

Cleaner Air Oregon

# Comments from Cleaner Air Oregon Advisory Committee Members on April 4, 2017 Meeting Topics



<b>Commenters</b>	<b>Date Submitted</b>
Jessica Applegate and Katharine Salzmann	March 2, 2017
Diana Rohlman, Susan Katz and Jessica Nischik-Long	April 11, 2017
Kathryn VanNatta	April 11, 2017
Linda George	April 14, 2017
Jessica Applegate and Katharine Salzmann	April 17, 2017
Huy Ong, Jo Ann Hardesty, Mark Riskedahl and Mary Peveto	April 19, 2017
Jae Douglas	April 19, 2017
Lisa Arkin	April 20, 2017
Susan Anderson	April 20, 2017
Jessica Applegate and Katharine Salzmann	April 21, 2017
Tom Wood	April 21, 2017
Steven Anderson	May 11, 2017

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**From:** Eastside Portland Air Coalition  
**To:** [WESTERSUND Joe](#)  
**Cc:** [PALERMO Jaclyn](#)  
**Subject:** A few details for CAO  
**Date:** Thursday, March 02, 2017 7:10:34 PM

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Hello,

Since drafting of the new Cleaner Air Oregon rules has begun, we would like to highlight a couple of things we think are important and don't want overlooked or lost in the traditional complexities:

We request that the Cleaner Air Oregon rulemaking include:

- 1.) Mandatory toxics reporting that requires a *full materials balancing* to be updated *every five years* [includes facilities designated *de minimis*]. Firmly grounded in the Polluter Pays approach to environmental regulation, materials balancing is a cost effective way for DEQ to identify hot spots for further assessment and prioritize limited monitoring resources.
- 2.) Used oil re-refineries and recyclers [*and their products*] that produce air emissions must be included in the rulemaking.
- 3.) Stationary diesel engines and generators must be included in the rulemaking. It may be a reasonable idea to define "stationary" to include trucks that sit in place idling for a designated period of time.
- 4.) We would like a provision in the new rules for citizens to seek relief in state court for violations of any regulations designed to protect our health, our air, our environment should the DEQ be unable to proceed with enforcement in a timely manner. For example:

Any person may commence a civil action against any other person alleged to be in violation of any statute, regulation or ordinance which is designed to prevent or minimize pollution, impairment, or destruction of the environment. The action may be for injunctive or other equitable relief to compel compliance with a statute, regulation or ordinance, or to assess civil penalties for the violation as provided by law. The action may be commenced upon an allegation that a person is in violation, either continuously or intermittently, of a statute, regulation or ordinance, and that there is a likelihood that the violation will recur in the future.

Thank you for your work on this important rulemaking,

Jessica Applegate, CAO Advisory committee, EPAC

Katharine Salzman, CAO AC alternate, EPAC

[Eastside Portland Air Coalition](#)

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Oregon Public  
Health Association

## Oregon Public Health Association

818 SW Third Avenue, #1201, Portland, OR 97204  
[www.OregonPublicHealth.org](http://www.OregonPublicHealth.org)

April 11, 2017

Dear Jackie and Claudia,

We greatly appreciate the chance to be part of this monumental Cleaner Air Oregon undertaking. The April 4<sup>th</sup> meeting was excellent at laying out the proposed draft framework. Below we have briefly summarized some of our main points, and then organized our points by program element.

First, we would like to address a comment that has come up before in these meetings, which is the belief that employment leads to health. While there is a definite correlation between the two, this is not a causative relationship. Having a job leads to a salary which leads to the financial ability to go to a doctor and buy medications to treat symptoms and invest in healthy behaviors – increased access to affordable health care is the causative agent in improving health, not the job itself. To believe that a job alone results in a healthier person does a disservice to the impacted individuals. In 2006, the World Health Organization estimated that the environment contributed up to 24% of the global burden of disease (Prüss-Üstün A, Corvalán C. *Preventing disease through healthy environments: Towards an estimate of the environmental burden of disease*. France: World Health Organization, 2006). This is a misleading statement and, as another member pointed out, would become inaccurate if healthcare were universally available.

Secondly, we applaud the proposed framework for how it incorporates a health protective viewpoint. To that end, we request that when calculating cumulative risk for an area, the cumulative risk include the risk coming from sources that are classified as *de minimis*. We understand the need for having the *de minimis* rating, but then that data should be utilized. This is also protective of environmental justice communities, which may have a higher incidence of both industrial, permitted sources and industrial *de minimis* sources, which could result in a very high cumulative area risk.

Thirdly, for such a program to be health-protective and protective of environmental justice communities, we ask that the committee revisit the proposed Element 9, wherein if an area is said to be above the cumulative area risk, that no further action against pre-existing sources would be taken. We understand that all facilities may be in compliance on a per-source basis, but that may still lead to a non-compliant area. As a result, there may be a risk to human health. We would suggest the committee brainstorm ways to reduce area risk when it rises above the cumulative area risk.

Below are comments specific to the discussed Program Elements:

Program Element 1-2 – *no concerns or clarifications*

Program Element 3: Categorical exemptions

*Note:* It is our understanding that these exemptions will be based on currently existing categorical exemptions

Program Element 4: Air toxics included in the program – *Concerns noted:*

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1. Will the reporting data be made publicly available? How will DEQ and OHA use this data? We agree it should be collected, but the use of the data should be clarified. For example, will the data be used to show what the most prevalent types of air toxics are emitted by industry?
2. By collecting this data, will retrospective risk be monitored, as it is by Cal OEHHA (every 4 years)?
3. What is the process for moving a toxic from the reporting list to the permitting list? This should be very clear regarding steps necessary and the associated timeline for such a process.
4. Why is the International Agency for Research on Cancer not listed as an authoritative body?

Program Element 5: Method for setting regulatory health risk-based concentrations – *Concerns noted:*

1. Why is the International Agency for Research on Cancer not listed as an authoritative body?
2. There are many other European Agencies with useful, science-based health standards that could be utilized. Relying on ATSAC or other small US agencies/departments may be restrictive and time-consuming.
3. The Southwest Clean Air Agency has an online tool for identifying RBCs. Would this tool be used or adapted to provide RBCs for permitted industry to use? How will industry easily access and utilize the RBCs? If a change is made to an RBC, how will industry be made aware of these changes?
4. The element states that “anyone could propose that a new toxic air pollutant be added to the list if they can show that there is enough toxicity information to develop an RBC.” The type and quality of toxicity data should be specified that would be considered “enough” to propose an addition to the list.
5. As stated in the meeting, there should be a way to add new toxics to the list in the face of strong evidence outside of the 3 year updates. For example, if a new air toxic is discovered to be a Group 1 human carcinogen 6 months after the most recent update, it does not make sense to continue emissions until the next meeting. The rules for initiating an ad hoc update should be specific to the specific toxic in question, and there should be stringent requirements regarding the toxicological data. For example, there are longitudinal bio-monitoring studies that may provide strong evidence, or even long-term, controlled animal studies that may indicate human health risk. What are the parameters that will be set that maintain “enough toxicity information to develop an RBC”?

Program Element 6 – 8 – *no concerns or clarifications*

Program Element 9: Cumulative risk from multiple facilities in an area – *We strongly agree with this approach, yet have the following requests for clarification:*

1. How would an ‘area’ be determined?
2. If a cumulative risk for an area is set, how will this information be used? In the meeting, it was clarified that if an area is at the limit or above, no new industry nor industrial expansion would be approved. However, it appeared that if an area was above the limit, there would be no steps to reduce all industrial emissions to reduce the cumulative risk. One of the central tenets of Cleaner Air Oregon is to proceed with an environmental justice lens. The proposed approach is not protective of environmental justice communities, as it would allow cumulative risk to stay high if the industry already exists. It ‘grandfathers in’ existing pollution.
3. There should be strong guidelines for setting cumulative risk in an area, and procedures for reducing cumulative risk in an area for pre-existing industrial sources.
4. We recommend a lower cumulative risk for an area. As stated in the meeting, the current state average is ~40 in a million. To be protective of health, we feel that area risk should be lower than the current state average. This should be a science-based approach, rather than a range composed of ½ - 2x the state average.

Program Element 10: Use of background/ambient concentrations in the assessment of risk – *Clarification suggested:*

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1. We understand the scope of this program, and further understand the difficulties associated with monitoring and modeling non-stationary (e.g. diesel) and ambient, non-industrial (e.g. woodsmoke) sources. However, we propose that the data collected in PE 16 be used here, and be calculated as part of the cumulative risk for an area (PE 9).

Program Element 11 – 13 – *no concerns or clarifications*

Program Element 14 and 15: Allowable risk levels and; Allow different risk levels for existing and new sources – *Concerns noted:*

1. While we understand that TBACT is the most effect control technology, that is a technology-based standard, not a health-based standard. As a result, it is difficult to understand, from a public health standpoint, why a unit with TBACT gets a higher emission standard. However, the point may be moot as long as worker safety is adequately addressed and the whole facility emissions are held to 10 in 1 million and an HI of 1.
2. Regarding #4 in the proposed elements 14 and 15; we support setting a total industrial emissions impact in an area but raise the concerns listed above in Program Element 9. However, this concentration should be science- and health-based, rather than a range based on the current state-wide cancer risk posed by industry. From a health standpoint, it is difficult to rationalize increasing the cancer risk in an area, thereby increasing the state-wide cancer risk. To be protective of human health, cancer risks should be minimized.

Program Element 16: Setting and using *de minimis* emission rates – *Concerns noted:*

1. We support having an ‘off-ramp’ for industrial sources that emit very low levels of air toxics (e.g. below 1 in a million, or below HI 1). However, this data should be used, not collected as a point of interest. We would suggest collecting the *de minimis* data and using it within the cumulative area risk outlined in Program Element 9. Such an approach would be protective of environmental justice communities, and partially addresses the concern over ‘background’ or ‘ambient’ levels of air pollution. Since the data is being collected as part of the permitting process anyway, it should be a simple addition.

Program Element 17 - 24 – *no concerns or clarifications*

Program Element 25: Evaluation – *Concerns noted:* Very specific metrics should be chosen to identify program effectiveness. It is useful to compare initial 2017 emissions inventory information against future emissions, but additional metrics should be chosen as well. Complaint lines are one way of evaluating the program, but just looking at the total number may be misleading. The content and type of complaint may provide useful information. Would evaluation also include fence-line monitoring to compare monitored emissions data to modeled emissions data? If this is done, there should be concurrent actions in place if emissions are found to be higher than modeled numbers.

Best,



Diana Rohlman, PhD



Susan Katz, MD



Jessica Nischik-Long



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**Vipin K. Varma, PhD**  
Vice President, Air Quality and  
Director, Southern Region

April 11, 2017

Kathryn Van Natta  
Northwest Pulp and Paper Association

**Subject: Summary of MACT Rules Affecting Pulp and Paper Manufacturing Facilities**

In response to your inquiry regarding summary information on MACT controls at pulp and paper facilities, we have prepared the following summary. As you aware, NCASI has conducted studies in a variety of areas related to air emissions, and worked extensively in developing emissions data used in multiple National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemakings affecting this industry. NCASI also assisted EPA during the development and implementation of the 2011 Pulp and Paper Information Collection Request (ICR), which was used by EPA as part of the Residual Risk and Technology Review (RTR) of the pulping, bleaching and wastewater MACT (“Subpart S”) and the pulp mill chemical recovery NESHAP (“Subpart MM”). NCASI has also assisted EPA in the development of the various iterations of the industrial boiler and process heater NESHAP (“Subpart DDDDD”).

Chemical pulp mills are subject to multiple MACT rules that cover most of the operations at the facility. Chemical pulp mills are subject to the following:

- Subpart S
  - MACT Standards - Chemical Pulping
    - Collect and treat 98% of HAP emissions from Low Volume High Concentration (LVHC) systems – digester, evaporator, turpentine recovery and steam stripper systems
    - Additionally, collect condensate from these systems and either treat them in a steam stripper or biological treatment system for HAP (methanol) removal
  - MACT Standards – Pulp Bleaching
    - Minimize chloroform through elimination of elemental Cl<sub>2</sub> bleaching or achieving BAT effluent standards
    - Collect and treat vent gases to achieve 99% control (or to achieve concentration or emission rate targets)
  - MACT Standards – Pulp Washing

- Collect and treat 98% of HAP emissions from brownstock washing and oxygen delignification systems
    - Additional decker, knotter, and screening system standards for some facilities
    - Condensate collection and treatment requirements
  - MACT Standards – Kraft Pulping Process Condensates
    - Collect LVHC, HVLC and other stipulated process condensates
    - 92% removal of the HAP (methanol) from collected condensates or collect/treat 11.1/10.2 lb/oven dried ton pulp (ODTP) for bleached pulp mills or 7.2/6.6 lb/ODTP for unbleached mills
- Subpart MM
  - MACT Standards – Pulp Mill Chemical Recovery Systems
    - Collect and treat 98% of the HAPs in evaporator vent gases
    - Achieve numerical PM limits as a surrogate for metal HAPs
    - Achieve numerical methanol limits
- Subpart DDDDD
  - MACT Standards – Industrial Boilers and Process Heaters
    - Achieve numerical mercury and hydrochloric acid limits
    - Achieve numerical PM limits as a surrogate for metal HAPs
    - Achieve numerical CO limits as a surrogate for volatile organic HAPs
    - Work practice standards such as boiler tune-ups (to minimize PCDD/F formation) and burning of clean fuels (to minimize HAP formation during startup and shutdown)

The detailed requirements of each NESHAP are quite complicated, but the overall rules are summarized at the end of this communication. Additionally, the EPA fact sheets for the final Subpart S rules, final Subpart S RTR rule, the Subpart MM rules, and the proposed Subpart MM RTR rules are attached.

Additionally, EPA has completed the RTR process for the pulping and bleaching MACT rules (Subpart S) and recently proposed the RTR rule for pulp mill chemical recovery MACT sources (Subpart MM) and has determined the following:

- Subpart S RTR (Final)
  - Post-MACT risks from chemical pulping, pulp bleaching, and pulp washing are acceptable and no new technology has been adopted that would yield significantly higher HAP controls.
  - Minor changes to the rule to remove startup, shutdown, and malfunction exemptions and to require repeat performance testing.
- Subpart MM RTR (Proposed)
  - Post-MACT risks from chemical recovery sources are acceptable and no new technology has been adopted that would significantly improve HAP removal.
  - Proposed changes to applicable opacity limits for recovery furnaces and lime kilns and associated excess emissions allowances.
  - Minor changes to the rule to remove startup, shutdown, and malfunction exemptions and to require repeat performance testing.

Please do not hesitate to contact me or Zach Emerson if you have any questions regarding MACT rules or would like additional information or assistance.

