SWCAA
Southwest Clean Air Agency

11815 NE 99th Street, Suite 1294
Vancouver, WA 98682
(360) 574-3058
www.swcleanair.org

September 14, 2022

Hank Doane
10105 Mather Road
Clackamas, OR 97105

RE: Final Air Discharge Permit for Metal Recycling Facility

Dear Mr. Doane:

The public comment period for the preliminary determination to issue Air Discharge Permit 22-3531 (ADP 22-3531) in response to ADP Application CO-1050 concluded on September 4, 2022. The Southwest Clean Air Agency (SWCAA) did not receive any adverse comments from the public relative to the preliminary determination. Therefore, a final determination to issue ADP 22-3531 has been made pursuant to Section 400-110(4) of SWCAA's General Regulations for Air Pollution Sources. Electronic copies of ADP 22-3531 and the associated Technical Support Document are available for public review in the permit section of SWCAA's internet home page (http://www.swcleanair.gov/permits/adpfinal.asp). Original copies are enclosed for your files.

This Air Discharge Permit may be appealed directly to the Pollution Control Hearings Board (PCHB) at P.O. Box 40903, Olympia, Washington 98504-0903 within 30 days of receipt as provided in RCW 43.21B.

If you have any comments, or desire additional information, please contact me or Clinton Lamoreaux at (360) 574-3058, extension 131.

Sincerely,

Uri Papish
Executive Director

UP:cl

Enclosure: Technical Support Document and Air Discharge Permit 22-3531

SWCAA
Southwest Clean Air Agency

AIR DISCHARGE PERMIT
22-3531

Issued: September 14, 2022

PNW METAL RECYCLING
100 Paper Way, Longview, WA

SWCAA ID – 2734

CLINTON HILAIRE LAMOREAUX
STATE OF WASHINGTON
37640
REGISTERED
PROFESSIONAL ENGINEER

REVIEWED BY: _____
Clinton Lamoreaux, Chief Engineer

APPROVED BY: _____
Uri Papish, Executive Director

TABLE OF CONTENTS

1. Equipment/Activity Identification

ID No.	Equipment/Activity	Control Equipment/Measure
1	Shredder	Fabric filtration, regenerative thermal oxidizer, wet scrubber
2	Propane or Acetylene Torch Cutting	Wet suppression, surface cleaning
3	Material Handling	Wet suppression
4	Roads and Yard Surface (fugitive emissions)	Sweeping, wet suppression

2. Permit Requirements

The following tables detail the specific requirements of this Air Discharge Permit (ADP). In addition to the requirements listed below, equipment at this facility may be subject to other federal, state, and local regulations. The requirement number is identified in the left-hand column. The text of the requirement is contained in the middle column. The emission unit, equipment, or activity to which the requirement applies is listed in the right-hand column.

Air Discharge Permit 21-3500 is superseded in its entirety by this Air Discharge Permit.

Emission Limits

<table>
<tr><th>Req. No.</th><th>Emission Limits</th><th>Equipment/ Activity ID No.</th></tr>
<tr><td>1.</td><td>Facility-wide emissions must not exceed:

<table>
<tr><th>Pollutant</th><th>Emission Limit (tons per year)</th></tr>
<tr><td>VOC as C_3H_8</td><td>7.07</td></tr>
<tr><td>PM_{10}</td><td>41.27</td></tr>
<tr><td>$PM_{2.5}$</td><td>40.97</td></tr>
</table>

The emission factors presented in the Technical Support Document for this ADP must be used unless site-specific emission factors have been generated through source emissions testing.

Fugitive VOC, PM_{10}, and $PM_{2.5}$ emissions from the shredder must be calculated assuming a 95% capture efficiency unless a different capture efficiency has been documented to SWCAA's satisfaction.

