Chemical Waste Management of the Northwest
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2030 phone
(541) 454-3247 fax

June 26, 2020

VIA E-MAIL ONLY

Mr. Thomas Rhodes, Source Test Coordinator
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232

RE: Chemical Waste Management of the Northwest, Inc., (CWMNW)
Second Source Test Plan Response

Dear Mr. Rhodes,

CWMNW, SCS Engineers (SCS), and Blue Sky Environmental (Blue Sky) have reviewed the Oregon Department of Environmental Quality (ODEQ or Department) Source Test Plan (STP) comment letter, dated June 5th, 2020. CWMNW is providing the following responses regarding the issues that ODEQ requested be addressed. CWMNW is submitting a revised source testing plan with the amendments as described below.

Task Methods General Comments
Isokinetic method descriptions will be updated to include the reference to "quartz" glass probe. CWMNW has reviewed the detection limits and sample volumes to ensure they meet the minimum volumes specified in your comment letter.

CWMNW understands that ODEQ approval is required prior to testing, and CWMNW is modifying our procedures and supplies to accommodate ODEQ requests. However, some of the requested procedures are difficult to implement, and CWMNW is requesting approval of the following alternative testing and sampling methods:

- Hydrogen Chloride (HCL) will be the only Hydrogen Halide tested;
- Use of a 2-part quartz probe liner/nozzle with ground glass to glass slip fit connections;
- Testing for certain compounds that do not meet the 5 times detection limits;
- Partially testing of the Polycyclic Aromatic Hydrocarbons (PAHs) and Derivatives in OAR 340-245-8020, Table 2; and
- Use of the 2% factor to calculate the Hexavalent Chrome.

As you know CWMNW in good faith voluntarily agreed to perform a source test of the ORU-2 and TOU-1 unit after a competitor made unfounded, spurious and inflammatory statements with regard to the TOU emissions in several venues. CWMNW is concerned that the department is requesting testing requirements that are complex, in some cases unachievable, costly, and in some cases provide data with little value or, in the case of hexavalent chromium testing, potentially erroneous data.

Furthermore, our sister facility CWM Louisiana (CWMLA), is permitted and operates a similar unit, treating similar materials, without any requirement to perform a source test when running these similar materials.

The following are responses intended to address the Department's specific comments

1. EPA Method 5 (M5)

    a. M5 Allows the Use of Quartz Glass Nozzle and Probes:

        Please see the response provided in item 2, b.

    b. ODEQ Source Test Sampling Manual Specifies M5 Detection Limit as 3mg:

        The Detection Limit proposed was 0.8 mg, which is consistent with the U.S. Environmental Protection Agency (EPA) M5 limit of 3mg. The detection limits are listed in Appendix C. Particulate Matter is at the bottom of the page as 800 ug/sample or 0.8 mg. There is no target limit for Particulate that CWMNW is aware of for this toxic risk assessment.

        Consequently, CWMNW will report using the detection limit of 3 mg

    c. Minimum Sample Volume Must Be Greater Than 31.8dscf:

        Our sample volume minimum shall be equal or greater than the referenced 31.8 dscf. Our typical target sample rate for isokinetic sampling is 0.6 to 0.65 CFM or 36 - 39 CF/hour.

        Consequently, no changes to the current protocol are required

2. EPA Method 26A (M26A)

    a. Test for All Hydrogen Halides including Hydrogen Bromine (HBr) and Hydrogen Fluoride (HF):

        Our April 27, 2020 source test plan specifies testing for only Hydrogen Chloride. HBr and HF were not included. HBr and HF are not expected in the exhaust since brominated and fluorinate compounds are not part of the feedstock. In fact, brominated and fluorinated compounds are only found in a few select industries and wastes from those industries are prohibited from being processed by the Organics Recovery Unit. The proposed waste feed is limited by our RCRA Part B permit to wastes from the petroleum refining, transportation and pipeline industry sectors with recoverable oil; thus, no brominated or fluorinated compounds are likely to be present. However, due to the unfounded allegations by our competitor surrounding chlorinated compounds, CWMNW has agreed to test to be transparent and forthcoming.

