



December 19, 2014

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Attn: Docket ID No. EPA-R05-OAR-2014-0280

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SGS North America, Inc.
Strata-G, LLC
TestAmerica Laboratories, Inc.
TRC Environmental Corporation
URS Corporation
Verantis Environmental Solutions

The Coalition for Responsible Waste Incineration (CRWI) appreciates the opportunity to submit comments on Veolia ES Technical Solutions draft Title V Permit. CRWI is a trade association comprised of 25 members. Veolia ES Technical Solutions and Eli Lilly and Company are members of CRWI.

EPA Region 5 is proposing to make major changes to Veolia's Title V permit. CRWI has concerns about a number of issues in the draft permit. The major themes of our concerns are:

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ACADEMIC MEMBERS

(Includes faculty from:)

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Lamar University
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New Jersey Institute of Technology
University of California – Berkeley
University of Dayton
University of Kentucky
University of Maryland
University of Utah

- As required in the draft permit, the multi-metals instrument is a continuous emissions monitor (CEMs), not a continuous parameter monitoring system (CPMS);
- § 63.1209(g)(2 and section 114 of the Clean Air Act do not give Region 5 the authority to require CEMs;
- Title V permits are not supposed to include new “applicable requirements;”
- Region 5 has made a number of statements in the Statement of Basis that are unsubstantiated, misleading, and/or incorrect, giving the false impression that multi-metals CEMs are “commercially available” and have been demonstrated on hazardous waste combustors; and
- There are no promulgated performance specifications for a multi-metals CEMs.

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Specific comments on each of the issues listed above and additional issues are attached. Thank you for the opportunity to comment on this draft Title V permit. If you have any questions, please contact me at (703-431-7343 or mel@crwi.org).

Sincerely yours,



Melvin E. Keener, Ph.D.
Executive Director

cc: CRWI members
J. Mooney – EPA

Specific Comments

1. As required in the draft permit, the multi-metals instrument is not a continuous parameter monitoring system (CPMS) but a continuous emissions monitor (CEM).

At the bottom of page 53 of 79 of the Statement of Basis, Region 5 attempts to characterize the installation, calibration, and operations of the Xact™ multi-metals instrument as required in this draft permit as a CPMS instead of a CEMs. Right above this statement, Region 5 discusses the requirements in the Portland Cement MACT where a PM CEMs is used as a CPMS as a way of justifying using CEMs as a CPMS. However, there are significant differences in what is required in the Portland Cement MACT rule and what is being required here. First of all, there is a promulgated performance specification (PS-11 and Procedure 2 – January 12, 2004, 69 FR 1,786) for PM CEMs. Despite the fact that there is a promulgated performance standard for PM CEMs, an affected Portland Cement source is required to install a PM CEMs but is not required to calibrate that instrument. The requirement in this rule is to develop a “not to exceed” signal (measured in mA) during performance testing (78 FR 10,019, February 12, 2013). This is significantly different from the requirements in the Veolia draft permit where “The Permittee shall install, calibrate, maintain and operate an x-ray fluorescence multi-metals CEMS for use as a continuous parametric monitoring system (CPMS)...” Draft permit page 34 of 172. Further down that page, the permit requires that “each multi-metals CEMS shall measure and report the total concentrations (regardless of speciation) of the following metals in both their vapor and solid forms in the exhaust stream: arsenic, beryllium, cadmium, chromium, lead and mercury.” To “measure and report,” each CEMs will have to be calibrated. Although the draft permit explicitly states that the facility is not required to calibrate against Method 29, it is impossible to get an accurate concentration without a calibration. Once calibrated, that instrument is not a CPMS but a CEMs. Region 5 cannot overcome this problem by simply stating that

a multi-metals CEMs will be used as a CPMS. A fully calibrated instrument is a CEMs. Neither § 63.1209(g)(2) nor section 114 of the Clean Air Act allows the Agency to require a CEMs for the purposes stated in the Statement of Basis.