Annual emissions shall be calculated using the emission factors presented in the Technical Support Document for this Air Discharge Permit unless more recent source test data has been collected.</td><td>Facility-wide</td></tr>
</table>

<table>
<tr><th>Req. No.</th><th>Emission Limits</th><th>Equipment/ Activity ID No.</th></tr>
<tr><td>2.</td><td>Emissions of toxic air pollutants from the shredder other than hydrogen chloride, hydrogen fluoride, and the pollutants listed in the table below, must not exceed the applicable small quantity emission rate listed in WAC 173-460 (as in effect August 21, 1998). For toxic air pollutants without a listed small quantity emission rate, emissions of that pollutant must not cause the acceptable source impact level (ASIL) listed in WAC 173-460 to be exceeded.

<table>
<tr><th>Pollutant</th><th>CAS #</th><th>Annual Limit (lbs. per year)</th></tr>
<tr><td>Arsenic and inorganic compounds as As</td><td>C7440-38-2</td><td>0.035</td></tr>
<tr><td>Beryllium and compounds as Be</td><td>7440-41-7</td><td>0.0073</td></tr>
<tr><td>Cadmium and compounds as Cd</td><td>7440-43-9</td><td>0.32</td></tr>
<tr><td>Hexavalent chromium compounds as Cr</td><td>7440-47-3</td><td>0.018</td></tr>
<tr><td>Nickel and compounds as nickel subsulfide</td><td>7440-02-0</td><td>0.60</td></tr>
</table>

Emissions from the shredder include both emissions discharged from the scrubber stack and fugitive emissions from the shredder building. Emissions from the scrubber stack must be determined from the most recent measurement of each pollutant from the scrubber exhaust. Fugitive emissions from the shredder building must be calculated assuming a particulate matter emission control efficiency of 99%, a volatile organic compound control efficiency of 98%, and a building capture efficiency of 95% unless a different capture or control efficiency has been demonstrated to SWCAA's satisfaction.

The emission factor presented in the Technical Support Document for this ADP must be used if site-specific relevant test data has not been collected for that pollutant. Annual emissions must be calculated by multiplying the pollutant emission factor in units of pounds per ton of material shredded by the amount of material shredded in that year.</td><td>1</td></tr>
</table>

<table>
<tr><th>Req. No.</th><th>Emission Limits</th><th>Equipment/ Activity ID No.</th></tr>
<tr><td>3.</td><td>Emissions from the Shredder Scrubber exhaust stack must not exceed:

<table>
<tr><th>Pollutant</th><th>Emission Limit (mass emissions, 1-hour average)</th><th>Emission Limit (concentration, 1-hour average)</th></tr>
<tr><td>NO_X</td><td>0.69 lb/hr</td><td>1.3 ppmvd</td></tr>
<tr><td>CO</td><td>1.40 lb/hr</td><td>4.3 ppmvd</td></tr>
<tr><td>VOC as C_3H_8</td><td>1.08 lb/hr</td><td>2.1 ppmvd</td></tr>
<tr><td>PM_{10}</td><td>3.21 lb/hr</td><td>0.005 gr/dscf</td></tr>
<tr><td>$PM_{2.5}$</td><td>3.21 lb/hr</td><td>0.005 gr/dscf</td></tr>
<tr><td>HCl</td><td>0.43 lb/hr</td><td>1.0 ppmvd</td></tr>
<tr><td>Total fluorides as HF</td><td>0.16 lb/hr</td><td>0.7 ppmvd</td></tr>
</table>

Compliance with the above limits must be determined using the test methods identified in Appendix A of the ADP. When data from these test methods is not available, other credible evidence, including the use of non-reference method test data, many be used to assess the compliance status of the facility.</td><td>1</td></tr>
<tr><td>4.</td><td>Emissions of PM_{10} from torch cutting, material handling, and yard and road fugitive emissions must not exceed the following:

<table>
<tr><th>Activity</th><th>Emission Limit (tons per year)</th></tr>
<tr><td>Torch Cutting</td><td>0.18</td></tr>
<tr><td>Material Handling</td><td>1.94</td></tr>
<tr><td>Yard and Road Fugitive</td><td>0.36</td></tr>
</table>

Annual emissions from torch cutting must be calculated by multiplying the number of man-hours of torch cutting by the emission factors provided in Section 6 of the Technical Support Document (TSD) for this ADP unless new emission factors are developed through source emissions testing, or an alternative methodology is specified or approved by SWCAA.