        Consequently, CWMNW is not making changes to the protocol on this point and request the Department approve sampling and testing for HCL only.

b. M26A Specifies Quartz Glass and One-Piece Nozzle and Probes:

To accommodate the Department's request for using one-piece probes, CWMNW is required to have probes specially manufactured for this test. Industry practice is to use the two-piece probes with ground-glass slip-fit connections. Two-piece probes give the technician the flexibility to select the correct nozzle size in the field, to use one-piece probes. Multiple one-piece probes will be needed to accommodate different nozzle sizes. This costly addition, approximately $12,000, will require 6-8 weeks to procure, which will delay the test, unless the two-piece probe is approved as an alternative.

Consequently, CWMNW is requesting approval of the use of the 2-piece probes, which are commonly used for source testing throughout the country.

c. ODEQ Source Test Sampling Manual Specifies at Least Five Times the Detection Limit:

Times/volumes can be designed for 5 times the desired target limits, but some methods cannot be concentrated by sampling larger volumes or longer times or they are not likely to be present in the exhaust. Sampling with SUMMA canisters does produce some dilution of the sample and if high levels of some compounds are present this can require additional dilution and raise the detection limit. CWMNW can only estimate the detection limit for TO-15 because of these considerations.

Consequently, CWMNW has noted in the STP the 5 times detection limits and indicated which parameters may not meet the limit because the compounds are not present in the exhaust.

3. EPA Method 29 (M29)

a. M29 Allows the Use of Quartz Glass Nozzle and Probes:

Please see response provided in 2.b.

4. EPA Method 23 (M23)

a. M23 Allows the Use of Quartz Glass Nozzle and Probes:

Please see response provided in 2.b.

b. Methylene Chloride Rinse Not Required:

CWMNW has updated the STP to remove this rinse.

c. Testing for All PAHs and Derivatives in OAR 340-245-8020, Table 2:

Our STP dated April 27, 2020 proposed the poly aromatic hydrocarbons (PAH) parameters that are commonly completed by laboratories performing Method 23. CWMNW contacted four laboratories, Bureau Veritas, Vista, AAC & ALS, and they cannot perform all the PAH and PAH derivatives parameters listed in OAR 340-245-8020, Table 2. Additionally, the labs confirmed that the standards are not readily available for all these parameters. Thus, CWMNW is requesting a waiver from testing for the full PAH and PAH derivatives listed in Table 2 and allow testing for only PAHs listed in the new M23. If ODEQ knows of laboratories performing Method 23 for all the PAHs and PAH derivatives listed, please provide their contact information.

Consequently, CWMNW has put a reasonable effort into this, and request that ODEQ approve the partial list contained in the STP.

d. ODEQ considers 120 dscf sample volume to be the minimum:

CWMNW agrees to increase the source test run time to 4 hours to attain the 120 dscf, provided ODEQ agrees with the use of zero for the non-detects in the risk analysis.

Consequently, the STP has been updated to reflect the four-hour testing.

5. SW846 Method 0061

a. ODEQ Recommends Using Method 306 or 100% of the Total Chromium:

CWMNW cannot agree to the use of Method 306 for the flare as this method is not technically approved (per EPA discussion) for flare emission testing, has not been validated which makes the results suspect, and is known for providing improper results on sources other than the chrome plating industry. CWMNW believes that attempting to use a hexavalent chromium method will provide results that are unrealistic, and that calculating hexavalent chromium based on 100% of the total chromium is far too excessive.

