-hour number: 604-436-6777, or to [regulationenforcement@metrovancover.org](mailto:regulationenforcement@metrovancover.org).

**C. POLLUTION NOT PERMITTED**

Notwithstanding any conditions in this permit, no person shall discharge or allow or cause the discharge of any air contaminant so as to cause pollution as defined in the Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008 and the Environmental Management Act.

**D. BYPASSES**

The discharge of air contaminants that have bypassed authorized control works is prohibited unless advance approval has been obtained and confirmed in writing from the District Director.


**E. EMERGENCY PROCEDURES**

In the event of an emergency or condition beyond the control of the Permittee that prevents effective operation of the authorized works or procedures or leads to unauthorized discharge, the Permittee shall:

1. Comply with all applicable statutory requirements;
2. Immediately notify the District Director of the emergency or condition and of contingency actions invoked or planned to mitigate adverse impacts and restore compliance; Notification shall be made to Metro Vancouver's 24-hour number: 604-436-6777; and
3. Take appropriate remedial action for the prevention or mitigation of pollution.

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The District Director may specify contingency actions to be implemented to protect human health and the environment while authorized works are being restored and/or corrective actions are being taken to prevent unauthorized discharges.

If an emergency situation results in a "spill" as defined in the Environmental Management Act Spill Reporting Regulation, the spill shall also be reported immediately to the Provincial Emergency Program by telephoning 1-800-663-3456.

### **F. AMENDMENTS**

The terms and conditions of this permit may be amended, as authorized by applicable legislation. New works, procedures or sources or alterations to existing works, procedures or sources must receive authorization in advance of operation.

### **G. STANDARD CONDITIONS AND DEFINITIONS**

Unless otherwise specified, the following applies to this permit:

1. Gaseous volumes are corrected to standard conditions of 20 degrees Celsius (°C) and 101.325 kilo Pascals (kPa) with zero percent moisture.
2. Contaminant concentrations from the combustion of specific fuel types are corrected to the following Oxygen content, unless specified otherwise:
  - 3% O<sub>2</sub> for natural gas and fuel oil; or
  - 8% O<sub>2</sub> for wood fuel
3. Where compliance testing is required, each contaminant concentration limit in this permit will be assessed for compliance based on a valid test using test methods approved by the District Director.
4. Visual opacity measurements are made at the point of maximum density, nearest the discharge point and exclude the effect of condensed, uncombined water droplets. Compliance determinations are based on a six-minute average in accordance with the United States Environmental Protection Agency (US EPA) Method 9: Visual Determination of the Opacity of Emissions from Stationary Sources. Continuous Emission Monitor System (CEMS) opacity compliance determinations are based on a one-hour average (taken from the top of each hour).
5. If authorized in Section 1 of this permit, standby fuel use is restricted to a maximum of 350 hours per year and to those periods during which the primary authorized fuel is not available. Fuel oil sulphur content shall not exceed 15 milligrams per kilogram (mg/kg) and emissions during fuel oil firing shall not exceed 10% opacity.
6. Definitions in the Environmental Management Act and Air Quality Management Bylaw apply to terminology used in this permit.
7. Threshold Limit Values (TLV) refer to the Time Weighted Average (TWA) exposure limits for substances specified in the American Conference of Governmental Industrial Hygienists Threshold Limit Values handbook, current on the latest date that this permit issuance or amendment came into effect.
8. Sulphur Oxides (SO<sub>x</sub>) are expressed as Sulphur Dioxide.
9. Nitrogen Oxides (NO<sub>x</sub>) are expressed as Nitrogen Dioxide.

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10. The Canadian Council of Ministers of the Environment (CCME) "Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks (PN1180)" shall be adhered to for all applicable tanks unless otherwise stated in this permit.
11. Authorized 'Maximum Annual Operating Hours' of 8760 hours per year for an emission source is equivalent to authorization for continuous operation of the emission source for an entire calendar year, including leap years.

**H. RECORDS RETENTION**

All records and supporting documentation relating to this permit must be kept for at least three years after the date of preparation or receipt thereof, and be made available for inspection within 48 hours of a request by an Officer.

**I. HEATING, VENTILATION, AIR CONDITIONING AND INTERNAL COMBUSTION ENGINES**

Air contaminants discharged from any natural gas-fired heating, ventilation or air conditioning system for buildings and any internal combustion engine located at the discharge site shall be maintained and operated in a manner prescribed by the manufacturer to ensure good combustion of the fuel with minimum discharge of air contaminants.

