Chemical Waste Management of the Northwest
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April 30, 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) 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 comment letter, dated March 9th, 2020. We are providing the following comments regarding the issues that ODEQ requested be addressed and changes, which have been incorporated into the attached revised source testing plan for the Department's review.

***General Comments***

We have reviewed Section A-1 of the *Source Sampling Manual* and included (6) applicable statements on page 3 of the source test plan, added additional source descriptions in Section 2.0, and made other appropriate revisions to the test plan.

The detection limits for each test method and pollutant were evaluated for different run times and volumes of sample matrix and stack gas. We have increased run times for selected parameters to improve detection limits. A detailed analysis of the proposed detection limits is presented in Appendix C of the revised test plan, which provides the test method, pollutants, sampling times, sample volumes and new method detection limits.

***Specific Comments***

1. Page 1 – Correct Permit Number. The permit number for the facility has been revised in the test plan.

2. Page 3 – Method 306 and ODEQ's suggested use of Method 061. CWMNW respectfully disagrees with using Method 061 due in part to the high operating temperatures in the Thermal Oxidizer Unit (TOU), and the difficulties that Method 061 presents, which may lead to inaccurate results. We consulted United States Environmental Protection Agency (EPA) staff at the Measurement Technology Group, who agrees that the Method 061 is a difficult if not impossible method to test for hexavalent chromium in this instance. As an alternative to Method 306 and Method 061, we propose using the total chromium results from Method 29 and calculating the hexavalent chromium as 2% of the total chromium. This is a practical and

scientifically supported alternative for determining hexavalent chromium emission rates. The revised test plan includes more details on this testing method and provides email correspondences with the EPA staff and a link to documents supporting the use of 2% of total chromium.

3. Page 3 – Method 25C and ODEQ's request for Method 25A. We previously selected EPA Method 25C because it is widely used for hydrocarbon laden biogas and an effective method. However, since it is applicable only to 40 Code of Federal Regulations (CFR), Part 60, Subpart WWW facilities, we are proposing as an alternative EPA Method 25 for Non-Methane Hydrocarbon Compounds (NHMCs). Method 25 uses essentially the same equipment and analysis (except a trap is used in Method 25). We did not select EPA Method 25A for Total Hydrocarbon (THC), which is based upon Flame Ionizing Detector (FID) instrument, sampling in a Tedlar bag and testing for Methane by Method 18. The FID approach is complicated by the different response factors for the individual volatile organic compound (VOC) species in the expected stack mix of numerous different VOCs.

4. Page 3 – TO-15 and ODEQ's request for Method 18. Although EPA Method TO-15 is used as an ambient air method, the TO-15 method is widely used method for stationary sources as it is reliable and accurate. We commonly use it on landfill gas (LFG), biogas, and composting emissions where a large and diverse group of toxic species are expected. From our experience, it is the most common method in use for analyzing stack emissions for toxic VOCs. We request ODEQ reconsider the use of TO-15. The TO-15 method is also more appropriate than Method 18 in this case since we are using the data as part of the toxics risk assessment. The TO-15 method will provide more data and specific toxic compound concentrations near the part per trillion detection level versus general carbon compound data at higher concentrations. In addition, many of the chemicals that could be present from this source due not have available standards that can be used with Method 18. Additionally, the letter from ODEQ dated August 8, 2019 initially recommended using TO-15.

5. Page 3 – One-hour methods and ODEQ's request for longer run times. We have revised the proposed run times based upon the method detection limits, and revised Methods 29 & 23 as three-hour runs. We added a summary of the test methods, pollutants, the sampling times, sample volumes and method detection limits in Appendix C of the attached revised test plan.

6. Page 4 – One-hour Hexavalent Chromium method and ODEQ request for longer run times. We have removed the hexavalent chromium test and method from the revised test plan as we are proposing the use of the total chromium result and the 2% factor, as explained in Item 2 and listed in the revised test plan.

7. Page 4 - Inlet waste gas flow and ODEQ's request for Method 2. We have revised the test plan to include Method 2C.

8. Page 6 - Chlorine ($CL_2$) and Bromine ($Br_2$) were not proposed but requested by ODEQ. CWMNW respectfully disagrees with adding these two compounds since the waste processed are refinery tank bottom sludge and other wastes from the petroleum, refining, transportation and pipeline sections, which do not contain chlorinated and brominated compounds.

9. Page 6 - EPA Method 29 and ODEQ request to add aluminum and vanadium. The past tense references have been revised. Analyses will be completed for aluminum and vanadium, as well

as the entire Method 29 list of metals. Analytical detection limits for these EPA Method 29 parameters are included in Appendix C, which was added to the revised test plan.

10. Page 7 - Hexavalent chromium and ODEQ's request for Method 061. We have removed the hexavalent chromium test and method, as we are proposing to use total chromium and the 2% factor explained in Item 2 above and in the revised test plan.

11. Page 7 - Method 23 for Poly Aromatic Hydrocarbons (PAHs) and ODEQ's request for modified Method 23. The method description has been revised to specify separate analysis of the impingers for PAH compounds as described in the Modified Method 23 procedures. In addition, the list of PAH compounds have been included in Appendix C.

12. Page 8 – Non-Methane Organic Compounds (NMOCs) and ODEQ's request for a method description. The NMOCs test has been revised to a NMHC test using EPA Method 25. A description of the NMHC method has been added to the test plan. In addition, testing for speciated VOCs will be performed by Method TO-15, as discussed in Item 4.

13. Page 9 - Waste Feed Material Description and Documentation. The waste proposed for processing at the Organics Recovery Unit #2 (ORU2) will be Resource Conservation and Recovery Act (RCRA)-exempt - petroleum refinery tank bottom sludges and other wastes generated from the petroleum, refining, transportation, and pipeline sectors. These wastes are profiled and characterized to ensure they meet established waste acceptance criteria. Additionally, documentation for the waste feed analytical data was included in our December 2019 Emission Inventory Submittal, in the Excel file under the tab, "Building B-5". For the purpose of this test, this waste stream will prepared in batches in Building B-5 to provide sufficient materials for the duration of the test. The batches will be weighed, sampled and loaded into the feed hopper at the normal feed rate. Feed samples will be collected at 15-minute intervals for 1-hour runs and at 30-minute intervals for 3-hour runs. Samples taken for the runs will be composited for testing.

14. Page 9 - Process Data. The following process data will be collected during the runs:
    a. Time,
    b. Thermal Destruction Unit (TDU) feed rate,
    c. TOU temperature,
    d. TDU propane flow rate.

15. Page 9 - Laboratories. The final air testing laboratory selection will be provided for ODEQ review and approval prior finalizing the source test plan.

16. Page 9 - Final Report Deadline. We appreciate the ODEQ allowing for a deadline of 60 days following the completion of the source test.

17. Page 10 - Proposed Timeline and inlet NMHC & outlet total hydrocarbons (THC). The proposed timeline has been updated in the test plan with the revised test methods and sample durations. The inlet NMHC and outlet THC testing will be performed simultaneously.

We look forward to proceeding with the test on June 29 based on the revisions summarized above to the test plan. Please be aware that consistent with the Governor's directive, Company, CDC and OSHA mandates relating to COVID-19, CWMNW is limiting 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 not be able to accommodate any agency visitors during the testing campaign. If that is problematic for ODEQ, we should discuss moving the testing date to a time when all access restrictions have been lifted. Unfortunately, we are not able to estimate when that will be at this time. Please contact me at 602-757-3352 or at jdenson@wm.com should you have any questions.

Sincerely,

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

CC ;
Thomas Wood, Stoel Rives via E-mail
Facility File