2. Region 5 does not have authority under § 63.1209(g)(2) to require the installation or operation of a CEMs.

On page 53 of the Statement of Basis, Region 5 states that “EPA interprets 40 C.F.R. § 63.1209(g)(2) as providing EPA with authority to require additional monitoring related to parametric monitoring.” The Agency is correct that § 63.1209(g)(2) gives them the authority to require “additional or alternative operating parameters” on a case-by-case basis. However, there is nothing in this paragraph that gives them the authority to require a CEMs. In fact, the first part of § 63.1209(g) restricts this section to “Alternative monitoring requirements other than continuous emissions monitoring systems (CEMS).” If that were not enough, § 63.1209(g)(1)(i) states that “For requests to use additional CEMS, however, you must use paragraph (a)(5) of this section and § 63.8(f).” This indicates that for a facility wanting to use a CEMs, they must use the authority under § 63.1209(a)(5) to do so, not any authority under § 63.1209(g). Paragraph (a)(5) allows the facility to petition the Administrator to use CEMs as a compliance tool rather than operating parameter limits but does not give the Administrator authority to require the facility to install or operate a CEMs. Thus, that request has to come from the facility – not be initiated by the Agency.

We believe that § 63.1209(g) is intended to allow the Administrator to impose additional monitoring requirements on the facility if it is determined that they are needed. There is no mention of CEMs in this paragraph. This paragraph specifically mentions “additional or alternative operating parameters” and “alternative approaches to establish limits on operating parameters.” § 63.1209(g)(2) allows the Administrator to impose additional operating parameters (even gives the example of opacity for PM) but does not give the Administrator the authority to require a facility to install and operate a multi-metal CEMs. This determination is also required to be on a case-by-case basis and cannot be based on a policy to require all combustors to install CEMs. This can only be done through a properly noticed rulemaking.

We believe that the regulatory language is clear that § 63.1209(g)(2) does not give Region 5 the authority to require a CEMs. But as a further check, we examined the preamble language in proposed and final rules, technical support documents, and response to comment documents to seek clarification.

In the Hazardous Waste Combustor (HWC) MACT proposed rule (69 FR 21,198, April 20, 2004), § 63.1209(g)(2) is mentioned 3 times in the preamble all on the same page (69 FR 21,346). The first describes using § 63.1209(g)(2) to set a maximum pH limit. The second and third (footnote 282) are general statements that § 63.1209(g)(2) can be used to require additional or alternate limits. The only mention of § 63.1209(g)(2) in the preamble of the final rule (70 FR 59,429, October

12, 2005) describes the use of the authority to require a source to precondition a sample train. The Technical Support Document for the 2005 rule (Volume 4) mentions the use of § 63.1209(g)(2) four times. The first (page 2-14) is a general statement that § 63.1209(g)(2) can be used to specify “additional or alternative requirements.” The second (page 4-14) discusses additional limits on minimum nozzle pressure to ensure adequate liquid atomization. The third (8-3) and fourth (8-4) suggests additional operating parameter limits on batch feeding operations. The only mention of the use of § 63.1209(g)(2) in the Response to Comment Documents (Volume 3, page 249-250) again discusses maximum pH limits.

Every reference in the regulations, preambles, technical support document, and response to comments document pertains to using § 63.1209(g)(2) as the authority for requiring additional or modified operating parameters. There is no mention of using this section to require installing or operating a CEMs. Thus, we do not believe that § 63.1209(g)(2) provides Region 5 the authority to require a facility to install and operate a multi-metals CEMs.

3. Region 5 does not have authority under section 114 of the Clean Air Act to require the installation or operation of a CEMs.

Also on page 53 of the Statement of Basis, Region 5 states that “Additionally, section 114(a) of the Act, 42 U.S.C. § 7414(a), provides EPA with authority to require ‘enhanced monitoring’ as necessary to carry out any provision of the Act.” This section of the Clean Air Act gives EPA the authority to gather data for three broad purposes. These purposes are:

- a. the development of implementation plans under sections 110 and 111 or standards under 111, 112, or 129;
- b. an enforcement action of an implementation plan or standard; or
- c. to carry out any provisions of this Act.

However, the stated purpose of the proposed multi-metals CEMs is not to determine whether Veolia is in violation of the HWC MACT emissions limits, but to assess whether the established OPLs, which are themselves designed to ensure that the Veolia facility will not exceed the HWC MACT emissions limits, are sufficient. Statement of Basis at 53 of 79. Only the third of the three purposes of section 114(a), therefore, could potentially support the CEMs requirement. Region 5, however, does not identify why installing multi-metals CEMs is necessary for the purpose of “carrying out” any provision of the Act or cite to a provision of the Act being carried out.