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**SECTION 3 – REPORTING REQUIREMENTS**

**A. MONITORING REQUIREMENTS AND REPORTING**

Unless otherwise approved in writing by the District Director prior to any sampling or analysis, all measurements shall be performed by an independent agency in accordance with Metro Vancouver Air Emissions Sampling Program Manual of Methods and Standard Operating Procedures and the BC Ministry of Environment Field Sampling Manual, as they may be amended from time to time. Any variance from these procedures must receive prior written approval from the District Director.

A minimum of 5 working days advance notice must be given prior to taking measurements required by this Monitoring and Sampling Program. Notification must be given to the Metro Vancouver Environmental Regulation & Enforcement Division (phone 604-436-6777, Fax 604-436-6707, email [regulationenforcement@metrovancover.org](mailto:regulationenforcement@metrovancover.org)).

Unless otherwise specified, sampling shall be performed under operating conditions representative of the previous 90 calendar days of operation. All field data and calculations must be submitted with monitoring results and they shall be reported in the metric units which are used in this permit. These submissions shall include process data relevant to the operation of the source of the emissions and the performance of the emission control works.

The Permittee shall conduct the following monitoring and sampling and submit electronic reports of the results to the District Director by the dates specified below using a password enabled web based application provided by Metro Vancouver.

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| EMISSION SOURCE | INITIAL DUE DATE | SUBSEQUENT DUE DATES                                      | REQUIREMENT   | PARAMETER(S)  | TEST METHOD  | REPORT TYPE |
|-----------------|------------------|---|---|---|--|-------------|
| 01a, 01b        | October 31, 2021 | Every 2 years, on or before October 31 every second year. | <p><b>Stack Test Report</b><br/>Written report providing results of the assessment program for particulate matter, volatile organic compounds, chlorine, ammonia, ammonium chloride, hydrogen chloride, zinc, nickel, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, phosphorus, selenium, silver, thallium, and titanium in the emissions. The sampling program must adhere to the methodologies and criteria as outlined in the plan approved by the District Director on July 12, 2018 and must be conducted by qualified personnel.</p> <p>The stack testing is to be completed no more than 120 days prior to the due date for this report.</p> | Ammonium Chloride, Chlorine, Hydrogen Chloride, Nickel, Particulate Matter, Zinc, Ammonia, Total Volatile Organic Compounds, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Phosphorus, Selenium, Silver, Titanium, Thallium | Those approved by the District Director, EPA Test Method 5, EPA Test Method 29 | Stack       |
| 01c             | October 31, 2020 | Every 2 years, on or before October 31 every second year. | <p><b>Stack Test Report</b><br/>Written report providing results of the assessment program for particulate matter, volatile organic compounds,</p>  | Ammonia, Ammonium Chloride, Antimony,   | Those approved by the District Director, EPA Test Method 29,                   | Stack       |

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|-----------------|------------------|----------------------|---|--|--------------------------|-------------|
|                 |                  |                      | <p>chlorine, ammonia, ammonium chloride, hydrogen chloride, zinc, nickel, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, manganese, phosphorus, selenium, silver, thallium, and titanium in the emissions. The sampling program must adhere to the methodologies and criteria as outlined in the plan approved by the District Director on July 12, 2018 and must be conducted by qualified personnel.</p> <p>The stack testing is to be completed no more than 120 days prior to the due date for this report.</p> | <p>Arsenic, Barium, Beryllium, Cadmium, Chlorine, Chromium, Cobalt, Copper, Hydrogen Chloride, Lead, Manganese, Nickel, Particulate Matter, Phosphorus, Selenium, Silver, Thallium, Titanium, Total Volatile Organic Compounds, Zinc</p> | <p>EPA Test Method 5</p> |             |

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**B. INFORMATION REPORTING REQUIREMENTS**

The Permittee shall submit electronic reports containing the required information to the District Director by the dates specified below using a password enabled web based application provided by Metro Vancouver.