Sincerely,



Vipin Varma



Zachery Emerson

## SUMMARY OF MACT RULES AFFECTING CHEMICAL PULP MILLS 4/11/2017

### Overview of NESHAP/MACT

The 1990 Clean Air Act Amendments made sweeping changes to Section 112 due to widespread dissatisfaction with the pace of EPA NESHAP regulations. First, Congress designated 189 compounds as “hazardous air pollutants,” and made it very difficult to delete or add compounds to the list. Second, Congress required EPA to develop emission standards for industrial sources based solely on control technology, i.e., risks to human health were no longer to be considered in determining emission limits, at least for the initial round of regulations. EPA was given the task of identifying categories of industry sources that emitted one or more of the 189 listed compounds (at an annual rate of more than 10 tons for one compound or a total of more than 25 tons for all compounds), and then setting a schedule for the issuance of emission regulations for each category. *The emission rules for each industrial category must be based on Maximum Achievable Control Technology (MACT), which at a minimum represents the emission levels of “hazardous air pollutants” achieved by the “best performing” 12% of all similar industrial sources.* Such standards apply to all existing sources within the category. For new sources, the emission limits must be equivalent to the “best performing” source in the category.

EPA’s list of industrial source categories for which MACT emission standards would be developed included pulp and paper manufacture, industrial boilers, coating of paper and other webs, printing and publishing operations, plywood and particleboard production, and coating of flatwood paneling. EPA issued the pulp and paper manufacturing MACT standards in April 1998. The MACT standards for recovery furnaces, smelt dissolving tanks, and lime kilns at chemical pulp mills issued in January 2001. Standards for printing and publishing operations were finalized in 1996, and those for paper coating were issued in December 2002. In 2013, EPA issued the final MACT standards for industrial boilers, gas turbines, and wood products manufacture.

The list of 189 compounds originally designated by Congress as “hazardous air pollutants” can be found on EPA’s website (<https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications>). It includes solvents, metals, acid gases, pesticides, and organic compounds. Since 1990, EPA has modified the list through rulemaking to include 187 hazardous air pollutants.

MACT emission standards can be extremely detailed and usually require comprehensive monitoring, reporting and recordkeeping to prove continuous compliance is being achieved. EPA generally does not set standards for each individual HAP, but uses a single compound or surrogate for entire groups of compounds. For example, there are 11 metal compounds designated as HAPs, but most MACT standards for industrial source categories emitting metals use total particulate emissions as a surrogate for the metals emissions on the premise that most metal compounds are in particulate form and that increasing particulate control device efficiency will result in lowered emissions of metal compounds. In the MACT for pulp and paper manufacturing, EPA determined that methanol was an appropriate surrogate for all non-chlorinated “volatile organic HAPs” emitted by pulping operations, while chlorine was an

appropriate surrogate for chlorinated organic compounds emitted in bleaching operations using bleaching agents containing chlorine.

Development of MACT emission standards is a lengthy process requiring EPA to gather significant amounts of information. It normally involves surveying the affected industry, collecting emissions data, evaluating the performance of control options, and preparing technical support documents. For some industries, such as pulp and paper, EPA has conducted sampling programs to obtain data on emissions of HAPs. In cases where EPA believes emission standards which are more stringent than those based on the best performing 12% of the sources are appropriate, EPA considers additional information on costs, energy requirements, and non-air quality impacts. Once EPA promulgates a final emission standard, existing sources generally have three years to come into compliance with it; however, an additional year may be granted in circumstances requiring installation of major control equipment. Any source subject to the standard that is built or modified after the standard is first proposed must comply when the standard is promulgated, or upon start-up, whichever is later.

### **Risk and Technology Review of MACT Standards**

Within eight years after promulgation of a MACT standard, the 1990 Clean Air Act Amendments require EPA to evaluate whether a more stringent emission standard is needed to “provide an ample margin of safety to protect public health...or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.” EPA must assess whether the “lifetime excess cancer risks to the individual most exposed to emissions” of known, probable, or possible human carcinogens are significant. Also after promulgation of a MACT standard, EPA must review the standard and revise it “as necessary (considering developments in practices, processes, and control technologies)” no less frequently than every eight years. These requirements are collectively referred to as the “Risk and Technology Review” (RTR). EPA completed the RTR of the Printing and Publishing MACT in 2011, and concluded the risks were acceptable and there had been no new developments in control technology that were cost-effective. The RTR for pulping, bleaching, and wastewater was completed at the end of July 2012. EPA found the risks were acceptable and that there had been no changes in practices, processes, and control technologies that would warrant a revision of the 1998 standards. EPA did alter certain provisions pertaining to startup/shutdown/malfunction provisions. The RTR rule for chemical recovery sources was proposed in late 2016. In the proposed rule, EPA found that risks were acceptable, but proposed reducing the opacity standards for recovery furnaces and lime kilns; a final rule is expected in 2017.

### **MACT Standards – Chemical Pulping**

***With respect to MACT emission standards that affect digester systems, vent gases from digester systems must be collected and treated to destroy at least 98% of HAPs.*** In the MACT standards, the digester system includes associated flash tanks, blow tanks, chip steamers not using fresh steam, blow heat recovery accumulators, relief gas condensers, and prehydrolysis units (present at mills producing dissolving pulp grades). The collection and 98% reduction requirements also apply to turpentine recovery systems, defined as including condensers, decanters, and storage tanks (prior to the decanters). The dominant HAP in digester and

turpentine system gases is methanol. Most mills use combustion devices to perform this destruction, as digester area gases were often already routed to combustion devices for TRS control purposes. EPA specified that a combustion temperature of 1600° F and a residence time of 0.75 seconds were generally necessary to achieve the 98% reduction in gaseous organic HAP concentrations. An allowance for venting up to 1% of the operating time is provided for LVHC systems. Periods of startup, shutdown, and malfunction were not included in the 1% downtime allowances in the 1998 original rule, but EPA removed this exemption in 2012.

In addition to requiring collection of vent gases from digester systems, the MACT standards require collection and treatment of condensates from LVHC systems (see below).

### **MACT Standards – Pulp Bleaching**

At kraft mills, the MACT I Standards for bleach plants apply only to lines that use bleaching chemicals containing chlorinated compounds, and only to the bleaching stages in which chlorinated compounds are introduced. Bleaching stages are defined to include bleaching towers, washers, filtrate tanks and miscellaneous emission points such as chemical mixer vents. Extraction stages not using chlorinated compounds such as hypochlorite are not covered under the rule. Bleaching lines not using any chlorinated compounds are not subject to any MACT I requirements. MACT requirements pertain to emissions of chlorinated HAPs and chloroform. The rule has two emission limits, one for chloroform and one for chlorinated HAPs (excluding chloroform and chlorine dioxide). It should be noted chlorine dioxide is not listed as a HAP.

The MACT I limitation for chloroform is based on performance of the bleaching technology defined as Best Available Technology (BAT) by the effluent limitations guidelines section of the rule (40 CFR 430). There are no numerical emission limits for chloroform in bleach plant vent gases. As such, *a mill can comply with the MACT chloroform requirements by eliminating chlorine and hypochlorite use or by meeting the limits set forth in the effluent limitations guidelines.*

The MACT I standards essentially require the collection and treatment of all vent gases from the bleaching stages where chlorinated compounds are applied. Treatment to remove chlorine and other gaseous HAPs containing chlorine (other than chloroform) is necessary. EPA determined that chlorine was an acceptable surrogate for all other HAPs containing chlorine. *A mill can demonstrate compliance with the treatment portion of the regulation using any one of three alternatives:*

- reducing the total chlorinated HAP mass in vent streams by 99% or more, measured as chlorine, using a control device (e.g., a scrubber),
- reducing the total chlorinated HAP emission concentration (excluding chloroform) to 10 ppmv or less exiting a treatment/control device, or
- reducing the total chlorinated HAP mass emission rate to 0.001 kg total HAP (excluding chloroform) per tonne oven dried production.

The rule requires equipment enclosures and closed-vent gas transport systems to convey the gases to a control device. Continuous monitoring of certain control device operating parameters

is necessary unless the chlorine concentration in the gas stream exiting the control device is monitored directly.

### **MACT Standards – Pulp Washing**

With respect to MACT emission standards, the pulp washing system includes vacuum drum washers, diffusion washers, rotary pressure washers, horizontal belt filters, intermediate stock chests, and their associated vacuum pumps, filtrate tanks, foam breakers or tanks, and any other equipment serving the same function as those listed. *Vent gases from these systems must be collected and treated to destroy at least 98% of the volatile organic HAPs.*

Vent gases from deckers are subject to the collection and 98% control requirement unless fresh or paper machine whitewater is used or the methanol content of process water used on the decker is less than 400 ppm of methanol. (Deckers are defined in the MACT standards as “all equipment used to thicken the pulp slurry or reduce its liquid content after the pulp washing system and prior to the high-density pulp storage; the decker system includes decker vents, filtrate tanks, associated vacuum pumps and any other equipment serving the function as those previously listed.”)

Vent gases from knotter systems are subject to the collection and 98% control requirement if the total emissions of methanol are greater than 0.1 lb/ODTP. (Knotter systems are defined by EPA to include knotters, knot drainer tanks, and ancillary tanks.) Vent gases from screening systems are subject to the collection and 98% control requirement if the total emissions of methanol are greater than 0.2 lb/ODTP. In situations where the knotter and screening system emissions cannot be separated, controls are required if the total emissions exceed 0.3 lb/ODTP.

The dominant HAP in washer system gases is methanol, and most mills collect these gases in an HVLC system and route them to combustion devices such as boilers and recovery furnaces to incinerate the methanol and other volatile organic compounds. An allowance for venting up to 4% of the operating time is provided for HVLC systems. Periods of startup, shutdown, and malfunction were not included in the 4% downtime allowance in the 1998 original rule, but EPA removed this exemption in 2012.

As an alternative to the above MACT control requirements for these operations, kraft mills can use a mill specific clean condensate approach.

In addition to requiring collection of vent gases from oxygen delignification systems, brownstock washers, deckers, knotters, and screens, the MACT standards require collection and treatment of condensates from HVLC systems.

### **MACT Standards – LVHC and HVLC Condensates**

The MACT standards require treatment of a) condensates from each digester system, turpentine recovery system, low volume high concentration (LVHC) system, and high volume low concentration (HVLC) system, and b) the following condensates from those pre-evaporators and multiple-effect evaporators which receive unevaporated weak liquor: (i) condensates generated

from vapors from those pre-evaporator or multiple-effect evaporator bodies where liquor is first introduced, and (ii) vacuum system condensates from each stage where liquor is first introduced. ***Mills have three options for condensate collection:*** a) collect all named streams described in the preceding paragraph, b) collect all HVLC and LVHC system condensates and a subset of the named condensate streams which contain at least 65% of the total HAPs from the named digester, evaporator, and turpentine recovery system condensates (65% option), or c) collect a subset of the named condensate streams that contain at least 11.1 lb/ODTP (oven dry ton pulp) for bleached mills or 7.2 lb/ODTP for unbleached mills (lb/ODTP option). It should be noted that methanol may be used as a surrogate for total HAPs in condensates.

The MACT rules require that the collected condensate streams be conveyed in a closed collection system such that there is no opportunity for HAPs to escape to the atmosphere. Any tank used in the system, e.g., a stripper feed tank, must be vented into a closed vent system with no leaks greater than 500 ppm above background. The vent gas must be treated to remove 98% or more of the HAPs.

***The MACT rules provide three treatment options for the collected condensate streams:***

- recycle the condensates to equipment which is enclosed and vented into a closed vent system, e.g., a brownstock washer which is hooded and vent gases are collected and treated;
- treat the pulping process condensates to reduce total HAPs by at least 92% or (i) for bleached mills, remove 10.2 lbs of total HAPs per ODTP or achieve a concentration of 330 ppm or less by weight at the control device outlet, or (ii) for unbleached mills, remove 6.6 lb/ODTP or achieve a concentration of 210 parts per million by weight at the control device outlet; or
- convey the condensates in a closed vent system and discharge them below the liquid surface of a biological treatment system (hard-piping option) which reduces the total HAPs by at least 92% or removes 10.2 lbs of total HAPs per ODTP at bleached mills (6.6 lb/ODTP at unbleached mills).

### **MACT Standards – Pulp Mill Chemical Recovery Standards**

With respect to MACT emission standards that affect the chemical recovery area, ***vent gases from evaporator systems must be collected and treated to destroy at least 98% of the volatile organic HAPs.*** The dominant HAP in evaporator gases is methanol. Most mills will use combustion devices to perform this destruction, considering evaporator gases are often already routed to combustion devices for TRS control purposes.

MACT emission standards to limit HAP metal emissions from all recovery furnaces, smelt dissolving tanks, and lime kilns were proposed in 1998 and finalized in 2001. ***EPA used numerical particulate matter concentrations as surrogates for the emissions of the 11 metals listed as hazardous air pollutants.*** For existing sources (i.e., those in existence as of April 15, 1998), the particulate surrogate emission limits are

- Recovery furnace PM limit is 0.044 gr/dscf (at 8% O<sub>2</sub>).
- Lime kiln PM limit is 0.064 gr/dscf.

- Smelt dissolving tank PM limit is 0.2 lb/ton of black liquor solids fired.

For “new” sources (i.e., those built or significantly modified after April 15, 1998), the particulate emission limits are very stringent (0.015 gr/dscf for recovery furnaces, 0.12 lb/ton BLS for smelt dissolving tanks, and 0.01 gr/dscf for lime kilns). The MACT emission standards for “new” recovery furnaces have a methanol emission limit of 0.025 lb/ton BLS to ensure the use of dry bottom ESPs and dry ash handling systems.

### **MACT Standards – Industrial Boilers**

EPA published MACT regulations to limit emissions of “hazardous air pollutants” from industrial boilers and process heaters in 2013. The rule has numerical emission limits for mercury, HCl, filterable particulate matter as a surrogate for metal HAPs (or an alternative limit for the sum of eight metals – As, Be, Cd, Cr, Mn, Ni, Pb, and Se), and CO as a surrogate for products of incomplete combustion. The limits apply to boilers with heat input capacities over  $10 \times 10^6$  Btu/hr firing liquid, solid, or certain gaseous fuels located at major sources, i.e. facilities with the potential to emit more than 10 ton/year of one or 25 ton/year of two or more hazardous air pollutants. There are different mercury and HCl limits for boilers firing solid fuels (coal or biomass), fuel oil, or certain gaseous fuels. Particulate (or alternative metals) and CO limits depend on fuel type and, for biomass units only, boiler design. ***The limits for existing boilers for Hg, HCl, filterable particulate matter, total selected metals, and CO represent the average emissions levels achieved by the best 12% of all units in a subcategory, prior to the rulemaking.*** The limits for new or modified boilers represent the emissions levels achieved by the best unit in a subcategory, prior to the rulemaking.

An additional requirement is for periodic tune-ups to be performed on all boilers and process heaters at a facility. This is a “work practice” standard intended to minimize emissions of incomplete combustion byproducts, including dioxin/furan. There is a list of specific actions that must be accomplished during the tune-up, including burner inspections, flame pattern optimization, air distribution system adjustments if needed, and before/after measurement of CO and O<sub>2</sub>. Documentation must be prepared and made available to the permitting agency upon request.