In addition, the permit provision of the Act, section 504(a), does not support the requirement to install a multi-metals CEMs. 42 U.S.C. § 7661c(a). Section 504(a) is a general requirement that operating permits contain “such other conditions as are necessary to assure compliance” and not specific authority to require a multi-metals CEMs. In fact, 42 U.S.C. § 7661c(b) explicitly states that “continuous emissions

monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance.” The HWC MACT contains sufficient requirements to insure continuous compliance with its metals emissions limits.

In summary, we believe that the Agency does not have the authority under either section 114 of the Clean Air Act or § 63.1209(g)(2) to require the installation or operation of any type of CEMs.

4. It is inappropriate to use a Title V permit to require a facility to install a multi-metals CEMs.

A Title V permit should be a compilation of emissions limits, monitoring requirements, and reporting requirements that are developed as a part of the regulations for that source category. Title V permits do not impose new substantive air quality control requirements, referred to as “applicable requirements.”¹ See 57 FR 32,250, 32,251. Thus a Title V permit can only contain “applicable requirements,” which are defined to include the specific standards and requirements of the regulations for that source category. Title V permits are not required to include new requirements (like a multi-metals CEMS) that is not already an applicable requirement. 40 C.F.R. § 71.6(a)(1). In addition, 40 C.F.R. § 71.6(a)(3), which deals with monitoring and related recordkeeping and reporting requirements, only requires a Title V permit to contain “All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements” and the draft permit contains all relevant monitoring provisions from the HWC MACT. A multi-metal CEMs is not required under the HWC MACT. We do not believe it is proper to use the Title V process to add entirely new requirements, especially where the Agency has not provided adequate justification.

5. It is not appropriate to require Veolia to fund a research and development project for multi-metals CEMs.

As outlined in the Statement of Basis and dictated in the draft permit, Veolia will be required to install, calibrate, and operate a multi-metals CEMs for at least one year. After the Agency is satisfied with the data gathered, the facility will be allowed to either remove the instrument or petition the Agency to allow it to continue to use this instrument to demonstrate compliance. To CRWI, this appears to be a thinly disguised research and development project. In addition, it seems unfair to impose the entire cost of the project on Veolia. If the instruments were inexpensive and everyone knew how to make them work, requiring them may not be such a big deal. However, an Xact multi-metals CEMs is not an inexpensive instrument. Cooper Environmental Services estimates that the purchase price is approximately \$250,000 per unit and the cost for the tape is approximately \$50,000 per year per unit. See EPA-R05-OAR-2014-0280-0039. If the instrument purchase and tape costs were

¹ The term “applicable requirement” is defined in 40 C.F.R. § 71.2.

the only costs, it would require Veolia to spend close to a million dollars for the three instruments. However, this number does not reflect the actual cost the facility will incur to install and operate these instruments. CRWI estimates that actual cost will be much higher. In addition to the instrument and tape, the sample transport system will cost approximately \$100,000 per unit, the sample probe will cost approximately \$50,000 per unit, the construction of a CEMs hut that may require tie in with the site safety systems (e.g., lower explosion limit, oxygen, and carbon dioxide monitors) will cost approximately \$150,000, and installation of a transformer to provide clean power for the Xact unit and to provide power for heated lines will cost approximately \$50,000. The development of the data acquisition system, the flagging of good or bad data, averaging, and storing the data on the historian will require approximately \$300,000. If three instruments are required, this cost would be approximately \$100,000 per instrument. These estimates add up to \$750,000 per instrument. For this type of project, the installation and validation of the infrastructure and hardware must meet state codes (OSHA) and all software development must be verified in the field. Companies typically apply a 1.3 factor to cover these expenses. This would give an estimated cost per instrument of \$975,000 for installation and getting them to work. All of this assumes that the instruments can be calibrated without the use of a stack test. Operating the instruments would require at least 2 full time senior technicians (approximately \$110,000 per person per year) with access to two additional technicians when starting up and calibrating the instruments. CRWI believes that the total costs to install, calibrate, and operate three multi-metals CEMs for at least a year as required in the draft permit will be above \$3 million. We believe that requiring this level of expenditure is unfair given the fact that the requirement to install the multi-metals CEMs is, in essence, a research project.