| <b>EMISSION SOURCE</b> | <b>INITIAL DUE DATE</b> | <b>SUBSEQUENT DUE DATES</b>                     | <b>REQUIREMENT</b>   | <b>REPORT TYPE</b>     |
|------------------------|-------------------------|---|--|------------------------|
| 01a, 01b,<br>02, 01c   | March 31, 2021          | On or before March 31 for each subsequent year. | <b>Operating Period Report</b><br>Written report providing details of the total number of hours and days operated in the preceding calendar year. Detailed records are to be maintained in a written bound log or other format approved in writing by the District Director and made available for inspection by Metro Vancouver staff for a minimum period of three years.  | Operating Period       |
| 01a, 01b,<br>02, 01c   | November 30,<br>2029    | N/A   | <b>BACT Assessment Plan</b><br>Written report prepared by a qualified person, submitted to the District Director for review, comment, and written approval, which outlines a plan to assess the best available control technology for emissions from zinc galvanizing facilities.<br><br>Terms of reference for the assessment must be submitted to the District Director for review and written approval and must include:<br>•Control technologies or equipment for particulate matter collection and recovery<br>•Information on the feasibility of implementation, including approximate costs<br>•Results of any control technology trials to reduce particulate matter from zinc galvanizing facilities. | Information -<br>Other |

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| EMISSION SOURCE   | INITIAL DUE DATE  | SUBSEQUENT DUE DATES                                    | REQUIREMENT   | REPORT TYPE         |
|-------------------|-------------------|---|---|---------------------|
| 01a, 01b, 01c     | April 30, 2021    | Every 2 years, on or before April 30 every second year. | <b>Soil, Plant Tissue, and Water Sampling Report</b><br>Written report of the findings of the sampling and assessment program which assesses the impacts of the emissions from the facility on the nearby soil, plant tissue, surface water and storm water. The sampling and assessment program must adhere to the methodologies and criteria as outlined in the approved Soil, Plant Tissue, and Water Sampling Plan approved by the District Director on August 13, 2019 and must be conducted by qualified personnel.   | Information - Other |
| 01a, 01b, 02, 01c | November 30, 2030 | N/A   | <b>BACT Assessment Report</b><br>A written report of the assessment of best available control technology (BACT) for emissions from a zinc galvanizing facility. The assessment must adhere to the methodologies and criteria as outlined in the approved BACT Assessment Plan and must be conducted by qualified personnel.   | Information - Other |
| 01a, 01b, 02, 01c | February 28, 2021 | On or before February 28 for each subsequent year.      | <b>Complaint Summary Report</b><br>Written report summarizing all complaints regarding air emissions received directly by the Permittee for the previous calendar year from individuals in the neighbouring community. All complaints shall be anonymized and submitted along with a summary of any follow-up actions taken or proposed, including lab analysis reports of any collected sample material and analysis of ambient air quality monitoring data. The complaint summary report must adhere to the methodologies and criteria as outlined in the approved Complaint Management and Communication Plan. | Information - Other |
| 01a, 01b, 01c     | June 30, 2021     | On or before June 30 for each subsequent year.          | <b>Baghouse Report</b><br>Written report summarizing frequency and results of all inspections and maintenance carried out on the baghouses and dust collectors. The report shall also include any actions, taken or proposed, to solve identified problems.   | Baghouse            |

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| <b>EMISSION SOURCE</b> | <b>INITIAL DUE DATE</b> | <b>SUBSEQUENT DUE DATES</b>                     | <b>REQUIREMENT</b>  | <b>REPORT TYPE</b>     |
|------------------------|-------------------------|---|---|------------------------|
| Facility               | March 31, 2021          | On or before March 31 for each subsequent year. | <b>Principal Products and Raw Materials Report</b><br>Written report providing details of the types and amounts of principal products produced and principal raw materials used in the preceding calendar year.   | Materials and Products |
| 01a, 01b, 01c          | June 30, 2021           | N/A   | <b>Fugitive Emission Management Plan</b><br>Written Fugitive Emissions Management Plan (FEMP) that describes the works and procedures necessary for controlling fugitive emissions from the galvanizing kettle under all potential operational scenarios. The FEMP must be submitted to the District Director for review, comment, and written approval. Once approved, the FEMP may be updated by the permittee. Any updates are to be submitted to Metro Vancouver at least 6 months before the proposed change for review, comment, and written approval. The most recently approved FEMP will be the plan in force. | Information - Other    |

**C. AMENDED OR ADDITIONAL REQUIREMENTS**

Based on the results of the monitoring program, including the stack sampling results or any other information, the District Director may:

1. Amend the monitoring and reporting requirement of any of the information required by this Permit including plans, programs and studies.
2. Require additional investigations, tests, surveys or studies.