The frequency of tune-ups varies between one and five years, depending on fuel type, size, usage, and whether an oxygen trim system is employed. Annual tune-ups are mandated for units with a heat input capacity over  $10 \times 10^6$  Btu/hr burning any type of fuel (including natural gas) if they do not have an oxygen trim system. Tune-ups every five years are required for units with an oxygen trim system, limited use units (restricted by permit to operate at less than 10% annual capacity factor), units with a heat input capacity of less than  $5 \times 10^6$  Btu/hr burning gaseous fuels or light liquids, and process heaters with a heat input capacity under  $5 \times 10^6$  Btu/hr. Tune-ups every two years are required for units without an oxygen trim system with heat input capacities under  $10 \times 10^6$  Btu/hr burning solid fuels or heavy liquids, or with heat inputs between 5 and  $10 \times 10^6$  Btu/hr burning gaseous fuels or light liquids, or process heaters with heat input capacities between 5 and  $10 \times 10^6$  Btu/hr.

A one-time energy assessment to identify opportunities to reduce consumption of steam and power produced by on-site boilers and process heaters must be completed by January 31, 2016. There is a list of items which must be addressed in the assessment, with the emphasis on energy management practices and identification of potential energy savings measures that could be implemented. An individual with specified qualifications must perform the assessment. A written report must be prepared and made available to the permitting agency on request; however, facilities are not obligated to implement any energy saving measures identified in the report. The Boiler MACT rules apply to units that burn only fossil fuels, traditional “clean” biomass fuels, and alternative fuels EPA has categorically determined are not solid wastes. In February 2013 EPA published a final rule with procedures and criteria for determining whether a non-hazardous material is a solid waste. In this final rule, resinated wood, tire-derived fuel, on-specification used oil, and pulp and paper sludges (provided they are generated and burned on the same site and that a ‘significant’ fraction of the sludge generated is combusted), when burned in a boiler or process heater, were determined by EPA to not be solid wastes. In 2016, EPA made a similar determination for woody construction and demolition debris, paper recycling residuals, and chipped railroad ties containing creosote.

8-31-98

## FACT SHEET

### INTERPRETATIVE AND TECHNICAL AMENDMENT TO THE FINAL AIR TOXICS REGULATION FOR PULP AND PAPER PRODUCTION

#### TODAY'S ACTION...

- ◆ The Environmental Protection Agency (EPA) is amending the final rule to regulate emissions of air toxics from pulp and paper mills. Air toxics, which are also known as hazardous air pollutants, are those pollutants known or suspected to cause cancer or other serious health or environmental effects.
- ◆ The final rule was issued on April 15, 1998 as the air component of the Pulp and Paper Cluster Rules. This interpretive amendment clarifies EPA's original intent regarding the applicability of the 10 percent excess emissions allowance to control devices used to treat kraft pulp mill condensates.
- ◆ EPA expects this amendment to be of interest to kraft mill owners and operators subject to this rule and to State and local regulatory agencies with kraft pulp mills in their jurisdictions.
- ◆ The amendment will be effective upon publication in the Federal Register.

#### SUMMARY OF THE AMENDMENT TO THE EPA'S PULP AND PAPER AIR TOXICS RULE

- ◆ The amendment modifies the rule language to make it consistent with the intent expressed in the preamble to provide the 10 percent excess emissions allowance to steam stripping systems and to other in-process type condensate control devices complying with any of the available control options.
- ◆ This amendment will have no impact on the information collection burden estimates made previously for the final rule. The changes are interpretations of requirements and are not additional requirements.
- ◆ The Federal Register notice accompanying the amendment also provides guidance but no rule changes to clarify how the rule applies to different types of biological treatment units. Specifically, the guidance addresses biological treatment units that are part of the National Pollutant Discharge Elimination System wastewater treatment plant versus in-process type biological treatment units (e.g., anaerobic reaction towers) dedicated to treating the regulated kraft pulp mill condensates.

## **BACKGROUND**

- ◆ Under the Clean Air Act Amendments of 1990, EPA is required to regulate sources of 188 listed toxic air pollutants. (Note that this list originally contained 189 pollutants, but EPA has subsequently removed the chemical caprolactam from the list.) On July 16, 1992, EPA published a list of industrial source categories that emit one or more of these air toxics. For listed categories of “major” sources (those that emit 10 tons/year or more of a listed pollutant or 25 tons/year or more of a combination of pollutants), the Clean Air Act requires EPA to develop standards that require the application of stringent air pollution controls, known as maximum achievable control technology (MACT).
- ◆ In its July 16, 1992 published list of industry groups to be regulated, EPA identified pulp and paper production as a major source of air toxics. The final air toxics rule for pulp and paper production was issued on April 15, 1998 as the air component of the Pulp and Paper Cluster Rules.

## **ENVIRONMENTAL BENEFITS OF EPA'S FINAL RULE TO REDUCE AIR TOXICS FROM PULP AND PAPER PRODUCTION**

- ◆ EPA's final rule will reduce air toxics emissions by approximately 155,000 tons annually, representing a 60 percent reduction from current levels.

## **HOW DOES THE AMENDMENT PROVIDE FLEXIBILITY TO INDUSTRY?**

- ◆ The amendment makes clear EPA's intent to extend the excess emissions allowance to kraft mills electing to use innovative technologies such as dedicated anaerobic biological reaction towers instead of steam strippers.

## **FOR FURTHER INFORMATION**

- ◆ Interested parties can download the amendment from EPA's web site on the Internet under “recent actions” at the following address: (<http://www.epa.gov/ttn/oarpg>). For further information about the amendment or the rule itself, contact Penny Lassiter of the EPA's Office of Air Quality Planning and Standards at (919) 541-5396.
- ◆ EPA's Office of Air and Radiation's homepage on the Internet contains a wide range of information on the air toxics program, as well as many other air pollution programs and issues. The Office of Air and Radiation's home page address is: (<http://www.epa.gov/oar/>).

## FACT SHEET

### Final Amendments to the National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

#### ACTION

- On July 31, 2012, the U.S. Environmental Protection Agency (EPA) issued final amendments to air toxics standards for the pulp and paper industry.
- The EPA issued the initial emission standards for this industry in August 1998. The standards cover 171 pulp and papermaking facilities. This review of those standards, known as the risk and technology review, evaluated:
  - Availability of new, improved or previously unidentified emission control approaches, practices or processes;
  - Whether additional emission reductions were warranted to protect public health; and
  - If additional changes were needed to assure that the rules are accurate and legally defensible.

#### **Residual Risk Assessment**

- The Clean Air Act (CAA) requires the EPA to assess the risk remaining after application of the final air toxic standards. This process is known as a residual risk assessment.
- The residual risk assessment includes the following analyses:
  - Estimates of individual source category risk.
  - Risk estimates from all air toxic emissions at a facility (“total facility risk”).
  - Analysis of air toxics-related risks across different social, demographic and economic groups living near the facilities.
  - Risk estimates based on the actual emissions reported as emitted.
  - Risk estimates based on emissions allowed by the current air toxics standard.
- The results of the residual risk assessment suggest that the level of risk due to emissions from the source category is “acceptable” since the cancer risks are well below 100 in 1 million and the other health risks (including noncancer risks) from the source category are not significant.

#### **Technology Review**

- The CAA requires the EPA to review the national emission standards and to revise them as necessary, taking into account developments in practices, processes and control technologies since the standards were first established.
- During the technology assessment, the EPA did not identify any cost-effective developments in practices, processes or control technologies.

#### **Start-up, Shutdown Malfunction Provisions**

- These final amendments eliminate the exemptions to emission limits during periods of startup,

shutdown and malfunction to ensure the standards are consistent with the District of Columbia Circuit Court's vacatur of such provisions in other rules.

### **Compliance Testing**

- To assure that control systems are properly maintained, this final rule requires compliance testing as part of each 5 year permit review cycle rather than a one-time-only test.
- The Agency estimates total industry costs for testing, monitoring, reporting, and record keeping will be approximately \$2.1 million per year.

### **BACKGROUND**

- The CAA requires the EPA to regulate toxic air pollutants, also known as air toxics, from large industrial facilities in two phases.
- The first phase is "technology-based," where the EPA develops standards for controlling the emissions of air toxics from sources in an industry group (or "source category"). These Maximum Achievable Control Technology (MACT) standards are based on emissions levels that are already being achieved by the better-controlled and lower-emitting sources in an industry.
- Within 8 years of setting the MACT standards, the CAA directs the EPA to assess the remaining health risks from each source category to determine whether the MACT standards protect public health with an ample margin of safety and protect against adverse environmental effects. This second phase is a "risk-based" approach called residual risk. Here, the EPA must determine whether more health-protective standards are necessary.
- Also, every 8 years after setting the MACT standards, the CAA requires that the EPA review the national emission standards, and revise them as necessary, taking into account developments in practices, processes and control technologies.
- The previously-issued air toxic standards for this source category are one of 96 air toxic standards (MACT) that require 174 industry sectors to eliminate 1.7 million tons of 187 toxic air pollutants. Congress listed these toxic air pollutants in the CAA.

### **FOR MORE INFORMATION**

- Interested parties can download the notice from the EPA's website at the following address:  
<http://www.epa.gov/ttn/oarpg/t3pfpr.html>.
- Today's final rule and other background information are also available either electronically at <http://www.regulations.gov>, the EPA's electronic public docket and comment system or in hardcopy at the EPA Docket Center's Public Reading Room.
- The Public Reading Room is located in the EPA Headquarters Library, Room Number 3334, in the EPA West Building, located at 1301 Constitution Avenue, NW, Washington, DC. Hours of

operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding federal holidays.

- Visitors are required to show photographic identification, pass through a metal detector and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine as well. Visitors will be provided a badge that must be visible at all times.
- Materials for this final action can be accessed using Docket ID Number EPA-HQ-OAR-2007-0544.
- For further information, contact William Schrock of the EPA's Office of Air Quality Planning and Standards by phone at (919) 541-5032, or by email at: [schrock.bill@epa.gov](mailto:schrock.bill@epa.gov).

## FACT SHEET

### AMENDMENT TO EPA'S FINAL AIR TOXICS RULE

#### FOR PULP and PAPER COMBUSTION SOURCES

#### ACTION

On July 7, 2003, the Environmental Protection Agency (EPA) amended its rule to reduce toxic air pollutant emissions from pulp and paper combustion sources. This amendment establishes a site specific emissions standard for a paper mill owned by the Weyerhaeuser Corporation.

- Chemical recovery combustion systems at pulp mills process and recover the chemicals used to convert wood into pulp. Air toxics are emitted from chemical recovery combustion sources during the chemical recovery process.
- This amendment will not significantly change the health and environmental effects of the rule, and they will not change the requirement that new and existing major sources control air toxics emissions.

#### BACKGROUND

- Under the Clean Air Act, EPA is required to regulate emissions of 188 toxic air pollutants. EPA included pulp and paper production in the list of industries that are major sources of air toxics. "Major" sources are those that emit 10 tons/year or more of a single listed air toxic or 25 tons/year or more of a combination of air toxics. For listed categories of major sources, the Act requires EPA to develop standards that require the use of stringent air pollution controls.
- EPA issued its final rule for chemical recovery combustion sources in January 2001. The rule requires approximately 136 of these facilities to reduce toxic air emissions (metals, gaseous organic compounds and hydrogen chloride) using stringent air pollution controls known as maximum achievable control technologies (MACT).
- This rule will reduce air toxics emissions by 2,700 tons per year—a 12 percent reduction from 1997 levels. The rule also reduces particulate matter and volatile organic compound emissions, which contribute to the formation of ground-level ozone (smog). In addition, the rule will reduce carbon monoxide emissions.
- In response to a settlement agreement between EPA and Weyerhaeuser Corporation EPA amended the final rule on February 18, 2003. This amendment, issued as a direct final rule and parallel proposal, added
  - an alternative emissions standard for a specific Weyerhaeuser mill, and
  - amendments to clarify and consolidate monitoring and testing requirements.

- EPA received adverse comment on the amendments related to monitoring and testing and will now consider those comments before issuing a final rule relating to monitoring and testing.
- We were unable to publish a withdrawal of the revisions prior to the May 19, 2003 effective date of the direct final rule. Accordingly, today's action removes the revised monitoring requirements that should not have become effective.

### **FOR FURTHER INFORMATION**

- Interested parties can download today's technical correction from EPA's web site on the Internet under recent actions at the following address:  
*<http://www.epa.gov/ttn/oarpg/>*. For further information on today's technical correction, contact Mr. Jeff Telander of EPA's Office of Air Quality Planning and Standards at (919) 541-5427.
- EPA's Office of Air and Radiation's homepage on the Internet contains a wide range of information on the air toxics program, as well as many other air pollution programs and issues. The Office of Air and Radiation's home page address is:  
*<http://www.epa.gov/oar/>*.

## **Proposed Amendments to Air Toxics Standards for the Pulp and Paper Chemical Recovery Combustion Sources: Fact Sheet**

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### **ACTION**

- On December 13, 2016, the U.S. Environmental Protection Agency (EPA) proposed amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Pulp and Paper Combustion Sources.
- This will help ensure compliance with existing emission limits and reduce the likelihood of exceedances through increased frequency of emissions testing, updated monitoring requirements, and updated recordkeeping and reporting.
- The Pulp and Paper Combustion Sources NESHAP, subpart MM, was finalized in January 2001, and amended in 2003.
- Following a residual risk review and technology review, the EPA is proposing to:
  - Reduce opacity from 35 percent to 20 percent and the monitoring allowance from 6 percent to 2 percent for recovery furnaces.
  - Reduce the opacity monitoring allowance from 6 percent to 1 percent for lime kilns.
  - Add electronic reporting requirements for semiannual compliance reports.
  - Update ongoing monitoring and testing requirements for emission monitoring systems.
  - Require repeating stack testing and electronic reporting of results.
  - Remove startup, shutdown, and malfunction (SSM) provisions.
- EPA is proposing these amendments to improve the effectiveness of the rule. Because risks were found to be acceptable, EPA is not proposing any specific amendment to reduce residual risk.
- EPA will accept comment on these proposed amendments for 60 days after publication in the Federal Register.

### **RESIDUAL RISK ASSESSMENT**

- The Clean Air Act requires the EPA to assess the risk remaining after application of the final air toxics standards. This is known as a residual risk assessment.
- After assessing the risk from exposure to toxic air emissions from pulp and paper combustion source facilities, the EPA proposes that the emission standards provide an acceptable level of risk with an ample margin of safety to protect public health.
- The maximum individual cancer risk (MIR) for the source category is estimated to be 4-in-1 million.
- The risks are low and well within what is considered acceptable.