CRWI believes that the Agency has already developed a much better way to do this type of project. In the early discussions of the HWC MACT rule, EPA funded a project at DuPont Experiment Station to evaluate the accuracy and robustness of six PM CEMs.² In this endeavor, the vendors supplied the instruments, DuPont supplied the facility, and EPA funded the stack testing and general oversight of the project. Should Region 5 want to demonstrate the effectiveness of multi-metal CEMs, this seems like a better model than requiring the facility to pay all of the costs. In fact, the Federal Technology Transfer Act (www.epa.gov/osp/ftta.htm) sets up a mechanism to do this. The Agency has used this mechanism in the past and we see this as a better method of demonstrating the efficacy and reliability of these instruments over time.

6. Region 5 has made a number of statements on multi-metal CEMs that are unsubstantiated, misleading, or incorrect.

In the Statement of Basis, the Agency makes several statements for which no support or documentation is provided. In addition, there are a number of statements

² Particulate Matter CEMS Demonstration, Draft report in three volumes, EPA Contract 68-D2-0164, Work Assignment 4-02, prepared by Energy and Environmental Research Corporation, February, 12, 1997

that are either incorrect or misleading. The statements that have no supporting documentation are listed below.

- “The uncertainties caused by feedstream analysis can be largely resolved when a well-maintained and operated CEMS is used to identify deviations from emissions limitations that may result from inaccurate or insufficient feedstream analysis.” (Statement of Basis at 56)
- “Without a CEMS, most emission excursions from combustion of such heterogeneous feedstreams would go undetected.” (Statement of Basis at 57).

The Agency has not provided any documentation or citations to show these statements to be correct. The courts have stated (*Northeast Maryland*, 358 F.3d at 954) that EPA must provide proof of its statements, not just make unsupported assertions. If these statements were correct, one would assume that multi-metals CEMS would be required in a number of the recent combustion MACT rules. However, it is not required in any of them.

In addition, the Agency makes a number of statements that are either incorrect or misleading.

- a. “Multi-metals CEMS are commercially available and have been demonstrated to be reliable for measuring mercury and other metal emissions from hazardous waste combustors.” (Statement of Basis at 59).

In 61.13(e)(1)(i), the regulations for using audit samples defines the term “commercially available” to mean “that two or more independent AASPs [accredited audit sample provider] have blind audit samples available for purchase.” In EPA-R05-OAR-2014-0280-0082, a Cooper Environmental Services representative states that “We have known competition for the ambient market in China from FPI and Skyray (both Chinese companies). We have also heard that FPI produces a multi-metals CEMS but cannot confirm this. We have no known competition outside of China.” While the definition of “commercially available” is for the sample audit program, it is still within Agency’s jurisdiction and it appears disingenuous for Region 5 to claim that a multi-metals CEMs is “commercially available.”

One Xact unit has been installed and operated for an extended period of time at one hazardous waste combustor, the combustor at Evonik’s (formerly Lilly) Tippecanoe Laboratories. Due to frequent maintenance issues, equipment failure, and a software failure that could not be repaired, that Xact unit is no longer operable. See EPA-R05-OAR-2014-0280-0101. Evonik made the decision not to purchase another Xact unit based on a cost benefit analysis, the metals concentration in their waste was low and did not vary significantly, and because they had problems with the sampling train that would require additional funds to resolve. In addition, three units have been purchased by the Army but

none of them have ever been used to show compliance with the HWC MACT. Thus, the part of the statement that these units have been demonstrated is also misleading.

- b. “EPA has performed side-by-side evaluations of multi-metals CEMS with EPA Method 29 of Appendix A–8 to 40 C.F.R. Part 60 at industrial waste incinerators and found good correlation between the two methods. 75 Fed. Reg. 31962 (June 4, 2010).” Statement of Basis at 59.