Annual emissions from material handling must be calculated by multiplying the amount of material handled by the emission factors identified in Section 6 of the TSD for this ADP and the average number of times the material is transferred unless new emission factors are developed and approved by SWCAA.

Annual emissions from yard and road fugitives must be calculated using the vehicle miles traveled and the methodology and assumptions identified in Section 6 of the TSD for this ADP. The number of vehicle trips, used to estimate vehicle miles traveled, may be estimated from the average load weight and the total annual material receipt volume.</td><td>2 - 4</td></tr>
</table>

Req. No.	Emission Limits	Equipment/ Activity ID No.
5.	Visual emissions from torch metal cutting must not exceed twenty percent opacity for more than three minutes in any one-hour period as determined in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400).	2
6.	With the exception of torch cutting, visual emissions from equipment and activities at the facility must not exceed zero percent opacity for more than three minutes in any one-hour period as determined in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400). The Permittee is not required to have Method 9 certified individuals on-site at all times. Method 9 observations are not required except during source emissions testing events and when visible emissions are observed from equipment or activities other than torch cutting and cannot be immediately corrected.	1, 3, 4

Operating Limits and Requirements

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
7.	Emission units and activities identified in this ADP must be maintained and operated in total and continuous conformity with the conditions identified in this ADP. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this ADP, including directing the facility to cease operations until corrective action can be completed.	Facility-wide
8.	Reasonable precautions must be taken at all times to prevent and minimize fugitive emissions from plant operations.	Facility-wide
9.	Operations that cause or contribute to a nuisance odor must use recognized good practice and procedures to reduce these odors to a reasonable minimum.	Facility-wide
10.	Each pollution control device must be operated whenever the processing equipment served by that air pollution control device is in operation. Further, the scrubber must be in operation at any time the regenerative thermal oxidizer is actively heated, including bake-out periods. Control devices must be operated and maintained in accordance with the manufacturer's specifications. Furthermore, air pollution control devices must be operated in a manner that minimizes emissions.	Facility-wide
11.	The following must be removed from vehicles or appliances prior to baling, shredding, or other destructive activities: (a) Fluids and refrigerants other than residual fluids remaining in tanks or systems; (b) Batteries; and (c) Mercury-containing switches and sensors. All materials must be removed, handled, and disposed of in accordance with applicable state and federal regulations.	Facility-wide

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
12.	The Permittee must not accept crushed automobiles unless the supplier can demonstrate that mercury-containing switches and sensors have been removed. The Permittee must receive a signed certification or contract from each supplier of crushed vehicles that states that all accessible mercury-containing switches and sensors are removed from the vehicles before they are crushed.	Facility-wide
13.	All mercury-containing switches must be removed from uncrushed automobiles received at the facility.	Facility-wide
14.	With the exception of the openings for the infeed and discharge conveyors, all openings to the building enclosing the shredder must remain closed during shredder operation except as necessary for ingress or egress. Curtains / skirting must be installed at the infeed and discharge conveyors to further minimize the possibility of fugitive emissions from these openings. Any area between the exterior frames of the infeed and discharge conveyors and the building must be covered to prevent airflow. Rubber skirting or equivalent may be used to satisfy this requirement. The shredder building must meet the requirements of EPA Method 204 as a permanent total enclosure.	1
15.	The flow through the shredder emission control system must be no less than 10% below the most recent flow at which compliance with the permanent total enclosure standards of EPA Method 204 have been demonstrated. The shredder emission control system flow monitoring system required by this ADP may be used to demonstrate compliance with this requirement.	1
16.	Prior to the initial source emissions test, the regenerative thermal oxidizer must be pre-heated to a minimum of 1,600°F before beginning shredder operation. Thereafter, the regenerative thermal oxidizer must be preheated to a temperature within the range of operating temperatures (1-hour average) at which compliance with the permitted emission limits was demonstrated during the most recent source emissions test.	1
17.	Prior to the initial source emissions test, the regenerative thermal oxidizer must be operated at a minimum of 1,600°F (1-hour average). Thereafter, the regenerative thermal oxidizer must be operated within the range of operating temperatures (1-hour average) at which compliance with the permitted emission limits was demonstrated during the most recent source emissions test.	1
18.	The scrubber liquid recirculation rate must be at least 870 gallons per minute.	1
19.	The scrubber pH must be maintained at 8.0 or above in the scrubber sump.	1
20.	The scrubber blowdown must be at least 2 gallons per minute (1-hour average).	1
21.	All torch cutting must be conducted at least 100 meters from the fenceline.	2
22.	Torch cutting of stainless steel or metal plated in nickel or chromium is prohibited.	2
23.	Torch cutting is only allowed for cutting metal items that cannot be otherwise processed with the hydraulic shears (e.g., ≥ 1″ thick steel).	2