### **TECHNOLOGY REVIEW**

- The Clean Air Act requires the EPA to assess the review and revise air toxics standards, as necessary, taking into account developments in practices, processes and control technologies since the EPA issued the standards.
- The technology assessment did not identify any practices, processes or control technologies that were not already required by the combustion source NESHAP or considered in its development. The EPA also did not identify any major improvements to those practices, processes, or control technologies that could be transferred and applied to this source category.

## **BACKGROUND**

- The Clean Air Act requires the EPA to regulate toxic air pollutants, also known as air toxics, from categories of industrial facilities in two phases.
- The first phase is “technology-based,” where the EPA develops standards for controlling the emissions of air toxics from sources in an industry group (or “source category”). These MACT standards are based on emissions levels that are already being achieved by the best-controlled and lower-emitting sources in an industry.
- Within eight years of setting the MACT standards, the Clean Air Act directs the EPA to assess the remaining health risks from each source category to determine whether the MACT standards protect public health with an ample margin of safety, and protect against adverse environmental effects. This second phase is a “risk-based” approach called residual risk. Here, the EPA must determine whether more health-protective standards are necessary.
- Also, every eight years after setting the MACT standards, the Clean Air Act requires that the EPA review and revise the standards, if necessary, to account for improvements in air pollution controls and/or prevention.
- The previously-issued air toxic standards for this source category is one of 96 air toxic standards (MACT) that require 174 industry sectors to eliminate 1.7 million tons of 187 toxic air pollutants. Congress listed these toxic air pollutants in the Clean Air Act.

## **HOW TO COMMENT**

- The EPA will accept comment on the proposal for 60 days after publication in the Federal Register. Comments, identified by Docket ID Number EPA-HQ-OAR-2014-0741 may be submitted by one of the following methods:
  - Go to [www.regulations.gov](http://www.regulations.gov) and follow the on-line instructions for submitting comments.
  - Send comments by email to a-and-r- Docket@epa.gov, Attention Docket ID No. EPA-HQ- OAR-2014-0741.
  - Fax your comments to: 202-566-9744, Attention Docket ID. No. EPA-HQ-OAR-2014- 0741.
  - Mail your comments to: Air and Radiation Docket and Information Center,

- Environmental Protection Agency, Mail Code: 28221T, 1200 Pennsylvania Ave., NW, Washington, DC, 20460, Attention Docket ID. No. EPA-HQ-OAR-2014-0741.
- Deliver comments in person to: EPA Docket Center, 1301 Constitution Ave., NW, Room 3334, Washington, D.C. Note: In person deliveries (including courier deliveries) are only accepted during the Docket's normal hours of operation. Special arrangements should be made for deliveries of boxed information.

## **FOR MORE INFORMATION**

- To download a copy of the proposed rule notice, go to EPA's Worldwide Web site at <https://www.epa.gov/stationary-sources-air-pollution/kraft-soda-sulfite-and-stand-alone-semichemical-pulp-mills-mact-ii>
- Today's action and other background information are also available either electronically at <http://www.regulations.gov>, EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.
  - The Public Reading Room is located at EPA Headquarters, room number 3334 in the EPA WJC West Building, 1301 Constitution Avenue, NW, Washington, DC. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding Federal holidays.
  - Visitors are required to show photographic identification, pass through a metal detector and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine as well. Visitors will be provided a badge that must be visible at all times.
  - Materials for this proposed action can be accessed using Docket ID No. EPA-HQ-OAR- 2014-0741.
- For further technical information about the rule contact Dr. Kelley Spence, EPA's Office of Air Quality Planning and Standards, at (919) 541-3158 or [spence.kelley@epa.gov](mailto:spence.kelley@epa.gov).

## WESTERSUND Joe

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**From:** Linda George  
**Sent:** Friday, April 14, 2017 6:34 AM  
**To:** WESTERSUND Joe Comments  
**Subject:** from Linda George

Dear Cleaner Air Oregon Rulemaking Staff:

Overall, the proposed health-risk based permitting program will create a far more protective air toxics system than we currently have. I greatly appreciate the work that ODEQ and OHA have put into this rulemaking. However, there is a glaring problem of inadequate consideration of cumulative risk due to non-industrial sources. While the current rulemaking is focused on industrial sources, I fail to understand why this rulemaking must remain blind to the actual state of the air that the source is emitting into and that residents in that neighborhood are already breathing. At the very minimum, ODEQ could categorize neighborhoods with high, medium, low existing non-industrial risk and establish three tiers of allowable additional risk. For example, for Program Element 14, "Total industrial emissions impact", could be 20 for areas with high levels of other sources of air toxics to 80 in areas where there are low levels of other sources. This would not be a perfect solution but it would move us in the right direction and would provide some protection to areas that experience high levels of non-facility based air toxics.

A couple of other points:

In the interest of public right to know, it is imperative that emission information be readily accessible. I strongly urge Oregon DEQ to maintain a database that is described in the rule that requires disclosure of the identity of hazard air pollutants (with IURs), annual emissions of each pollutant and maximum potential daily and hourly emissions. These disclosures will allow the public to evaluate potential risks. In addition, the parameters that are used by either the source or DEQ in evaluating the potential risk should also be available (AERMOD parameters). Full transparency about how risks are evaluated is critical to gaining public trust in the risk assessment process.

I am concerned that current rule does not adequately incentivize sources to be creative in reducing their emissions. MACT should not be considered the best possible action for a source (i.e., "They are doing the best they can do."). In this case, a source can continue to cause elevated risk and even increase production as long as they are complying with MACT standards. This approach will not incentivize creative thinking in emission reduction. I strongly urge ODEQ to establish a standardized timetable for reduction that includes reduced operation if a source cannot figure out a way to reduce emissions to acceptable levels. As one of the CAO industry representatives stated, "Necessity is the mother of invention".

Thank you for your consideration.

Sincerely,

Linda George



**Eastside Portland Air Coalition**

Monday, April 17, 2017

VIA ELECTRONIC MAIL to [cleanerair@deq.state.or.us](mailto:cleanerair@deq.state.or.us)

Jacqueline Dingfelder

Co-Chair, Cleaner Air Oregon Rulemaking Advisory Committee

Claudia Powers

Co-Chair, Cleaner Air Oregon Rulemaking Advisory Committee

RE: Written comments for Cleaner Air Oregon meeting on April 4th, 2017 in Springfield.

Dear Co-Chairs Dingfelder and Powers,

On behalf of citizen and community groups concerned about public and environmental health in regard to air toxics, Eastside Portland Air Coalition (EPAC) is submitting the following comments. Together we represent thousands of Oregonians across the state.

**Program Element 1- Inclusion of existing sources:**

We believe that existing sources should be given time to comply with CAO, but the public wants a definite time frame and have implementation as expedient as possible. The rules as written need to be detailed so adequate public comment can be given. We recommend the South Coast reporting cycle of every 4 years.

**Program Element 4- Air toxics to be included:**

As new chemicals are developed and information is made available the public needs clear guidelines as to how a chemical gets added to the list of regulated toxics. The more specific the better.

**Program Element 5- Method for setting regulatory health risk-based concentrations:**

The term “authoritative bodies” is used, but a definition of what this means is not. We need an agreed upon definition of authoritative body and a hierarchy to follow. For example, US EPA is first, then OHEA, then ATSDR. The “authoritative body” decision must include the public and outside experts in the decision making process. A large lack of public trust is around this issue, with agency known to use “authoritative bodies” that are industry backed research thus creating distrust on the advocacy end.

**Program Element 7- Risk based concentration averaging times:**

We recommend following the South Coast pattern and have risk based concentration averaging times of Annual, 24 hour, 8 hour and 1 hour. This can be written into the specific permit.

**Program Element 8- Cumulative risks from multiple air toxics form a single facility:**



Cumulative risk from multiple air toxics from a single facility should also include the environmental impacts of other pathways of toxics. We know that toxics don't just stay in the air but also end up in soil and water. This is very important in terms of public trust. We want to know how our entire neighborhood is affected including our gardens and water. We want an accounting of the bioaccumulation of substances and their impacts on public health.

Understanding that synergistic effects of multiple toxics is a huge challenge we want room in CAO to fold into its permitting, tracking the evolution of scientific research in this area as it becomes available. Specifics as to how synergistic effects will be tracked and eventually included in CAO by DEQ is essential for public trust.

**Program Element 9- Cumulative risk from multiple facilities:**

Widening the allowable cumulative cancer risk levels to accommodate new facilities is not health protective. Remember this is added risk to the already high (40%) cancer rates in some parts of our state.

We suggest the Louisville Kentucky programs risk levels at 10.0 in a million cancer risk and HQ of 1 for individual TAC. Choosing this conservative approach could be why Louisville chose not to include background/ambient air concentrations in their program. It might be interesting to explore how Louisville made these decisions when considering risk. It might also be a point of compromise.

**Program Element 10- Background ambient concentrations and risk:**

As mentioned above if allowable risk was low enough background levels might not be as much of an issue. Given that it seems that the lowest DEQ is offering to go is the 20 in a million and HI of 1-2 then background levels must be considered.

**Program Element 15- Allow different risks levels for existing and new sources:**

Widening the allowable cumulative cancer risk levels to accommodate new facilities is not health protective. Remember this is added risk to the already high (40%) cancer rates in some parts of our state. However, if DEQ does widen it we suggest the a 10-50 for cancer for total industrial emissions impact in an area as opposed to the 20 and 80 in 1 million / between HI 2 and 4 that is in the draft framework.

We do not recommend this issue be addressed outside of CAO and are concerned that it would minimize CAO authority and protections, creating one more layer of complexity that is not necessary.

**Program Element 16- Setting and using de minimis emission rates:**

The public has a right to know if their neighbors are polluting them even if they fall within de minimis. As stated before: de minimis becomes relevant when considering cumulative impacts in a specific area.



Also, tracking and making public de minimis emissions will create the transparency that the public is looking for. This information will need to be easily accessed and streamlined so the average layperson can make informed decisions about where they live and what is in the air, soil, and water in their neighborhood.

We suggest an aggregate facility (de minimis and regulated) be subject to allowable cumulative risk limits. This will take into consideration cumulative and or additive de minimis risks.

For all de minimis facilities we recommend:

- 1) Registered with an annual fee
- 2) Subject to annual review
- 3) Included in cumulative risk assessments of permitted facilities

Facilities that fall between de minimis and SER should have an air permit with regular reporting for full transparency. TBACT should be required for facilities that fall in this gap under their air permits. What is the point of this gap? If you eliminate it and a facility falls above de minimis it should have an air permit. This would be a practical way of streamlining the program.

**Program Element 17- Setting and using significant emission rates:**

In using reference emission rates (RERs) we must use the most health protective RERs (CAL/EPA) and these should be subject to 3-5 yr periodic review. As this is a long list it could be reviewed on a rolling basis for example, one quarter of the list reviewed annually for 4-year review period prioritized by toxicity.

**Program Element 18- Initial modeling**

We also recommend using moss as a screening tool.

**Program Element 19- Refined modeling:**

We recommend the higher the risk in an area with the most cumulative risk should be prioritized. We also would like to see air monitoring earlier in the hierarchy of risk assessment. People want to know what is in their air exactly, not only what a computer models says. Granted, air monitoring alone has its flaws.

Air monitors are subject to human error- placement, time of monitoring and what is being measured can be manipulated. This is why we agree with South Coast in their recommendation that stack monitoring, fenceline monitoring as well as modeling is necessary to capture emissions information and it's impacts on a surrounding area. We would also like to have a place for moss as a tool to determine impact of toxics. A multipronged approach early on is best practice and most protective of public health.



Materials balancing could also be part of the screening process. For example, if you know a facility is emitting a large amount of chemical X and there is a known high asthma rate in a given area, you can use this information to trigger monitoring and further assessment.

**Program Element 20- Implementation and Phasing:**

DEQ mentions incorporating air toxics permit requirements in the permit at renewal time. We are suggesting that we don't wait for renewal and create a priority list based on level of risk and cumulative impacts.

We also agree that evaluating and tracking Environmental Justice concerns be done by DEQ, not by the industrial sources.

**Program Element 21- Looking beyond current air permitting programs:**

A facility's emissions could be causing health impacts whether it is permitted or not, so must include consideration of all and any available facilities.

Oregon needs to look at the manufacturing processes that are unregulated categorically that could be causing health risks.

Looking at emissions inventory is critical for successful implementation but it must be updated routinely, ideally every year in order to have accurate data points.

Emissions reporting based on full materials balancing provides the most accurate and most comprehensive data for use in risk assessments. It would allow DEQ to quickly identify toxic hot spots and to prioritize its limited resources.

**Program Element 22- Community Engagement:**

CAO needs a mechanism that will sustain robust, high quality community engagement. This would include a clear, user friendly, transparent database for community members to access information as to what is in their air and what is being done about it. This would include access to emissions inventory and other material being used at a facility.

Community outreach via neighborhood organizations and advocate groups needs to happen on a regular basis. This needs to be done with in person meetings with DEQ staff members and information offered in multiple languages that is accessible to people who might not have access to a computer. Regular air quality checkups for neighborhoods, please.

Don't forget our rural communities. We are worried that CAO might push our air toxics to other parts of the state. All communities in Oregon deserve to know what is in the air and how it impacts their lives.



DEQ will benefit from creative use of community resources, saving money and engaging the public at the same time. We suggest DEQ utilizes research assistant internships, citizen data collection, and partnering with community projects already underway. For example, a masters in public health intern could be given the task to do preliminary research in advance of RBC or RER period review, identifying current peer-reviewed research or comparative international analysis of current health protective risk assessments levels and standards.

**Program Element 23- Compliance:**

We recommend unannounced compliance inspections to make sure that industry is meeting its obligations.

What tools specifically do we measure compliance with? This will need to be answered in detail and made public so that it can be tracked in a transparent way.

Using materials balancing should not impact business trade secrets as DEQ can easily create chemical equivalents to capture information while protecting proprietary chemical information.

**Program Element 24- Capacity:**

Costs related to permits or modeling and reviews should be paid for by Industry as public already bears the externality of related health risks.

Air monitors could be funded by Industry as matter of their own self-regulation. Air monitoring could also be funded through the general fund. It looks as if air monitoring equipment and technology is quickly advancing. Of concern is the lack of full spectrum monitors that capture known and unknown emissions. This should be given priority when purchasing or using monitors. Most monitors just capture criteria pollutants and miss the heavy metals and other toxics, such as those from the colored art glass facilities.

How do we change the state law that states that DEQ fines cannot go back to the DEQ? It seems Industry friendly to use permit fees to fund our DEQ but not the fines. This is the bias that needs to end.

**Program Element 25- Evaluation:**

It's important to track emissions inventory against future reported emissions, but also important to track pollution prevention efforts by industry.

Is there a way to incentivize pollution prevention and give special designation to Industries that are actively taking a role in being leaders in pollution prevention? Industry should be celebrated and recognized for being innovative and flexible.