OAR 340-245-8040, Table 4 Risk-Based Concentrations, footnote D states that "…In the absence of data indicating otherwise, assume that any total chromium (i.e., unspeciated) that is measured or modeled is entirely in the hexavalent form." However, CWMNW have presented data in our April 27, 2020 source test protocol. That data was a report that provides a 2% factor for the hexavalent chromium. The data was published scientific study by the National Risk Management Research Laboratory in RTP of the effect of high temperature incineration and flaring specifically address the formation of Hexavalent Chromium at high temperature and clearly indicate that 2% of Total Chromium is converted into Hexavalent. Robin Segall and staff (EPA-RTP) advice was to use EPA 29 to measure total Chromium and base the Hexavalent Chromium on the 2% factor.

Additionally, CWMNW have now found more EPA data to support for the use of the use of 2% of total chromium factor. See pages 63-65 of the *Report Laboratory and Field Evaluations of Methodology for Determining Hexavalent Chromium in Emissions from Stationary Sources* that show the conversion of hexavalent chrome from trivalent chrome is at most 1.1% for rotary kiln incineration.

Again, CWMNW are proposing using the total chromium results from Method 29 and calculating the hexavalent chromium as 2% of the total chromium. These data sources supports the use of the 2% calculation from the total chromium, and CWMNW are again CWMNW are requesting approval of this as an alternative as a practical and scientifically supported basis for performing the CRVI risk assessment which is allowed under OAR 340-245-8040, Table 4, footnote D.

Consequently, no changes have been made to the STP on this point.

6. EPA Method TO-15
    a. ODEQ Allows the Use of TO-15:

        CWMNW agrees, CWMNW will use the TO-15 method, and if any toxic compound exceeds 1 ppm, CWMNW will re-test with EPA Method 18. Our flame ionizing instrument, used to perform EPA Method 25A/ALT097, will indicate if there is any likelihood of individual hydrocarbons exceeding 1 ppm. Please note that many of the chemicals that could be present from this source do not have available standards that can be used with Method 18 which could limit the extent CWMNW are able to do so.

        Consequently, The STP has been updated to include Method 18 testing for any toxic compounds over 1ppm

7. Feed Analysis Test Methods
    a. Listed Test Parameters Should Match Methods:

        CWMNW have amended the methods list to show EPA Method 3050/6010 and 8270 for metals, and EPA Method 8260 for Benzene, Toluene, Ethylbenzene and Xylene (BTEX), and remove the other method references.

8. Page 6 & 12, Metals List for Waste Feed Matching Exhaust List
    a. Feed Metals List Should Match Exhaust List:
        CWMNW understand and have revised the STP to add the additional metals Al, Co, Cu, Mn & P so that the waste feed matches the exhaust metals list.

9. Page 10, Amount of Organics Recovered
    a. Record the Amount of Organics Recovered:

        It is not possible to record or determine the volume or amount of organics recovered in this process.

As discussed previously, based mainly upon the delivery time in item 2b above and other items that need your approval, CWMNW have delayed the test originally scheduled for June 29 until CWMNW receive an approved Source Test Protocol from the Department. Please be aware that consistent with the Governor's directive, Center for Disease Control and Occupational Safety and Health Agency mandates relating to COVID-19, CWMNW is continuing to limit facility access to only company employees and essential contractors. As a result, unless the Governor lifts the distancing restrictions and CWMNW safety personnel lift the company facility access restrictions, CWMNW will need to restrict visitors viewing the testing to a safe number and visitors will be required to pass through the CWMNW COVID-

19 visitor protocols. Additionally, all visitors accessing the active areas are required to complete an on-line safety course, have at least 24hour HAZWOPER certification, and bring evidence of respirator fit testing.

CWMNW look forward to continuing to work with you and the Department on this project and will schedule the source test once the Department has issued approval of the plan. CWMNW has included a revised STP with the amendments as described above Should you have any questions or concerns please contact me at jdenson@wm.com or by phone at 602-757-3352.

Sincerely,

James L. Denson Jr.
PNW/BC Environmental Protection Manager