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
24.	Smoke generation during torch cutting must be minimized by the use of best practices, including, but not limited to, the following: (a) Wiping excess dirt and oil from the area to be cut; (b) Removing any plastic coating from the material to be cut; (c) Removing any paint within at least 4 inches of a cutting line; (d) Placing the material to be cut, or choosing the cutting surface, such that the torch flame does not impinge on the ground; and (e) Utilizing wet suppression (fog or mist with Dust Boss DB-60 or equivalent) when cutting cable, cast iron and metal more than three inches thick.	2
25.	The total number of man-hours of torch cutting must not exceed 7,300 per year.	2
26.	The facility may not receive more than 1,600,000 tons of material per calendar year.	Facility-wide
27.	Wet suppression must be used as necessary in the process area, scrap piles, and conveyor transfer points to control fugitive dust during operations except as prohibited by other applicable rules (e.g., stormwater discharge rules).	3 - 4
28.	To control fugitive dust from roads and process areas, roads and process areas must be swept daily when in use or maintained wet when in use.	3 - 4
29.	The shredder may only operate between the hours of 5:00 a.m. and 9:00 p.m., Pacific daylight time.	1

Monitoring and Recordkeeping Requirements

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
30.	The shredder emission control system must be inspected prior to initial facility startup and at least once every 12 months thereafter. At a minimum, each inspection must include a visual inspection of the system ductwork, fabric filter system, regenerative thermal oxidizer, and wet scrubber.	1
31.	A system must be installed to monitor the relative flow rate through the shredder emission control system. Any system that produces a response proportional to exhaust flow satisfies this requirement. Systems utilizing Annubars or pitot tubes located upstream of the scrubber exhaust must be paired with temperature and pressure monitoring devices to compensate for changing temperatures or pressures. The temperature and pressure changes downstream of the scrubber will be assumed to be small enough to be neglected for the purposes of this requirement. The system outputs must be monitored continuously and the average recorded at least once for each hour of operation.	1

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
32.	The following information regarding the shredder and shredder emission control system must be collected continuously, recorded for each hour of operation, and readily available on-site for inspection: (a) The amount of material shredded (tons); (b) The regenerative thermal oxidizer operating temperature; (c) The differential pressure across the roll filter; (d) The differential pressure across the regenerative thermal oxidizer; (e) The scrubber recirculation rate; and (f) The pH of the scrubbing liquor. The following information regarding scrubber operation must be recorded at least once per operating day: (g) The scrubbing liquor recirculation rate; and (h) The differential pressure across the scrubber.	1
33.	The Permittee must perform daily inspections of the facility, including all points of potential particulate matter emissions, during daylight hours to identify and prevent potential emissions violations. Whenever visible emissions are observed from any source other than torch cutting, the opacity of the visual emissions must be measured for at least six minutes using SWCAA Method 9. For every individual opacity reading in excess of 0% opacity, the opacity of visual emissions must be read for an additional 6 minutes to a maximum total of 60 minutes or 13 individual readings in excess of the opacity standard, whichever is shorter. For the purposes of this requirement, each individual observation taken at 15-second intervals constitutes a "reading." Whenever fallout of particulate matter beyond the Permittee's property boundary, visible emissions in excess of the standard, or any other potential excess emissions are observed during the daily inspection or any other time, the Permittee must determine the source of the emissions. The Permittee must initiate corrective action within 2 hours of observing the excess emissions. The Permittee must determine whether the pertinent equipment is or is not experiencing a malfunction and whether all relevant air pollution control equipment is operating properly. Within 24 hours of initial discovery, the Permittee must resolve the operational problem, or notify SWCAA by the next working day of progress made in resolving the operational problem.	1, 3, 4