Eastside Portland Air Coalition

**Program Element 26- Enforcement:**

Without enforced standards that are clear and implemented there will be no there, there. The public is willing to tolerate a certain amount of risk, but when that risk is exceeded we want to know what is being done about it. Years of waiting around while lawyers and industry stall our agencies, while continuing to poison us is unacceptable.

If the risk limit is exceeded there must be a stop production order until that toxic can be controlled and brought under allowable risk. There must be enforceable standards that protect the public.

Industry needs to know limits as well. Without clear expectations and boundaries with allowable risk everyone loses, including industry. This will give industry clarity on their goals and help them plan pollution reduction strategies and expectations of their TBACT protocol.

We continue to recommend a Citizen Enforcement Provision especially now with the Entek Company and the recent gag order put on DEQ.

**General Comments:**

Industry has suggested that while there will be a net positive gain for the economy, manufacturing jobs will be lost as a result of CAO. This is faulty logic. Loss of manufacturing jobs will not be due to environmental regulation or CAO, it will be simply due to the fact that manufacturing jobs are declining worldwide and there is less demand for labored productivity as workers are replaced by increasingly cost, production, and energy efficient technologies. Many of the countries where there is loss of manufacturing jobs haven't even enacted stringent clean air regulation.

Economic analysis has shown that the 1990 amendments to the Clean Air Act resulted in 2 trillion dollars of economic benefits at a cost of 65 billion. That is a return of 30 to 1. For every dollar spent on pollution prevention there is a 30-dollar savings according to the World Health Organization.

We thank you for allowing us to participate on the Cleaner Air Oregon rules advisory committee. It has been an honor and privilege to work hand in hand with DEQ, OHA, and other stakeholders to enable health based regulatory overhaul for air toxics based on DEQ's mission:

***DEQ's mission is to be a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.***

Sincerely,

Jessica Applegate & Katharine Salzmann

**NAACP Portland Branch • Neighbors for Clean Air  
Northwest Environmental Defense Center • OPAL Environmental Justice Oregon**

April 19, 2017

**VIA ELECTRONIC MAIL to [cleanerair@deq.state.or.us](mailto:cleanerair@deq.state.or.us)**

Jacqueline Dingfelder  
Co-Chair, Cleaner Air Oregon, Rulemaking Advisory Committee

Claudia Powers  
Co-Chair, Cleaner Air Oregon, Rulemaking Advisory Committee

**Re: Follow-up Comments Regarding April 4, 2017 Cleaner Air Oregon Advisory  
Committee Meeting and CAO Framework**

Dear Co-Chairs Dingfelder and Powers,

This letter is to follow-up on the discussion that took place during the April 4, 2017 meeting of the Cleaner Air Oregon (“CAO”) Advisory Committee and to provide comments on the draft CAO program framework (“Framework”) that was presented during the meeting. Thank you for the opportunity to participate in the development of Oregon’s air toxics regulations through the Advisory Committee process and to provide these additional comments for consideration by the Oregon Department of Environmental Quality (“DEQ”) and Oregon Health Authority (“OHA”) (collectively “the Agencies”).

We commend the Agencies on the progress made so far with CAO, particularly with the scope and rigor of the program, as proposed in the Framework. We specifically support the Agencies’ inclusion of the following in the Framework:

- Regulation of whole facility emissions, as well as new emissions units;
- Regulation of 660 toxic air pollutants;
- Inclusion of a mechanism for adding new, emerging pollutants;
- Regulation of both new and existing facilities;
- Requirements for community engagement plans;
- Inclusion of cancer and non-cancer risk levels;
- Inclusion of periodic reviews for RBCs; and
- Inclusion of adjustments to reference emission rates for the 16 persistent, bioaccumulative, and toxic pollutants.

Our primary concerns with the program are as follows:

**I. Calculating Cumulative Risk and Use of Background/Ambient Concentrations**

We are pleased to see the Agencies are proposing to include analysis and regulation of cumulative risk from multiple air toxics and multiple facilities within a defined area under the

CAO program (Program Elements 8 and 9). This is a necessary first step in crafting health-based regulations for industrial air toxics and we support inclusion of multiple facility cumulative risk in the CAO program. However, for the program to be truly health based, the Agencies must take a broader view of cumulative risk in order to get an accurate picture of the overall public health risk from toxic air emissions. We provide the following comments and questions for the Agencies to consider in drafting the regulations for cumulative risk.

A. The Program Should Include “De Minimis” Facilities in Cumulative Risk Calculation.

During the April 4, 2017 Advisory Committee meeting, DEQ explained that emissions from facilities that screened out below de minimis levels (0.5 in 1 million cancer risk and HI of 0.5) would not be included in the cumulative risk calculation for multiple facilities (Program Elements 9 and 16). Additionally, those de minimis facilities will not be subject to any reporting requirements. We are concerned with this approach as it has the potential to exclude multiple facilities within a community from the analysis of cumulative risk. For example, there may be a scenario where there are several facilities within a geographic area that individually fall below de minimis risk levels but collectively, along with other facilities in the area, pose a risk above the allowable cumulative risk limit. If left out of the cumulative risk calculation, those de minimis facilities are essentially treated as having zero risk, skewing the analysis of the actual risk posed to a community.

We propose that the Agencies include all de minimis facilities in area cumulative risk calculations at the level of 0.5 in 1 million cancer risk and HI of 0.5 for non-cancer risk. The Agencies should also require these facilities to periodically report emissions, or certify continued compliance, to confirm that facility emissions remain at “de minimis” levels. This will ensure that calculations and regulation of cumulative risk from multiple facilities is truly health-based.

B. Area Cumulative Risk Limits Should Include Individual Facility Reduction Requirements.

*Questions:* How will the program regulate facilities in a defined area that are below the individual facility allowable risk (e.g. 10 in 1 million), but collectively exceed the allowable area cumulative risk? Will the incentive or requirement to reduce individual risk occur only where there is a proposed new or expanded facility? Does the duty to reduce risk to make room for a new or expanded facility shared among all facilities in the area or does it fall only to the new or expanding source?

We propose that the final rule include some additional community engagement and risk reduction requirements for facilities that are within an area where total industrial emissions exceed the allowable cumulative risk limit, even where those facilities do not exceed the individual facility allowable risk limit. This will ensure the program prioritizes reducing area cumulative risk below acceptable health-based limits in all communities and will distribute the burden among all facilities to make room for new or expanded industry.

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C. Area Cumulative Risk Calculations and Requirements Should Include Consideration of Background/Ambient Concentrations.

*Questions:* What is the public health basis for the range of 20 to 80 in 1 million proposed in the framework (Program Element 9)? How does that range relate to the overall cumulative risk from air toxics posed from all sources, including mobile and non-industrial sources of air toxics?

In order to be truly health based, the program must incorporate consideration of background and non-industrial sources of air toxics in setting allowable area cumulative risk limits. Non-industrial sources of air toxics are part of the overall cumulative risk to a community and cannot be left out of a program that aims to reduce air toxics to healthy levels. During the April 4, 2017 Advisory Committee meeting, the Agencies explained that the proposed range for allowable cumulative risk for multiple facilities in an area was derived from Oregon's statewide average for cumulative risk (~40 in 1 million) according to the 2011 National Air Toxics Assessment ("NATA"). Based on this number, the Agencies proposed an allowable cumulative risk for industrial air toxics in the range of ½ – 2x the state average: 20 to 80 in 1 million. However, the NATA includes data not only for industrial sources of air toxics, but also for nonpoint sources including residential wood smoke and mobile source emissions. Thus, the statewide average for cumulative cancer risk from air toxics includes all of these sources.

According to the NATA, industrial (point stationary) air toxics emissions account for only 0.22 in 1 million, or approximately 0.5%, of the overall 40 in 1 million cancer risk from air toxics. Per tract, the NATA shows that the highest measure of industrial air toxics in Oregon is in Linn County (Tract 41043030800) with a 7.5 in 1 million cancer risk from point stationary sources, accounting for approximately 20% of the overall cumulative risk (36.4 in 1 million) in that tract. In light of this data, why are the Agencies proposing to give industry the full share of the statewide average cumulative risk of 40 in 1 million, or perhaps even double that amount to 80 in 1 million? If industry is responsible for roughly 0.5–20% of the cumulative risk from air toxics throughout Oregon, why would the program allow industrial sources to emit up to 100%, 200%, or even 50% of the overall cumulative risk to a community? This approach ignores the other sources of air toxics in a community and allows industry to disproportionately contribute to the cumulative risk.

We know from NATA and the Portland Air Toxics Assessment ("PATA") that there are communities throughout the state that are disproportionately impacted from high levels of ambient air toxics from non-industrial sources, particularly diesel particulate emissions.<sup>1</sup> In order to protect public health, the program must include a mechanism to address non-industrial and ambient sources of air toxics either directly or indirectly. When incorporating considerations of background sources of air toxics, the program should focus on the most heavily impacted communities and prioritize those communities for risk reduction. Several other state and regional air toxics programs incorporate background or ambient air toxics in some manner,

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<sup>1</sup> In fact, according to PATA, "Diesel particulate matter alone contributes to 90–99 percent of the cumulative non-cancer and cancer risk in the Portland area."  
<http://www.deq.state.or.us/aq/toxics/docs/pataconclude.pdf>, at 134.

including New York, Texas, and the Bay Area Air Quality Management District. Below are two proposed alternatives for incorporating background/ambient air toxic concentrations into the cumulative risk analysis.

1. Throughout the CAO process, the Agencies have affirmed that crafting regulations that seek to protect the health of the most vulnerable communities will in turn protect the health of all Oregonians. Working from this principle, one approach is to set a statewide allowable cumulative risk level for industrial air toxics based on conditions in the most vulnerable, heavily impacted community. First, the Agencies should establish an acceptable health-based risk level for all sources of air toxics to serve as the baseline. Then, the Agencies could use a combination of the NATA and AERMOD to identify the communities with the highest levels of cumulative cancer risk from all sources of air toxics. Once those communities are identified, the Agencies could determine, roughly, what proportion of the cumulative cancer risk in the community is attributable to industrial point sources. That proportion should serve as the basis for the allowable cumulative risk limit for multiple facilities in the CAO program. This would ensure that the regulatory threshold is protective of even the most vulnerable communities. With this conservative limit in place statewide, facilities located in communities with lower levels of background/ambient concentrations of air toxics or where industrial sources make up a larger proportion of the overall cumulative risk could employ refined modeling and monitoring to justify an area cumulative risk above the baseline limit.

For example, assume that the acceptable health-based risk level for all sources of air toxics is 100 in 1 million; this is the baseline. According to the NATA, the tract with the highest cancer risk is in Multnomah County (Tract 41051010600) with approximately 86 in 1 million total cancer risk from all sources. Within that tract, industrial point sources account for 0.23 in 1 million cancer risk, or 0.2% of the total cumulative risk. Thus, this tract would serve as the basis for the allowable cumulative risk limit in the program. Acknowledging a degree of conservatism and inaccuracy in the NATA, perhaps the statewide limit for area cumulative risk from multiple facilities could be set at 10 in 1 million. From there, individual facilities could request, and justify, variances from the baseline cumulative risk limit according to the conditions in their specific area. For instance, in an area with low background concentrations of air toxics where industrial sources account for 40% of the total cumulative risk, facilities in the area may use modeling and monitoring to justify a cumulative risk limit of 40 in 1 million. This approach provides a more accurate representation of the area cumulative risk that is actually attributable to industrial sources by including consideration of background/ambient concentrations, while also protecting the most vulnerable communities.

2. A second possible approach to addressing background/ambient concentrations of air toxics is to set the limit for cumulative risk from multiple industrial facilities in an area based on the statewide average of 40 in 1 million and then focus additional agency resources and impose additional risk reduction requirements in those communities identified as being most heavily impacted from background/ambient concentrations of air toxics. This approach would require the Agencies to dedicate resources early in the

regulatory process to identify those communities with the highest levels of cumulative risk from air toxics. Once identified, those communities would be prioritized for regulation and program implementation. Individual facilities located within an identified high-risk community would be subject to additional regulatory requirements for risk reduction and mitigation. These requirements could include facility specific risk reduction measures or localized risk mitigation activities, such as wood stove replacement, diesel engine retrofits, and idling restrictions aimed at reducing the area cumulative risk to below the acceptable baseline cumulative risk level (e.g. 100 in 1 million).

This approach is similar to those of the Bay Area Air Quality Management District (“BAAQMD”) and the Texas Commission on Environmental Quality (“TCEQ”). The BAAQMD conducted a study to identify Community Air Risk Evaluation (“CARE”) designated areas. CARE areas are defined as areas where levels of toxic air contaminants are higher than other areas and where people may be particularly vulnerable and may bear disproportionately higher adverse health effects.<sup>2</sup> These areas were identified using air pollution data and health records to determine mortality rates and rates of illness aggravated by air pollution.<sup>3</sup> A facility located within a CARE area may be subject to an expedited risk reduction schedule depending on the risk posed by that facility. In Texas, the TCEQ uses NATA to identify areas with concentrations of air toxics above a level of concern.<sup>4</sup> In areas where monitoring indicates concentrations of potential concern, TCEQ uses an Air Pollutant Watch List to focus agency resources and efforts to reduce ambient levels of chemicals of concern from all possible sources.<sup>5</sup>

## II. Setting and Administering Allowable Risk

### A. Risk-Based Concentrations

The Framework establishes that risk-based concentrations (“RBCs”) for chronic and acute health risks be adopted in rule, using available toxicological data from a hierarchy of authoritative bodies. We have several suggestions to ensure this process maximizes protection of human health, including suggestions about the concentration averaging times, the hierarchy of authoritative bodies, the 3-year intervals, and the time between triennial reviews.

For concentration averaging times, when available from authoritative bodies, we recommend the Agencies include RBCs for annual, 24-hour, 8-hour, and 1-hour intervals, as well as RBCs for

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<sup>2</sup> [http://www.baaqmd.gov/~media/files/planning-and-research/workshops/2016/1118-and-1216/10142016\\_rg1118-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/workshops/2016/1118-and-1216/10142016_rg1118-pdf.pdf?la=en).

<sup>3</sup> [http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/ImpactCommunities\\_2\\_Methodology.ashx?la=en](http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CARE%20Program/Documents/ImpactCommunities_2_Methodology.ashx?la=en) (previous methodology for defining CARE areas relied on socioeconomic information to determine vulnerability).

<sup>4</sup> [http://www.tceq.texas.gov/toxicology/q-a/cumulative\\_risk](http://www.tceq.texas.gov/toxicology/q-a/cumulative_risk).

<sup>5</sup> <http://www.tceq.texas.gov/publications/rg/rg-442.html>, p.7.

other intervals upon a demonstration that additional intervals are appropriate.<sup>6</sup> Exposure and effects can vary significantly depending on the averaging period. The 8-hour period is particularly important to ensure the protection of people who work in the area at the same time a facility emits pollutants. The Technical Workgroup noted that multiple averaging times are appropriate when the data is available, and explained that having multiple averaging times has not posed a problem for other air toxics programs, like Washington.<sup>7</sup> Given that this process is not overly cumbersome but has a significant advantage of ensuring protective RBCs that are more representative of how a community ingests toxics, we encourage the agencies to consider including additional intervals for RBCs.