This reference is from the proposed CISWI rule. The preamble to the proposed CISWI rule states:

EPA believes multi-metals CEMS can be used in many applications, including CISWI. EPA has monitored side-by-side evaluations of multi-metals CEMS with EPA Method 29 of appendix A–8 of 40 CFR part 60 at industrial waste incinerators and found good correlation. EPA also approved the use of multimetals [sic] CEMS as an alternative monitoring method at hazardous waste combustors. EPA believes it is possible to adapt proposed PS–10 (Specifications and Test Procedures for Multi-metals Continuous Monitoring Systems in Stationary Sources) of appendix B of 40 CFR part 60 or other EPA performance specifications to allow the use of multimetals [sic] CEMS at CISWI. We request comment on the appropriateness of using multi-metals CEMS instead of initial performance tests coupled with PM CEMS and other surrogates. The procedures used in proposed PS–10 for the initial accuracy determination use the relative accuracy test, a comparison against a reference method. EPA is taking comment on an alternate initial accuracy determination procedure, similar to the one in section 11 of PS–15 using the dynamic or analyte spiking procedure.

While the statement above is in the proposed rule, the final rule did not require multi-metals CEMS. In the preamble of the final rule, EPA made the following statements in response to comments about including multi-metal CEMS.

[EPA] Response: For the operations and facilities subject to the rule, we believe that the combination of periodic compliance emissions testing and continuous monitoring of operational and parametric control measure conditions is appropriate for assuring ongoing compliance. The rule allows a source owner or operator to install and operate CEMS in lieu of some testing and parametric monitoring requirements. This process requires source owners to propose site-specific monitoring plans for approval. These plans would include CEMS PS and periodic QA/QC steps to assure the quality of the alternative monitoring data. Currently, EPA has the requisite CEMS PS for Hg monitoring systems and not for multiple metals CEMS.

(76 FR 15,736, March 21, 2011)

John Cooper (the developer of the Xact technology) submitted extensive comments supporting the use of the Xact multi-metals CEMS. EPA's responses to comments document is EPA-HQ-OAR-0119-2494. EPA's responses to Mr. Cooper's comments with page numbers are below.

[EPA] Response 5 [page 1074]. At this time, EPA does not have promulgated performance specifications for multimetal [sic] CEMS and thus the final rule does not contemplate a requirement to use such monitoring or address these monitors directly. See preamble Section III.C. for a discussion on the testing and monitoring requirements in the final rule. See also response to EPA-HQ-OAR-2003-0119-1133.2, excerpt 12.

[EPA] Response 12 [page 1072]. We recognize and agree that an integrating multiple metals CEMS operates in a manner fundamentally different than the instrumental metals CEMS for which draft Performance Specification 10 was developed. Since EPA does not have a published performance specification for metals CEMS, instrumental or integrating, the source owner must prepare a site-specific monitoring plan in order to apply the metals CEMS option. The monitoring plan need not imitate existing CEMS performance specifications (e.g., sampling frequency) but should be structured to address those characteristic operations of the CEMS selecting [sic] the operating principle and associated QA/QC procedures.

In addition, the New York Department of Environmental Conservation (DEC) submitted a short comment opposing the use of multi-metals CEMS. They state, "The DEC believes that multi-metals and PM CEMS are inadequate to indicate the complex nature of incinerator emissions." [page 1078]. EPA responded:

For the operations and facilities subject to the rule, we believe that the combination of periodic compliance emissions testing and continuous monitoring of operational and parametric control measure conditions is appropriate for assuring ongoing compliance. The rule allows for the source owner or operator to install and operate continuous emissions monitoring systems in lieu of some testing and parametric monitoring. This process requires source owners to propose site-specific monitoring plans for approval. These plans would include CEMS performance specifications and periodic quality assurance and quality control steps to assure the quality of the alternative monitoring data. Currently, EPA has the requisite CEMS performance specifications for mercury monitoring systems and not for multiple metals CEMS.

While the statement at the beginning of this section is an accurate quote from the proposed CISWI rule, the inclusion of the statement in the preamble does not mean that the statement is correct. In fact, in the final rule, EPA declined to require multi-metals CEMS in spite of extensive comments submitted by the developer of the Xact system. The rationale EPA provided was that the Agency

had not promulgated a performance standard. It should be pointed out that Other Test Method (OTM) 16 and OTM 20 already existed at the time EPA made the decision not to require multi-metal CEMs in the CISWI rule. Since the Agency did not recognize OTM 16 and OTM 20 as valid performance specifications when they responded to Mr. Cooper's comments on the CISWI rule, they cannot now use them in Veolia's circumstance.