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
34.	At least once per calendar month, the Permittee must conduct and document an inspection of the torch cutting activities to confirm that the activities comply with the requirements of this ADP. At a minimum the documentation must include the following: (a) A description of the material being cut; (b) Whether the area being cut was free of excess dirt and oil; (c) Whether the material originally had a plastic coating, and if so, whether all plastic coating was removed prior to cutting; (d) Whether the material was painted, and if so, if the paint was removed from the cutting line; (e) Whether the torch flame was prevented from impinging on the ground; and (f) Whether wet suppression in the form of fog or mist was in use.	2
35.	The following information must be collected, recorded at the intervals specified below, and readily available on-site for inspection: (a) The total amount of material received must be recorded for each calendar year; (b) The total mass of materials processed through the shredder must be recorded for each calendar year; (c) The total number of man-hours of torch cutting must be recorded for each calendar year; (d) Signed contracts from each crushed vehicle supplier stating that mercury-containing switches and sensors are removed from the vehicles; (e) A log must be kept to document that all batteries, fluids, refrigerants, and mercury switches are removed from each uncrushed vehicle received; (f) The results of the inspections of the shredder emission control system must be recorded for each occurrence; (g) Upset conditions that cause excess emissions must be recorded for each occurrence; and (h) All air quality related complaints, including odor complaints, received by the permittee and the results of any subsequent investigation or corrective action must be recorded for each occurrence.	Facility-wide
36.	With the exception of data logged by a computerized data acquisition system, each record required by this ADP must include the date and the name of the person making the record entry, at minimum. If a control device or process is not operating, a record must be made to that effect.	Facility-wide
37.	All records required by this ADP must be kept for a minimum period of no less than three (3) years and must be maintained in a form readily available for inspection by SWCAA representatives.	Facility-wide
38.	Excess emissions and upset conditions must be recorded for each occurrence.	Facility-wide

Emission Monitoring and Testing Requirements

Req. No.	Emission Monitoring and Testing Requirements	Equipment/ Activity ID No.
39.	Adequate permanent and safe access must be provided to test ports at the scrubber inlet and outlet. The sampling locations must meet the following minimum requirements: (a) The sampling locations and test ports must meet the minimum requirements for sampling identified in 40 CFR 60, Appendix A, Method 1; (b) Sampling ports must be at be at least three inches in diameter; and (c) Adequate utilities must be available to accommodate source emissions testing.	1
40.	Source emissions testing of the shredder emission control system must be conducted in accordance with Appendix A of this Permit.	1

Reporting Requirements

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
41.	All air quality related complaints received by the Permittee must be reported to SWCAA within three (3) calendar days of receipt. Complaint reports must include the date and time of the complaint, the name and contact information (if available) for the complainant, the nature of the complaint, and any actions taken by the Permittee to address the complaint.	Facility-wide
42.	Excess emissions must be reported to SWCAA as follows: (a) As soon as possible, but no later than 12 hours after discovery for emissions that represent a potential threat to human health or safety; (b) As soon as possible, but no later than 48 hours after discovery for emissions which the Permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and (c) No later than 30 days after the end of the month of discovery for all other excess emissions.	Facility-wide
43.	Deviations from permit conditions must be reported no later than 30 days after the end of the month during which the deviation is discovered.	Facility-wide
44.	Upset conditions must be reported to SWCAA as soon as possible after discovery. The following are not considered upset conditions or permit deviations and are not required to be reported unless an excess emission is associated with the excursion: (a) A pH excursion lasting less than 10 minutes in duration in any 60 minute period and with a maximum deviation of less than ½ of a pH point outside the permitted pH limit; and (b) A flow excursion lasting less than 10 minutes in duration in any 60 minute period with a maximum deviation of less than 10% outside the flow limit.	1