Regarding the hierarchy of authoritative bodies, we recommend including additional authoritative bodies and selecting the RBC based on the best current science instead of the proposed hierarchy. The Framework includes few authoritative bodies. We request that the agencies broadly consider the best current science from other experts, such as the California Department of Toxic Substance Controls—or generally any department within CalEPA—and other California lists like the Safer Consumer Product regulations. Additionally, the Agencies should consider non-peer reviewed reports on a case-by-case basis, if the reports are from reputable researchers under good laboratory practices. For the hierarchy, the Technical Workgroup explained that using a hierarchy would not always give the Agencies the best information. Rather, toxicity values should be based on the best current science available. When there is dispute about which authoritative body or report is the “best current science available,” the Agencies should err on the side of protecting public health and include the RBC that is most protective.

According to the Framework, agency staff would review and update RBCs at 3-year intervals. Changes to the RBCs would require notice and comment rulemaking, which would drastically slow the process. If the agencies are committed to rulemaking, we request the final rules include automatic rulemaking requirements on 3-year intervals. We encourage the Agencies to expressly require rulemaking every 3 years shortly after the review and update from agency staff and provide a reasonably short timeline for each rulemaking interval.

Additionally, the Framework establishes that, between triennial reviews, anyone could propose that a new toxic air pollutant be added to the list if (1) they can show there is enough toxicity information to develop an RBC and (2) there is evidence that the chemical is emitted by an industrial facility in Oregon. We request that the final rule only includes the first requirement. Members of the public frequently do not have access to data from industrial facilities to determine whether a facility in Oregon emits a certain pollutant. Further, this information is

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<sup>6</sup> Louisville uses annual, 24-hour, 8-hour, and 1-hour, and additional intervals upon demonstration that those intervals are appropriate. New Jersey uses annual and 24-hour and uses the 24-hour level to break it down into 1-hour or 8-hour levels as appropriate. Rhode Island uses 1-hour, 24-hour, and annual levels. South Coast uses 1-hour, 8-hour, and chronic (annual). Washington uses annual, 24-hour, and 1-hour. Michigan uses annual, monthly, 24-hour, 8-hour, and 1-hour. CAO Technical Work Group Final Report, p. 31–32.

<sup>7</sup> CAO Technical Work Group Final Report, P. 32–33.

irrelevant to setting RBCs, which is based on toxicity levels, not the presence of that pollutant in Oregon.

### B. Allowable Risk Levels and Screening

The Framework provides new and existing whole facilities with a 10 in 1 million/HI 1 risk (Program Elements 14 & 15). If a facility exceeds that threshold risk level, it would have to comply with a community engagement and risk reduction plan; if the facility exceeds a higher threshold of 25 in 1 million/HI 3, it would receive an accelerated risk reduction schedule. Although not clear, the Framework suggests that facilities would receive new permits and continue to operate under existing permits regardless of the level of threshold exceedances. Several Advisory Committee members expressed concern about facilities operating above the risk thresholds, noting that such an allowance seems contrary to public health.

We request that program include “hard acceptable risk levels”—like the South Coast Program—for new and existing facilities beyond which the facilities could not continue operating.<sup>8</sup> For new and modified facilities, we propose a hard risk level threshold of 10 in 1 million/HI 1. New facilities should not be permitted to initiate operations above the allowable risk threshold. If a facility seeks a permit for emissions above that threshold, the Agencies should deny the permit. This approach fosters innovation and incentivizes new facilities to design their processes and facilities in a way that minimizes risk from air toxics.

For existing facilities, we propose that risk reduction plans include a reasonable timetable for the facility to come into compliance, which should be incorporated into a facility’s permit. If a facility cannot come into compliance within the timetable, they should not be allowed to continue to operate in violation of the threshold. We appreciate that older facilities need time to come into compliance with the health-based allowable risk levels, but a public health-focused program cannot allow facilities to continue to operate at unsafe levels without enforcement. Like the South Coast Program, we recommend an appeals process for facilities to show on a case-by-case basis why their operation above the acceptable risk level would not overly-burden the public, such as if there are no communities in the area to breathe the toxic pollutants.<sup>9</sup>

### III. **Community Engagement**

The Framework includes community engagement requirements for facilities whose risk is greater than the allowable risk levels. In those circumstances, facilities must develop and implement community engagement plans. Additionally, the Framework includes multiple requirements for the Agencies, such as employing an environmental justice staff member and developing plain language documents. We appreciate the Agencies’ efforts to engage the public and include an environmental justice staff member, and offer the following suggestions to improve these efforts in the final rule:

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<sup>8</sup> See <http://www.deq.state.or.us/nwr/docs/metalsem/Notes063016.pdf> at 6.

<sup>9</sup> See <http://www.deq.state.or.us/nwr/docs/metalsem/CleanAirOverhaul-FinalReport.pdf> at 57 (discussing the need for caution when setting hard lines) (South Coast has an appeal process, but rarely grants them).

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- Expand community engagement requirements to apply to facilities where area cumulative risk from multiple facilities is above allowable limit, even where individual facilities are below whole facility risk threshold.
- Remove the “dependent on funding” language for agency community engagement requirements. This language suggests that these requirements are optional and devalues the Agencies’ crucial role in engaging the public;
- Make community engagement plan requirements express and detailed in the final rule. This is a new area for the Agencies and for industry, so clear requirements are key to effectively engaging the community;
- Require all agency and industry documents prepared for communities to reflect the average education level for each specific community. Education levels vary by community, but a conservative goal would be to prepare plain language materials for a community with an 8th grade education;
- Actively involve local environmental justice organizations in all environmental justice trainings for agency staff. The needs of each community varies, and local environmental justice organizations could help the Agencies identify the unique needs for their communities;
- Include childcare services for public meetings in the “best practices” for agency community engagement efforts; and
- Include requirement for DEQ to notify local municipalities when there are permit violations at facilities located in their jurisdiction.

#### **IV. Additional Comments on Program Elements**

##### **A. Categorical Exemptions (Program Element 3)**

Categorically exempt sources should be under a minimal reporting obligation to ensure that its determination of exemption is reviewed periodically (i.e. every five years). The program should include “on-ramps” back into the program for sources that may fall within categorical exemption but present unique circumstances that warrant further analysis and/or regulation.

##### **B. Phasing (Program Element 20)**

In addition to phasing implementation based on those communities with cumulative risk from multiple industrial facilities, we propose that within that framework DEQ prioritize environmental justice communities and those communities that face high cumulative risk from all sources of air toxics.

##### **C. Looking Beyond the Current Permitting Program (Program Element 21)**

We support the Agencies’ proposal to look beyond the current permitting program to identify potential sources of toxic air pollution. We request that the Agencies look specifically to regulating Concentrated Animal Feeding Operations (“CAFOs”) under this approach. CAFOs, at least large dairy CAFOs, should not be definitively off the hook. EPA has long recognized that CAFOs can be considered stationary sources for purposes of Clean Air Act regulation.

ORS 468A.020 generally precludes the application of Oregon air pollution law to agricultural sources, except in several instances. One of the exceptions to the broad agricultural exemption is when “necessary for the Environmental Quality Commission, in the commission’s discretion, to implement a recommendation of the Task Force on Dairy Air Quality.” The Task Force on Dairy Air Quality expressly recommended that a system of air quality regulation from dairies should prioritize reductions in ammonia and methanol. Ammonia, methanol, and also hydrogen sulfide (and potentially other air toxics commonly associated with CAFO emissions) are on the air contaminants list currently being used in the Agencies’ emissions inventory.

#### D. Compliance (Program Element 23)

The Framework briefly addresses compliance by noting that compliance activities would include inspections and, where applicable, permit requirements for recordkeeping, reporting, source testing, continuous emissions monitoring, and monitoring pollution control device equipment to ensure good operation. In addition to those activities, we suggest the Agencies include the following in the final rule:

- A provision that explicitly addresses the Agencies’ authority to take enforcement action when a facility fails to comply with its permit conditions. This should include enforcement authority if a facility fails to comply with a Risk Reduction Plan, Accelerated Risk Reduction Plan, or Community Engagement Plan, all of which should be incorporated into a facility’s permit; and
- A citizen petition mechanism to request regulatory action or changes, including:
  - Regulating individual or categories of sources previously considered categorically exempt;
  - Creating RBCs for pollutants;
  - Requesting inspection of and reporting for a facility that may be in violation of its permit, and if necessary, petitioning for a Risk Reduction Plan, Accelerated Risk Reduction Plan, or Community Engagement Plan for a facility;
  - Requesting inspection of and reporting for a de minimis facility that may be exceeding the de minimis threshold, and if necessary, petitioning for a permit issuance for a facility; and
  - Requesting the Agencies to enforce against a facility known to be in violation of its permit, including its Risk Reduction Plan, Accelerated Risk Reduction Plan, or Community Engagement Plan.

#### E. Evaluation (Program Element 25)

The final rule should expressly incorporate periodic review of the program to ensure the success of the program and protection of public health. Periodic review should include an updated emissions inventory, review of categorical exemptions, review of sources of air toxics beyond the permitting program, and necessary updates to RBCs and allowable risk levels.

### V. **Indirect and Non-Industrial Sources of Air Toxics**

In launching the Cleaner Air Oregon program, Governor Brown expressed concern for regulatory gaps in federal and state air quality programs that fail to protect public health from

toxic air pollution. Perhaps the most concerning regulatory gap is Oregon's lack of regulations and controls on diesel emissions. Compared to our neighbors in Washington and California, Oregon is falling far behind in regulating diesel emissions. Ten years ago, Oregon set a goal for itself to reduce the excess cancer risk from diesel engine emissions to 1 in 1 million by 2017. We have failed to meet this goal and the individual targets intended to achieve risk reduction due to industry pressure and a lack of political will. Just this week, we watched as Senate Bill 1008—intended to reduce diesel emissions across the state—was gutted under industry pressure, leaving little hope for a legislative solution to this major problem.

We believe that in order for the Agencies to establish and implement truly health-based regulations for addressing toxic air emissions, the program must include considerations and regulations of indirect and non-industrial sources of air toxics. Cumulative risk cannot be viewed in a vacuum, separate from the significant risks posed to communities throughout the state from diesel emissions. At minimum, the CAO program should hold industry accountable to reducing diesel emissions that are directly related to facility operations, including from generators, on-site equipment use, and idling trucks at warehouses or distribution centers.

## **VI. Conclusion**

Thank you for the opportunity to provide these comments on the draft framework for the Cleaner Air Oregon regulations and for considering our groups' concerns. We greatly appreciate the work of the Co-Chairs and the Agencies throughout the Advisory Committee process and look forward to review the draft proposed regulations in the coming weeks.

Sincerely,

Huy Ong, Executive Director  
OPAL Environmental Justice Oregon

Jo Ann Hardesty, President  
NAACP Portland Branch

Mark Riskedahl, Executive Director  
Northwest Environmental Defense Center

Mary Peveto, President  
Neighbors for Clean Air

Wednesday April 19th, 2017

**Delivered via electronic mail to: [cleanerair@deq.state.or.us](mailto:cleanerair@deq.state.or.us)**

Jacqueline Dingfelder

Co-Chair, Cleaner Air Oregon Rulemaking Advisory Committee

Claudia Powers

Co-Chair, Cleaner Air Oregon Rulemaking Advisory Committee

**RE: Written comments regarding Cleaner Air Oregon Proposed Framework, covered during the meeting on April 4th, 2017**

Dear Co-Chairs Dingfelder and Powers,

Thank you for providing an opportunity to comment on the proposed Cleaner Air Oregon framework. Representing the most densely populated part of Oregon provides the large counties a unique perspective on the imperative for clean air. Based on this perspective, an air toxics program must have the following principles:

- 1. The program must be health based.** The Governor clearly articulated that Cleaner Air Oregon will be a health based air quality program. This means prioritizing human health in rulemaking and enforcement. The framework presented by DEQ captures this principle to a large extent, although specific areas can be strengthened as outlined below.
- 2. Background pollution matters.** People don't experience health impacts from air quality on an isolated pollutant or facility specific basis. Rather, it is the toxic mix of pollutants that people experience where they work, live and play that matters most. The Cleaner Air Oregon program must recognize how people actually experience air pollution.
- 3. Those who have been most harmed need the most protection.** People of color and low income populations have been disproportionately impacted by air pollution. The Cleaner Air Oregon program is required by Oregon statute to consider the impacts on this population. Moreover, the agency needs to have a specific plan on how to engage with these communities, and how to address their concerns, when making permitting decisions in affected areas.
- 4. Celebrate innovation.** Clean air regulations have proven to have a massive net economic benefit to the economy. Far from causing harm, regulations that protect human health, and are well implemented will spur innovation by businesses leading to greater operational efficiency and other benefits. Oregon businesses are some of the most innovative in the world and want to operate within the law and protect their communities. Industry can benefit from regulation, and the Oregon Department of Environmental Quality should help businesses achieve these goals within the new framework.



## **Applicability**

We support the approach outlined in the draft framework that includes new, modified and existing sources, and also the specific reference to permitted and unpermitted sources. This is congruent with the belief that some facilities may have slipped between the cracks under the previous system, such as the former Portland glassmaker, Uroboros.

We support the inclusion of both individual pieces of equipment and whole facility regulation. This allows for new equipment to be brought online and evaluated independently of an entire facility permit, which would ostensibly make it easier for facility modifications, including updates to pollution controls for individual pieces of equipment.

Finally, we support the inclusion of categorical exemptions in the permitting program, so that cumbersome, unnecessary “insignificant activities” can be removed from the process, thereby increasing efficiency. The classification of those activities should be available for public review prior to finalization and program design should allow for regular and formal review of activities deemed insignificant.

## **Pollutant Scope and Setting Concentration Levels**

We support the regulatory inclusion, in permitting decisions, of the list of 215 chemicals for which authoritative bodies have developed risk-based concentrations. We also support required reporting on the 660 pollutants included in the combined list derived from other programs. However, the need for regular and formalized review of chemicals and human health risk cannot be stressed enough- as time goes on we learn more and more about the interactions between chemicals and our bodies. Accordingly, the regulatory system should be flexible in order to respond to developments in research and therefore be truly health protective and representative of the most current toxicological research. A process should be developed that allows anyone to petition the State to include specific chemicals or family of chemicals for review and formal inclusion in the regulatory program.