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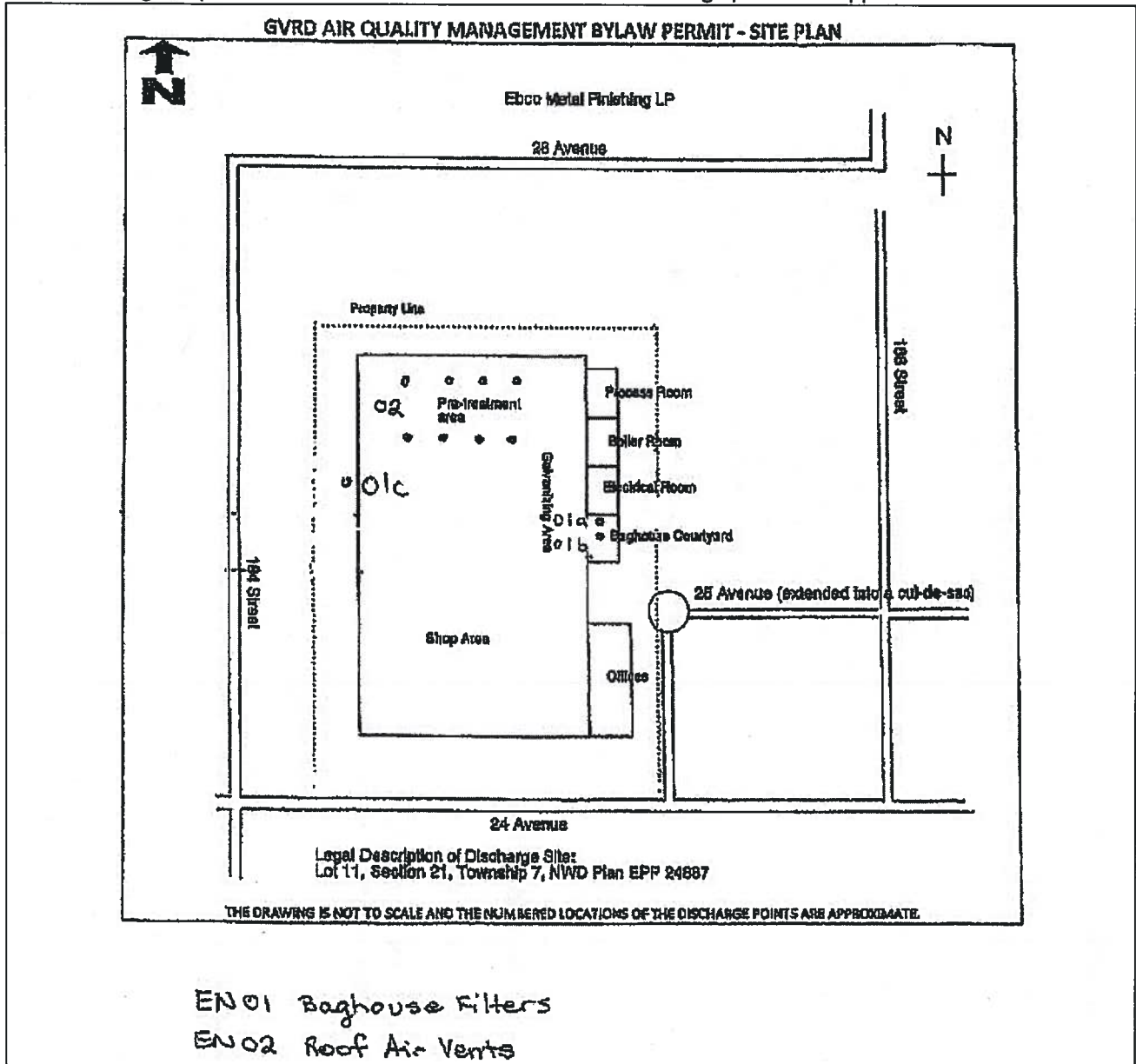
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**SECTION 4 – SITE PLAN**

LEGAL DESCRIPTION OF DISCHARGE SITE: Lot 11, Section 21, Township 7, NWD Plan EPP 24887

The following site plan is not to scale and the locations of the discharge points are approximate.



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*[Signature]*  
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