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
45.	The following emissions related records must be reported to SWCAA by March 15th for the previous calendar year: (a) The total amount of material received; (b) The total amount of material shredded; (c) The total number of man-hours of torch cutting; (d) A certification that all batteries, fluids, refrigerants, and mercury switches were removed from vehicles; and (e) Air emissions of criteria air pollutants, volatile organic compounds, hazardous air pollutants (HAPs), and toxic air pollutants (TAPs).	Facility-wide

3. General Provisions

Req. No.	General Provisions
A.	For the purpose of ensuring compliance with this ADP, duly authorized representatives of the Southwest Clean Air Agency must be permitted access to the Permittee's premises and the facilities being constructed, owned, operated and/or maintained by the Permittee for the purpose of inspecting said facilities. These inspections are required to determine the status of compliance with this ADP and applicable regulations and to perform or require such tests as may be deemed necessary.
B.	The provisions, terms, and conditions of this ADP bind the Permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the Permittee.
C.	The requirements of this ADP survive any transfer of ownership of the source or any portion thereof.
D.	This ADP must be posted conspicuously at or be readily available near the source.
E.	This ADP will be invalidated, in whole or in part, if construction or installation of any new or modified equipment has not commenced within eighteen (18) months from date of issuance, if construction is discontinued for a period of eighteen (18) months or more without prior SWCAA approval, or if construction is not completed within a reasonable time.
F.	This ADP does not supersede requirements of other Agencies with jurisdiction and further, this ADP does not relieve the Permittee of any requirements of any other governmental Agency. In addition to this ADP, the Permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
G.	Compliance with the terms of this ADP does not relieve the Permittee from the responsibility of compliance with SWCAA General Regulations for Air Pollution Sources, previously issued Regulatory Orders, RCW 70A.15, Title 173 WAC or any other applicable emission control requirements, nor from the resulting liabilities and/or legal remedies for failure to comply.
H.	If any provision of this ADP is held to be invalid, all unaffected provisions of the ADP will remain in effect and be enforceable.

Req. No.	General Provisions
I.	No change in this ADP will be made or be effective except as may be specifically set forth by written order of the Southwest Clean Air Agency upon written application by the Permittee for the relief sought.
J.	The Southwest Clean Air Agency may, in accordance with RCW 70A.15 impose such conditions as are reasonably necessary to assure the maintenance of compliance with the terms of this ADP, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Appendix A
Emission Testing Requirements
Shredder Emission Control System

1. Introduction:

a. The purpose of this testing is to evaluate the shredder emission control system and quantify emissions from the system.

2. Testing Requirements:

a. Source emissions testing of the shredder control system must be conducted within 60 days of initial startup and no later than the end of June every five years thereafter. The use of an alternative test schedule or method must be pre-approved by SWCAA in writing.

b. A comprehensive test plan must be submitted to SWCAA for review and approval at least 10 business days prior to testing.

c. SWCAA must be notified of the test date at least 5 business days prior to testing.

Unless an alternative methodology has been approved in writing by SWCAA, testing for each constituent must consist of a minimum of three sampling runs using the test methods and durations listed in the tables below.