We support the use of annual and 24 hour averaging times for setting and evaluating risk based concentrations. However, these ‘benchmarks’ will be ineffective unless protective values are used. Oregon’s Air Toxics Science Advisory Committee has been active for approximately twelve years. Although the committee’s deliberations are based on a review of primary toxicological and epidemiological literature, their findings overwhelmingly reaffirm risk based concentrations established by authoritative bodies such as the California Office of Environmental Health Hazard Assessment and the Agency for Toxic Substances and Disease Registry. Given the substantial body of work involved in promulgating and implementing new rules for industrial sources and the quality of existing risk based concentrations from authoritative bodies, we agree that it is prudent to select from existing values. There may be an appropriate role for ATSAC moving forward in reviewing data on emerging pollutants or pollutants where no RBC exists.

We agree that, given the work associated with updating program requirements and permits, 3-years is an appropriate time interval for regular review of RBC’s.

## **Cumulative Risks and Background**

We support the use of chronic cancer, chronic non-cancer, and acute non-cancer values in determining total risk for a given facility. We support the recognition and use of additive toxicity where there is no evidence for synergistic or antagonistic effect.

Concerning allowable risk for a facility or multiple facilities in an area (cumulative risk from multiple industrial sources), this value should be set conservatively (e.g. 5 or 10 in one million) since background air pollution is not being considered in the analysis. Background pollution matters. If a neighborhood is already saturated with disproportionate pollution, facilities sited or wishing to site in the area should be part of the solution, not add to the problem. Excluding background sources from consideration in permitting decisions is antithetical to a health based approach to regulation. If background sources were included, the acceptable risk could be set higher. This approach would be protective in high risk urban areas, while allowing facilities in rural Oregon greater flexibility.

We support the consideration of cross exposure media pathways for those pollutants that are persistent, bioaccumulative and toxic, using the South Coast multipathway adjustment factors. Pollutants with highly toxic or enduring characteristics warrant special consideration.

Evaluating and integrating past exposure to air toxics permitting is challenging, as is illustrated through the lack of this component in even the most aggressive of permitting programs. However, we think that establishing a strong screening tool to identify environmental justice communities is integral to prioritizing and protecting those communities that are most likely to have experienced past exposure to air toxics. The agency should use all existing data available to inform past exposures, including but not limited to historical permits, cleanup program records, permit violation data and longitudinal epidemiological studies. If there is not sufficient evidence to quantify past exposure, we believe the agency holds the responsibility to officially acknowledge policies and practices that disproportionately targeted communities of color and low income individuals and families.

### **Allowable Risk Levels**

We support the use of a 1 in 1 million ( $1 \times 10^{-6}$ ) cancer risk threshold and a hazard quotient of 1.0 for non-cancer risk for screening purposes. This is consistent with other states' approach, and also DEQ's own standard for clean-up.

New and existing facilities should be accountable to the same risk thresholds. Concerns regarding fairness and the additional cost burden on existing facilities should be addressed through a phased-implementation of the new rules. Where it is technically infeasible for a facility to reach a defined risk threshold LAER should be required. However, there should be a cap at which a permit will no longer be issued; either a facility risk cap or cumulative area cap. Protective standards should not be perceived as punitive; new regulatory requirements can lead to innovation in manufacturing that benefit the producer, consumer and the environment.

### **Screening and Risk Assessment**

De minimis values are an important tool in helping the agencies prioritize work. However, facilities falling below de minimis must be subject to reporting into an aggregate emissions inventory. At the proposed excess cancer risk threshold of 0.5 in 1 million and Hazard Index of 0.5, it would take just three facilities to exceed the proposed risk screening level of 1 in 1 million and HI of 1. As discussed in prior comments, the rules should allow for "on-ramping" of facilities that emit below de minimis, so that they are not granted a perpetual exemption from all regulation.

We support the use of significant emission rates as a screening tool to determine if a facility should be held to a more complex emissions modeling requirement. The proposed criteria (Reference Emission Rates that are back-

calculated using AERSCREEN) are technical and difficult to understand. The finalized process should be vetted, well documented and accessible to the public.

We support the use of AERSCREEN and AERMOD in a tiered requirement for facility emissions modeling. However, computer models are only as useful as the data that's input, and the parameters of the software. We suggest that the agency develop acceptable use guidelines for approved models, and require that permittees provide adequate evidence for quality assurance if they are to deviate.

## Implementation

We support the proposed approach of issuing air toxics permits separate and distinct from existing Title V and ACDP permits, and then merging the permits at time of renewal. This will allow for manageable implementation of the toxics program while maximizing efficiencies of permit renewal.

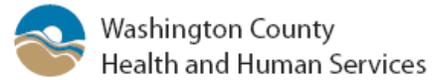
We support the use of any and all available sources of data when looking beyond currently permitted facilities to identify other potential sources of air toxics.

The rules outlined in the Community Engagement element seem reasonable, but the proposed plan for implementation is troubling. In early 2016, the public was informed that several industrial facilities in the Portland area had been emitting harmful levels of air toxics for decades, unabated. Much of the public lost trust in an agency mired in issues of transparency and public stewardship. If the agency is to regain the trust of the people it serves, community engagement must be a priority in Cleaner Air Oregon. In the proposed framework, implementation of community engagement activities is characterized as "dependent on funding" - which is completely unacceptable. DEQ and OHA should fully fund and implement their EJ responsibilities pursuant to ORS 182.545. Under this statute both agencies are required to create and staff a "citizen advocate position" responsible for:

1. Encouraging public participation
2. Ensuring that the agency considers EJ issues
3. Informing the agency of the effect of its decisions on communities traditionally underrepresented in public processes

The agencies must fund full-time "citizen advocate" positions, not add the label to existing positions (as is currently done), and certainly shouldn't indicate that these positions and corresponding engagement activities are "dependent on funding". The agency could also consider the addition of an independent ombudsman position to increase transparency, access and meaningful influence for an agency seeking to rebuild public trust.

Concerning compliance, the proposed activities are vague. We support an enforcement system that's transparent and efficient, where permitted facilities are held accountable to conditions outlined by the agency.



Overall, we believe that the rules outlined in this framework are an excellent starting point for a robust, progressive industrial permitting program. When approaching decisions on the final rules we ask that you consider the following:

- Background pollution matters
- Rules must be health based
- Protecting the most vulnerable in our communities is protective to all; and
- Celebrate innovation that can result from enhanced permitting

We appreciate the opportunity to provide written comment on the proposed framework for Cleaner Air Oregon. Please do not hesitate to contact with any questions.

Sincerely,

/s/ Jae Douglas

Jae P. Douglas, MSW, PhD  
Environmental Health Services Director  
Multnomah County Health Department





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Development and Events

April 20, 2017

Jacqueline Dingfelder, Co-Chair, Cleaner Air Oregon, RAC  
Claudia Powers, Co-Chair, Cleaner Air Oregon, RAC

### **Re: Comments Pertaining to the April 4, 2017 Cleaner Air Oregon Advisory Committee Meeting**

Dear Co-Chairs Dingfelder and Powers,

Thank you for the opportunity to serve on the Cleaner Air Oregon Advisory Committee. I am writing to briefly express my comments on the CAO Framework as presented by the DEQ and OHA during the April 4<sup>th</sup> meeting.

We support Agency efforts to account for and regulate cumulative air toxics risks for communities. The following suggestions are not exhaustive, but are targeted to further elucidate points that were made during the meeting.

#### Regulations:

1. Deminimis Facilities: Facilities that emit below the deminimis level must be included in a cumulative risk analysis.
  - a. Facilities that qualify as deminimis should report to the DEQ on a bi-annual basis, at a minimum to determine if the facility has exceeded their allowable deminimis emissions.
  - b. If exceedences occur due to increased production or changes in manufacturing processes, the DEQ needs to develop a clear "on-ramp" system to bring that facility into the permitting regulatory process.
  - c. Data obtained from facilities with deminimis emissions must be included in Agency monitoring and calculation of area cumulative risk. Two or more facilities emitting air toxics at or below deminimis levels may be additive, causing pollution to rise to unhealthy levels within the boundary of a geographic area.
  - d. Pollution reporting and assessment of possibly cumulative impacts is necessary because, without these data points, the DEQ will lack the necessary data by which to assess cumulative impacts and chronic exposures.
  - e. Facilities reporting deminimis emission levels should be required to pay a small annual fee into the program (e.g., \$200/year), report their emissions and production levels and submit to inspection and/or monitoring every four years.

1. Wet and Dry Deposition: DEQ must account for both wet and dry deposition of chemical emissions.
  - a. This is necessary to determine where the fallout of chemicals occurs and their impacts on nearby residential neighborhoods and water bodies.
  - b. Included in this should be an analysis of chemical transformation in the environment.
  
2. ACDP Permit Category Terminology Overhaul: DEQ should overhaul its ACDP permit categories to reflect the toxic impacts of polluters and to achieve more clarity and transparency for the public. The current system, using terms like general-simple-standard, communicates nothing to the public about the relative toxic impacts of these facilities. CAO goals include increased public transparency and outreach to neighborhoods and communities, so in order for this goal to be met, terminology must be more descriptive. Current permit categories are vaguely labeled:
  - a. ACDP General
  - b. ACDP Simple Low
  - c. ACDP Simple High
  - d. ACDP Standard
  - e. Title V
  
3. Fees should reflect Pollution Impacts: The DEQ should re-evaluate its fee schedule and take initiative to make fees commensurate with a polluter's impact.
  - a. The current fee increases are not commensurate with health risks and impacts at all. From a public health point of view, a one-time assessment for CAO of merely \$432 for a creosote manufacturer is ridiculously and arbitrarily low compared to the impact their emissions have on the health of nearby neighborhoods and to the quality of soil and ground water onsite.
  - b. For example, even if the DEQ charged the same annual fee to every facility to cover the cost of 6 FTE to carry out CAO in the future, that fee would only be \$434 (\$1,095,790/2525) !! This is miniscule and polluters should be asked to fully pay for the implementation of CAO.
  
4. Environmental Justice and 10 Cancers per Million: Currently the DEQ has proposed that if a facility is responsible for less than 10 cancers per million, they don't have to install pollution control equipment. This is an unacceptable standard.
  - a. The proposed standard doesn't account for acute and cumulative exposures that may create more cancers than estimated.
  - b. Nor does it safeguard vulnerable populations. To respect vulnerable communities and their long-term and cumulative exposures to industrial chemicals, all facilities above de minimis levels should be responsible to have

control equipment and to reduce their chemical pollution with Toxics Use Waste Reduction strategies.

- c. Furthermore, for facilities of RER greater than 10/million, the DEQ needs to lay out a clear strategy and a timeline for how pollution reductions will be measured and monitored. If polluters do not meet the criteria and requirements, there should be substantial penalties to convince polluters to take steps to reduce their high levels of carcinogenic pollution.
5. Allowable Risk and Risk Based Concentrations:
- a. Oregon agencies don't have the resources to develop an independent set of RBC's. We recommend that the CAO utilize the best current science and implementation from experts in other state air regulatory authorities. Let's not waste time and money reinventing studies and analyses. Oregon should consider previous analysis and work by CalEPA.
  - b. We recommend the Agencies model RBCs for annual, 24-hour, 8-hour, and 1-hour intervals.
  - c. For developing RBC's for routes other than inhalation, is the DEQ considering breast milk, dermal exposures and bio-accumulative factors when determining the RBC's? This would be very important to include in the Framework.
6. Compliance to Reduce Risk: Beyond Toxics supports the CAO goal to require compliance to measurably reduce health risks from air toxics. We have confidence that the DEQ intention to adopt permit requirement for continuous emissions monitoring, source testing, pollution control equipment testing, reporting and recordkeeping will result in reduced health risks. We urge the DEQ to establish rules for compliance, including but not limited to:
- a. The DEQ must develop a protocol that will come into play when a facility exceeds the established risk level or multiple facilities in a boundary exceed chronic or cumulative risk to health. We recommend that the Agency consider adopting the following compliance requirements:
    - i. All facilities with ACDP permits must be required to submit a meaningful and substantive Toxics Use Reduction Plan to the DEQ on a bi-annual basis.
    - ii. Industries must demonstrate successful achievement of their Toxics Use Reduction Plan.
    - iii. Pollution reduction can be verified by materials balancing reporting and "before and after" fence line monitoring.
    - iv. Failure to achieve the goals of pollution reduction will result in fines.
  - b. If an industry exceeds or fails to comply with its permit, the DEQ must exercise its authority to impose fines and production limits, as well as hold the industry to a tight schedule to achieve the goals of their Toxics Use Reduction Plans.

- c. The DEQ must be able to withdraw an air permit if a facility fails to reduce risk below Allowable Risk levels within a specified time frame.
- 7. Different risks levels for existing and new sources: Beyond Toxics does not support the large range for acceptable cancer and non-cancer risk proposed in the Framework for new sources.
  - a. DEQ's suggested range of 20 and 80 in 1 million / between HI 2 and 4 is too lenient.
  - b. This is particularly true taking into account that the DEQ does not want to include background exposure levels in the permitting rules, and may have trouble calculating cumulative risk.
  - c. Regulatory agencies should use more protective risk levels; we would like to see risk kept at between 10 and 20 cancers per million and an HI of no greater than 2 for additional new sources.
- 8. Community Engagement: Beyond Toxics applauds the agencies' new efforts to ensure meaningful community engagement and participation (which is something quite different from the current practice of a one-way presentation followed by Q&A).
  - a. The CAO plan needs to spell out the actual baseline criteria for community engagement, and how to achieve and document measurable outcomes of community engagement.
  - b. The community itself must provide the feedback to judge engagement. This should not be left up to the polluter, however funding must be provided by the polluter.
  - c. The DEQ should remove language from the Framework that devalues community engagement by requiring it only if funds are available.
  - d. Evaluating and tracking Environmental Justice concerns needs to be carried out by regulatory agencies, not by the industrial sources.
  - e. Agencies need to work with environmental justice leaders to help "get it right" for community engagement.
  - f. Ongoing community engagement should be a condition of a permit for all Title V facilities at the time of a new application or permit renewal and when impacts and risks exceed more than 5 cancers per million and/or impact an environmental justice community.
- 9. Implementation and Phasing: We do not support the DEQ's recommendation that new air quality regulations be incorporating into permits at the time of renewal.
  - a. Beyond Toxics recommends creating a priority list based on level of risk, cumulative impacts and the vulnerability of the nearby residential neighborhoods.

The Cleaner Air Oregon process is a model of how long-overdue regulatory overhaul can be envisioned, proposed and implemented. I applaud our state agencies for being bold, breaking with the old way of doing things and thinking health-based. Finally, through the Framework proposed for CAO, we can move Oregon into the modern era that takes into account an abundance of new science around human health and innovative technologies for sustainable industrial production.

On behalf of over 8,000 members, Beyond Toxics supports DEQ in its goal to enhance the quality of Oregon's air, land and water. I am grateful for the opportunity to participate and contribute to this process.

Sincerely,

A handwritten signature in black ink that reads "Lisa Arkin". The signature is written in a cursive, flowing style.