- c. "Although performance specifications for multi-metals CEMS have not yet been subjected to a formal rulemaking process, EPA has published specifications and quality assurance procedures for the multi-metals CEMS in its website as OTM 16 (Specifications and Test Procedures for X-ray Fluorescence Based Multi-Metals Continuous Emission Monitoring Systems at Stationary Sources) and OTM 20 (Quality Assurance Requirements for X-Ray-Fluorescence Based Multi-Metals Continuous Emission Monitoring Systems at Stationary Sources).⁶⁴" Statement of Basis at 61. (Footnote omitted, it is a website reference for the two OTMs.)

EPA acknowledges that OTM 16 and 20 are not promulgated performance specifications. When CRWI suggested that EPA use published OTMs for HCl monitors in the Portland Cement MACT reconsideration rule, the Agency declined to use these specifications giving the following reasons:

Other Test Methods (OTM 22 and 23) were provided on our website for evaluation and/or use by the stakeholder community and to encourage development of field test data supporting the procedures described in these methods. Significant improvements and additions to these OTM procedures are necessary before they will meet EPA's HCl CEMS performance specification requirements. EPA's efforts to prepare and distribute a technology neutral Performance Specification embraces the key components of OTM 22 and 23. If a facility manager believes that there is an alternative procedure that can better meet the HCl compliance monitoring requirements in this rule, they always have the option to submit it as an alternative test method under 63.7(f) as previously mentioned.

EPA-HQ-OAR-2011-0817-0846, page 78.

In at least two rulemakings, EPA declined to use OTM during the rulemaking or declined to require CEMs because there was no promulgated performance specification for that instrument. We believe that it is disingenuous at best for Region 5 to say that performance specifications and quality assurance procedures are now available for multi-metal CEMs. If a facility had asked to install such a CEMs, the Agency would require it to submit an alternative monitoring application and the process of approving that application would take several years. It is inconsistent that the Agency would simply decide that these two OTMs are now adequate without any additional review of the specific circumstances associated with the Veolia site.

- d. Region 5 set forth in its Statement of Basis (at footnote 60, page 61 of 79) that: “The U.S. Army has also successfully installed and evaluated a multi-metals CEMS on one of its hazardous waste incinerators. Hay *et al.* (2005). EPA also understands that the U.S. Department of Defense has purchased three Xact™ units for use at army munitions incinerators.”

Region 5 made the same statement in the 2013 draft permit. At that time, CRWI pointed out that it was correct that the Army purchased three Xact units, but that none has ever been used to show compliance with the HWC MACT. CRWI asked Army personnel the current status of the multi-metals CEMS at their facilities. Their responses are below.

Tooele Army Depot research and development furnace: This unit only operates from time to time to establish new "recipes" for new feed items. It's actually not covered by any of the site permits, as long as it stays under a certain number of hours of operation. We've never tested it for HWC MACT and it isn't included in the NOC. I would not consider this a realistic example of multi-metal CEMS operating on a daily basis.

Tooele Army Depot production furnace: This unit was operational on the furnace for a period of time. They no longer operate the CEMS on the unit. I think once they finished up the prove-out for Cooper, it was shut down.

Crane Army Ammunition Activity production furnace: It was installed, has been started up for an initial qualification, then shut down, and has never been used.

EPA asked Cooper Environmental Services to respond to our comment. Cooper's responses are below (EPA-R05-OAR-2014-0280-0082).

2. U.S. Army – Tooele UT munitions test furnace – It operated periodically at this facility as the U.S. Army tested procedures for burning different types of munitions.
3. U.S. Army – Tooele, UT production furnace. The Xact was installed at this facility but was never operated because regulations were never required for it.
4. U.S. Army – Crane, IN production furnace. The Xact was installed at this facility but was never operated because regulations were never required for it.

Since the first round of comments and responses, we have learned that the instrument at Crane was mounted but the sampling system was never installed. Without the sample system, this unit could not operate.

The statements in the Statement of Basis leave the impression that the Xact units are or have been successfully operated at three Army sites. These assertions are simply not correct.