Location: Scrubber Outlet
Condition: Lowest RTO Operating Temperature

Constituent / Parameter	**Test Method or Equivalent[1]**	**Minimum Test Run Duration**
Stack gas velocity, flow rate	EPA Methods 1 and 2	N/A
O_2 and CO_2 concentrations	EPA Method 3A	60 minutes
Stack gas moisture content	EPA Method 4	60 minutes
Filterable PM	EPA Method 5	60 minutes
Condensable PM (initial test only)	EPA Method 202	60 minutes
NO_X	EPA Method 7E	60 minutes
CO	EPA Method 10	60 minutes
Compounds listed in Table 1 of EPA Compendium Method TO-15	EPA Compendium Method TO-15	Target ~60 minutes (integrated sample)
VOC	EPA Method 25A/18[2]	60 minutes
10 largest TICs[3]	EPA Method 18 (GC/MS)	N/A
HCl and HF	EPA Method 26A	60 minutes
Opacity of Emissions	SWCAA Method 9	6 minutes + 6 additional minutes for each reading in excess of the standard up to a total of 60 minutes.
EPA Method 29 metals (Sb, As, Ba, Be, Cd, Cr, Co, Cu, Pb, Mn, Hg, Ni, P, Se, Ag, Tl, Zn)	EPA Method 29 except that EPA Method 30B may be used for Hg	60 minutes

Appendix A
Emission Testing Requirements
Shredder Emission Control System

2. Testing Requirements: (continued)

Location: Scrubber Outlet
Condition: Highest RTO Operating Temperature

Constituent / Parameter	Test Method or Equivalent[1]	Minimum Test Run Duration
Stack gas velocity, flow rate	EPA Methods 1 and 2	N/A
O_2 and CO_2 concentrations	EPA Method 3A	20 minutes
Stack gas moisture content	EPA Method 4	20 minutes
NO_X	EPA Method 7E	20 minutes

Location: Shredder Building

Constituent / Parameter	Test Method or Equivalent[1]	Minimum Test Run Duration
Permanent total enclosure	EPA Method 204	N/A – Single determination per testing campaign

[1] The use of an alternate or equivalent test method must be pre-approved in writing by SWCAA.

[2] The use of Method 25A with a "methane cutter" is acceptable to determine the VOC concentration. Alternatively, methane and ethane concentrations measured by Method 18 may be subtracted from the total hydrocarbon concentration measured by Method 25A to determine the VOC concentration. When using Method 25A, results must be reported as propane.

[3] Tentatively Identified Compounds (TICs): Gas chromatography / mass spectroscopy must be used to tentatively identify, and approximate the concentration of, the ten organic compounds (other than CH_4) that, based on the analysis, appear to be in the greatest abundance in the sample.

Tests conducted more than three months before the required due date will not satisfy the periodic source emission testing requirement without prior written approval from SWCAA.

Appendix A
Emission Testing Requirements
Shredder Emission Control System

3. Source Operation:

a. A complete record of production related parameters applicable to the testing, including but not limited to the following must be kept during emissions testing to correlate operations with emissions and must be recorded in the final report of the test results:

1. Shredding infeed rate and composition
2. Shredder water injection rate (total water use if the only meter is for the total water delivered to the shredder itself and infeed and discharge chutes)
3. Differential pressure across the roll filter
4. Regenerative thermal oxidizer operating temperature
5. Differential pressure across the regenerative thermal oxidizer
6. Scrubber pH
7. Scrubber recirculation rate
8. Scrubber blowdown rate
9. Scrubber differential pressure (pressure drop across the scrubber)

b. Source operations during emissions testing must be conducted at the most challenging of the intended operating conditions. In general, this would involve testing at the maximum shredding rate and operating the scrubber at the lowest pH, recirculation rate, and blowdown rate. The regenerative thermal oxidizer must be operated at the lowest and highest temperature setpoints at which it will be operated (as indicated in Section 2) until the next source emission test.

Appendix A
Emission Testing Requirements
Shredder Emission Control System

4. Reporting:

The results of all required testing must be submitted to SWCAA within 45 days of test completion. Unless otherwise directed by SWCAA, a single hard copy of the report and an electronic copy (e.g., portable document format (.pdf)) of the report must be submitted. Each report must include:

a. A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.
b. Time and date of the test and identification and qualifications of the personnel involved.
c. A summary of results, reported in units and averaging periods consistent with the applicable emission standard or limit.
d. A summary of control system or equipment operating conditions.
e. A summary of production related parameters.
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
h. Copies of all field data and example calculations for all calculations performed.
i. Chain of custody information.
j. Calibration documentation.
k. Discussion of any abnormalities associated with the results.
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

5. Changes to Testing Requirements:

The source test must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the testing schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.