- e. “Yanca *et al.* evaluated both the Xact™ and the QAG using a modified EPA Method 301 at a hazardous waste combustor by comparing measured and reference aerosol concentrations. The authors found that both the Xact™ and the QAG met the Method 301 validation criteria with precisions and accuracies on the order of 5 percent over a wide range of concentrations.⁵⁷” Statement of Basis at 60.

Footnote 57 is an incomplete citation to the Yanca paper. This statement is accurate for the operating conditions and the flue gas conditions at the Evonik hazardous waste combustor. However, this has not been verified at any other facility. It should be noted that the sampling system currently used by the Xact is not the same system as was used at Evonik. If the facility were requesting an alternative monitoring application to install a multi-metals CEMs, the Agency would require that the facility prove that the QAG (Quantitative Aerosol Generator) would work on a different sampling system before they would approve such an application. Here, Region 5 is simply assuming that the QAG would work the same way using a different sampling system.

- f. Footnote 61. “EPA’s Emissions Measurement Center (EMC), located within the Office of Air Quality Planning and Standards (OAQPS), has also recently evaluated the use of the multi-metals CEMS technology for ambient fence-line multi-metals monitoring for compliance determinations, ambient health exposure studies, and for locating and evaluating unknown sources of metals emissions. In 2010-2011, EMC deployed the Xact™ 625 fence-line multi-metals monitor at two sites in Ohio in coordination with EPA Region 5, EPA Office of Research and Development (ORD) and Ohio EPA. The Xact™ 625 reports hourly ambient air metals concentrations in near real-time, which allows for faster data acquisition and decision making over conventional filter-based monitoring methods. EPA’s Ohio studies show excellent comparability between the Xact™ 625 and conventional, filter-based, metals monitoring methods.” Statement of Basis at 61.

This is not a valid comparison. Ambient air monitoring is relatively simple due to the temperature and humidity profiles of the ambient air matrix. Flue gas sampling at high temperature, highly variable moisture content, and variable flow rates pose totally different problems. It is much more difficult to get a consistent flue gas sample to the instrument. Thus, any comparison of sampling the flue gas of a hazardous waste combustor to ambient air monitoring ignores too many variables to be valid.

In summary, Region 5 has made a number of statements that are unsubstantiated, misleading, or incorrect in an effort to show that multi-metals CEMs are off-the-shelf instruments that can simply be purchased and easily placed on a stack. The facts

are that an Xact unit was intermittently operated at one hazardous waste combustor for a number of years. Due to frequent maintenance issues, equipment failure, and software problems, the facility removed the CEMs from service permanently in 2011. While Xact units were installed at three Army facilities, they were never used to comply with the HWC MACT. In addition, these instruments are expensive, custom built, and require a great amount of resources to install, calibrate, maintain, and operate. Ultimately after the facility spends considerable amounts of money on the Xact unit, it may fail to provide the data expected. Installing and operating a multi-metals CEMs would take several years to accomplish. It would take several more years to gather data and to determine whether that data is an accurate representation of what is emitted from the stack. EPA has not promulgated a performance standard for multi-metals CEMs and until it does so, these instruments cannot be used for compliance purposes without an approved alternative monitoring application. CRWI does not see how Region 5 can justify the expenditure of resources for a “research project” when it has been established that other methods – namely those required in the existing HWC MACT regulations – can be used to show compliance.

7. A CEMs cannot be used for compliance unless it has a promulgated performance specification or unless the facility submits and the Agency approves an alternative monitoring application.

EPA has not promulgated a performance specification for a multi-metals CEMs. Without a performance specification, there is no vetted methodology for establishing the accuracy, precision, and proper QA/QC for an instrument. Without knowing the precision and accuracy of the instrument, it is nearly impossible to understand the value of the data generated by that instrument. In addition, the Agency cannot use this instrument for compliance unless it approves an alternative monitoring application. It should be noted that the facility has not submitted such an application. Finally, the courts (*Portland Cement Association v. Ruckelshaus*, 480 F.2d 375, 396 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974)) have made it clear that compliance can only be shown using the same methods used to develop the standards. Since Method 29 was used to develop the data used to set the metals standards in the HWC MACT, Method 29 is the only way a facility can show compliance unless the Agency approves an alternative monitoring application.

8. OTM 16 and 20 are site-specific methods and may not be applicable to Veolia’s operations.

OTMs 16 and 20 were written specifically for Lilly’s (now Evonik) source and instrument. While they would provide a starting place for another facility to develop their own site-specific method, one cannot assume that either could be used at another facility without significant modification. For example, the sample transport system in OTM 16 provides for a protocol for including the sample transport system into the instrument validation using either dynamic spiking of known gases or comparison to another method (instrumental or reference, Method 29, filters/tubes

and Ohio Luminex, etc.). This was written specifically for the Lilly system using a Sigrist sampling system. It is not at all clear that an appropriate sample transport system could be designed and developed for Veolia's stack gas conditions or the sampling system currently used by the Xact. Lilly spent considerable time and resources in developing both the laboratory and stack data underlying these methods. It is also not clear whether this instrument would tie into Veolia's daily operations, alarms, and QA/QC procedures. It is likely that these two OTMs would need extensive work before they would be usable for the conditions in Veolia's stack.

In addition, there is a good chance that the current QAG will not be able to produce quantitative mass of metals in the ranges required to calibrate/test the Xact. The QAG operates as a dynamic spiking into the probe/sample loop of the Xact system. Operation of this unit is dependent on the type of probe used, the flow in the sample loop, and gas conditions. Lilly spent a year developing this device to present the mass of metals specific to its sample loop (flow/moisture, etc.). A similar amount of time would be necessary for the development of a QAG for the Veolia site.

9. Non-detects should be reported at the detection level and not at the reporting limit.

When developing the HWC MACT rule, CRWI suggested that standards should be based on the reporting limit instead of the detection level. The Agency rejected that argument and used non-detect values (where appropriate) when developing the 2005 permanent replacement standards. Region 5 now proposes to use the reporting limits instead of the detection levels when reporting non-detects. While CRWI continues to consider the reporting limit as the only defensible number at or near the detection level, for the HWC MACT rule to operate as intended, the reporting method has to be the same as was used to develop the standards. Region 5 cannot require Veolia to report non-detects at the reporting limit when the Agency failed to use this same methodology when developing the HWC MACT rule. Further, if Region 5 requires Veolia to use the reporting limits, emission values would be inflated and potentially create compliance issues where none actually exist. This also places Veolia in the untenable position of certifying the accuracy of EPCRA (Emergency Planning and Community Right-to-Know Act) reports when they know that the reported data overstates the amount of actual emissions.

10. Region 5 cannot use a one-hour block average as an indicator of a deviation.

In the draft permit under paragraph (x) (page 36 of 172), any one-hour block average CEMs reading above any parametric range is a deviation. In paragraph (iii) (page 35 of 172), the draft permit defines the "parametric range for each metal or class of metals measured by the multi-metals CEMS is equal to the emission limit for that metal or class of metals specified in condition 2.1(A)(7) of this permit." Section 2.1(A)(7) is the emission limitations as specified in the HWC MACT. If finalized as drafted, paragraph (x) would effectively require that the facility be in compliance with the HWC MACT metals limitations on a one-hour block average CEMs reading

instead of a 12-hour rolling average as defined in § 63.1209(n). While a deviation is not defined as a violation of the standards, it does require a number of responses that include analyzing the feed stream data for the waste burned at the time and the combustion conditions at the time to determine why the deviation occurred, taking corrective action (stop feeding waste, reduce feed rates or adjustment of the combustion conditions) to reduce emissions, and sending a report within 30 days. CRWI believes that basing a “deviation” on a one-hour block average is clearly more restrictive than is the HWC MACT requirements in § 63.1209(n). Since the Agency has not justified this increase in stringency, we do not believe that it is allowed.

11. The installation of the Xact will require the facility to comply with both a CEMs and a feedstream analysis plan.

In paragraph (ii) of the draft permit (page 34 of 172), if the facility installs a multi-metals CEMs that is incapable of measuring any of the specified metals, the facility is required to create a “CEMs like” estimate of the emissions using the metals feedrate, the system removal efficiency, and stack gas data. Since the Xact cannot measure beryllium, the facility will be required to have both a multi-metals CEMs and all of the normal requirements of the HWC MACT requirements. As a consequence, the facility must operate under the worst of both worlds. They will need a Feedstream Analysis Plan, real-time feedrate monitoring, and OPLs for metals, even assuming that the facility is able to get the CEMs to operate perfectly. This is not fair.