Lisa Arkin, Executive Director



**Bureau of Planning and Sustainability**

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April 20, 2017

Delivered via electronic mail to: [cleanerair@deq.state.or.us](mailto:cleanerair@deq.state.or.us)

Jacqueline Dingfelder  
Co-Chair, Cleaner Air Oregon Rulemaking Advisory Committee

Claudia Powers  
Co-Chair, Cleaner Air Oregon Rulemaking Advisory Committee

**RE: Written comments regarding the April 4, 2017 Cleaner Air Oregon Advisory Committee Meeting and the Draft Proposed Framework for CAO's Health-Risk Based Permitting Program**

Dear Co-Chairs Jackie Dingfelder and Claudia Powers,

The purpose of this letter is to follow up on the April 4, 2017 Cleaner Air Oregon Advisory Committee Meeting discussion and to make additional suggestions regarding the Draft Proposed Framework for Cleaner Air Oregon's Health-Risk Based Permitting Program. I appreciate the opportunity to provide written comments on these topics.

As Cleaner Air Oregon (CAO) moves forward in finalizing the program elements of the proposed Health-Risk Based Permitting Program, there are several key principles I believe should be kept at the forefront of these rules. The permitting program must be rooted in protecting public health. In putting public health first, we must acknowledge that background pollution matters and cannot be ignored. Going forward, those who have been harmed in the past and not protected by environmental and public health rules must be protected further. We must make reparations in communities with environmental justice concerns.

Additionally, a Health-Risk Based Permitting Program should promote and celebrate innovation within industry, within the Oregon Department of Environmental Quality (DEQ) and Oregon Health Authority (OHA), and in methods and pathways for community engagement.

**Specific comments on proposed program elements:**

*Program Element 9: Cumulative Risk from Multiple Facilities in an Area*

Assessing cumulative risk from multiple facilities in an area is an essential element to protect public health and environmental justice communities. DEQ and OHA need to present to the Rulemaking Advisory Committee final threshold values for cancer and non-cancer risk for this type of assessment instead of leaving these values as ranges as is currently presented in the proposed framework. The Advisory Committee can then review DEQ and OHA's rationale and methodologies for the proposed risk threshold for cumulative risk and the public will have the same opportunity to review as well.



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### *Program Element 10: Use of Background/Ambient Concentrations in the Assessment of Risk*

The proposed framework notes that the scope of this rulemaking is stationary source air toxic emissions and therefore non-industrial or background concentrations would not be considered in permitting decisions. However, the scope of this rulemaking is also to create health-based permitting rules. For areas with environmental justice concerns and other compounding exposures to pollution or characteristics that make residents more sensitive to pollution exposure, all air pollution matters and other sources besides stationary source air toxics cannot be ignored. Public health should come first. We cannot make progress on assessing cumulative risk and improving protection of health if we do not consider background and ambient concentrations of air toxics.

If monitoring data is unavailable, we could look to follow New York's state program and use the most recent National Air Toxics Assessment (NATA) data available as a way to account for background across the state. While there are some issues with these datasets, the methods are applied the same away across the state. If an industry would like to challenge the background value derived from the most recent NATA data, then the burden is on the industry to provide new monitoring data to show otherwise. DEQ and OHA should work to develop defensible methodologies for this process.

If DEQ and OHA decide the methodology to account for background concentrations in this health-risk based permitting system is still too complex, cancer and non-cancer risk thresholds must be lower than the currently-proposed levels to account for background pollution and to ensure health comes first.

### *Program Element 16: Setting and Using de Minimis Emission Rates*

There needs to be a methodology within this framework that includes facilities that are below the de minimis emission rates in the assessment of cumulative risk from multiple facilities within an area. With the current proposed Program Element 16, it's possible that cumulative risks from many stationary sources at or below de minimis emission rates will go unnoticed and/or a proper cumulative risk analysis will not be conducted for facilities in an area where stationary sources with emission rates above and below the de minimis emission rates are concentrated.

DEQ and OHA must revise their screening methodologies in order to allow for valid accounting of all facilities emitting air toxics in an area and not just those above the de minimis emission rate and/or use screening values or default values of 0.5 in 1 million and 0.5 HI in cumulative risk analysis so that the effects of many smaller sources of air toxics do not slip through the cracks.

### *Additional ideas*

- Environmental justice is mentioned only three times in this proposed framework (once in Program Element 10: Use of Background/Ambient Concentrations and twice in Program Element 22: Community Engagement), yet environmental justice was a frequent topic of discussion and focus in DEQ and OHA presentations to the Rulemaking Advisory Committee. More explicit methods for how we protect environmental justice communities in this Health-Risk Based Permitting Program need to be included throughout the framework, especially in program elements 9, 10 and 16. Also, we need DEQ and OHA to provide their definitions and methods for how they will identify environmental justice communities for this program.



- For Program Elements 18: Initial Modeling and 19: Refined Modeling, I encourage DEQ and OHA to increase transparency around modeling guidelines and be as explicit and clear in defining modeling guidelines as is possible. This will provide DEQ, OHA, community members, researchers, and industry with more tools to better perform, assess, and interpret the models central to air quality regulations.
- I also encourage DEQ and OHA staff to develop methods and practices for walking the community through the modeling process and modeling results for any permit under review. Modeling specific communication plans could be steps added to the proposed Program Element 22: Community Engagement. Transparency of the modeling processes can help build trust across communities and agencies. Improved understanding and sharing of the modeling results can help empower communities so that health is consistently being protected by the proposed CAO Framework for the Health-Risk Based Permitting Program.

Sincerely,



Susan Anderson  
Director





Eastside Portland Air Coalition

April 20, 2017

**VIA ELECTRONIC MAIL to [cleanerair@deq.state.or.us](mailto:cleanerair@deq.state.or.us)**

Jacqueline Dingfelder

Co-Chair, Cleaner Air Oregon, Rulemaking Advisory Committee

Claudia Powers

Co-Chair, Cleaner Air Oregon, Rulemaking Advisory Committee

cc: DEQ Director Richard Whitman and OHA Director Lynne Saxton

Dear Co-Chairs Dingfelder and Powers,

In the past week, we came across a few items that we find disturbing.

It has come to our attention that the Eugene and Springfield Chambers of Commerce are hosting a "Manufacturer's Roundtable on DEQ Regulations" on April 24<sup>th</sup>, featuring lobbyists for Oregon business interests including CAO Advisory Committee member Mike Freese, Vice President, AOI.

<http://business.springfield-chamber.org/events/details/manufacturers-roundtable-on-deq-regulations-8404>

The gathering is purported to be an opportunity to learn about Cleaner Air Oregon. However, we find the language of the invitation alarming, referring to the upcoming rulemaking as "*extremely stringent air emission regulations that could drive industrial businesses out of Oregon*" and claims, "As your business advocates, we recognize *this threat*."

We understand that the RAC Charter allows members to meet regularly with constituencies to gather their input and inform them on the process. We understand that the Charter allows committee members to consult with their constituents in order to advocate for them appropriately in our meetings. And we understand that there are already legislative actions underway that will impact the CAO process. However, we cannot help but feel this invitation demonstrates bad faith, betraying the intended outcome of health-based regulatory reform. By sowing fear and misinformation amongst their membership and local communities, these professional lobbyists are actively working to undermine the hard work and commitment brought to the table by the Agencies and the rest of the committee. We believe this is a violation of the RAC Charter.

There is an unfortunate disconnect in allowing paid lobbyists with a record of



## Eastside Portland Air Coalition

consistently opposing environmental and health-protective regulations to serve on this particular committee while continuing their lobbying activities designed to undercut the Cleaner Air Oregon process.

For example, find attached a "fact sheet" that was distributed to legislators at the beginning of the legislative session, *before the first draft of the new rules was released*. The language is inflammatory and contains a sweeping indictment of Cleaner Air Oregon, misinformation, and a clear indication that "Oregonians for Fair Air Regulations" have no intention of supporting or advocating in favor of the Cleaner Air Oregon process. Ever.

We support these lobbyists' right to lobby and rally on behalf of their constituents. We intend to do the same in support of CAO. However, we feel it has become a conflict of interest and a violation of the RAC Charter to *so publicly undermined the process* before their work on the committee is done and before the rules have been finalized.

We believe the upcoming meeting with the Chambers of Commerce and the attached "fact sheet" opposing Cleaner Air Oregon violate the Charter provision that obliges committee members to avoid "representing to the public or media the views of any other committee member or the committee as a whole."

We knew the opposition to this project would be fierce. We find it highly inappropriate for that opposition to CAO to be taken outside the committee meetings at such an early stage. Again, we find these actions and statements to be in bad faith. Once again our concerns about ensuring a level playing field have been renewed.

It isn't clear to us at this point what the appropriate remedy should be, but we feel it important to bring this to your immediate attention. We have dedicated countless hours in good faith towards a fair, balanced advisory committee process. As a community-based representative for Cleaner Air Oregon, representing 18 other community groups and as unpaid advocates we find this situation especially undermining and unfair. When one or more industry representatives prejudge the outcome of the process in this fashion, it sows division and destabilizes the Cleaner Air Oregon process.

Thank you for your attention to this matter.

Sincerely,

Jessica Applegate & Katharine Salzman, EPAC

Community based representatives for 18 other community-based groups from across Oregon representing thousands of citizen Oregonians

## Oregonians for Fair Air Regulations<sup>1</sup>

Following news reports last year related to air quality concerns about art glass manufacturers in Portland, Governor Kate Brown directed the Department of Environmental Quality (DEQ) and Oregon Health Authority (OHA) to "overhaul" industrial air emissions regulations. In response, Oregon businesses have worked with the agencies to ensure the overhaul leads to the adoption of fair air regulations – regulations that are protective of human health, keep people employed, and support Oregon's economy.

Oregon businesses have a successful track record reducing air contaminants, improving Oregon's environment, and protecting community and employee health. While most air pollutants are generated by non-manufacturing sources (as DEQ notes on its website, "80 percent of air pollution comes from everyday activities like driving and heating with wood stoves"), air permit holders understand their responsibility to help improve overall air quality. Moreover, Oregon businesses and manufacturers have partnered with the state to dramatically reduce air contaminants from manufacturing facilities. Such sources now account for less than 15 percent of air pollutants<sup>2</sup> because Oregon businesses have invested in new technologies and made operational improvements.

**Our coalition believes Oregon can have both clean air and a healthy economy with fair and reasonable air regulations.** Fixing gaps in current regulations, identified by last year's discovery of harmful emissions from two Portland art glass makers, should be done through a narrowly focused process, not a wholesale rewrite of air quality regulations that goes too far.

**New regulations should be driven by science, not politics.** We support air quality regulations that protect public health and allow companies that operate in compliance with Oregon's air quality standards five years to phase in new requirements to make sure employment and operations can be maintained. Unnecessarily establishing standards that exceed those in any other state would hurt Oregon's ability to attract new manufacturing jobs and could put current manufacturing jobs at risk.

**Air permit holders should be responsible for their own emissions, not for pollution from sources they don't control.** Regulations should be limited to emissions directly attributable to the business itself, not pollution from other nearby sources. It would be unfair to ask businesses operating near other pollution sources to be responsible for more than their share of pollution.

**Do not support new regulations that would cause businesses to shut down or leave the state, costing thousands of family-wage jobs statewide.** Regulations that cost jobs can significantly affect the health of the newly unemployed. Increased unemployment strains local social services. To avoid damaging Oregon's economy by putting good jobs at risk, any new regulations must give businesses a reasonable length of time to fully comply with new rules.

*Until DEQ can demonstrate that it is able and willing to create fair air regulations for businesses, employees, and communities, we urge you to:*

- **OPPOSE SB 5518 and HB 2269** that provide DEQ more money to create a program without first explaining program details and implications.
- **OPPOSE DEQ** committing more resources to a program that has not yet been approved.

<sup>1</sup> The Fair Air Regulation coalition<sup>1</sup> includes dozens of Oregon companies operating manufacturing facilities with state air quality permits across many industries.

<sup>2</sup> <https://www.oregonlegislature.gov/lpr/Publications/AirQuality.pdf>



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THOMAS R. WOOD

April 21, 2017

**VIA EMAIL**

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**Re: Comments on Cleaner Air Oregon Rulemaking**

Dear Joe:

I am writing in my role as a business representative on the Cleaner Air Oregon (“CAO”) Advisory Committee as well as the spokesperson for a coalition of business and manufacturing associations representing over 1,550 businesses in Oregon and approximately 250,000 employees, including nearly 75,000 manufacturing jobs. This broad coalition of Oregon businesses remains keenly interested in the CAO rulemaking process and dedicated to the development of a successful regulatory program for all Oregonians. This letter presents the coalition’s comments on and concerns with the process to date, particularly the draft CAO rule framework discussed at the last Advisory Committee meeting on April 4, 2017.

The constituents I represent support the goal of maintaining a healthy environment in Oregon and they are increasingly concerned that the health of all Oregonians is not being adequately considered in this rulemaking. As has been repeatedly recognized during our Advisory Committee meetings, employment is the best indicator of a community’s health. Employment is critical to a community’s dignity. The Oregon Department of Environmental Quality (“DEQ”) and The Oregon Health Authority (“OHA”) should not reflexively adopt programs from other districts or states that do not face the same challenges faced by Oregon’s rural communities, manufacturing sector and working families. This rulemaking’s potential to negatively impact Oregon’s economy and its working families has not been honestly or openly addressed or considered by the Advisory Committee. The agencies failure to consider the comprehensive impacts of this rulemaking stands in sharp contrast to the agencies’ commitment to develop the CAO program to address and prioritize Oregon’s ability to “grow a thriving and competitive

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economy”<sup>1</sup> while also protecting environmental and public health. The agencies’ discussions and the framework both reflect an approach that has willfully disregarded both this commitment and the underlying reason it was made: Dismissing economic impacts will lead to an under informed rulemaking effort that will result in a program that causes far more harm than good to local health by eliminating manufacturing jobs without meaningfully improving air quality.

With these thoughts in mind, we make the following comments about the draft CAO framework discussed at the last Advisory Committee meeting. These comments reflect the collective concerns of the broad coalition we represent.

### The CAO Rules Must Adopt Reasonable and Rational Allowable Risk Levels

One of our primary concerns about the CAO proposed framework relates to the allowable risk levels. The draft framework proposes to define allowable risk in relation to cumulative chronic carcinogenic impacts and cumulative chronic and acute non-carcinogenic impacts. Carcinogenic risk would be based on the sum of the estimated excess lifetime cancer risks posed by each substance emitted by a source. Non-cancer risk would be based on the sum of the estimated non-cancer risk (referred to as a Hazard Index) posed by each listed substance emitted by a source. Thus, the framework proposes regulatory allowable risk levels by reference to assumed levels of cumulative risk. The proposed framework suggests that the maximum allowable cumulative risk for a new or an existing industrial facility would be a 10 in 1 million excess lifetime cancer risk and, for non-carcinogens, a Hazard Index of 1. At the last Advisory Committee meeting, OHA stated that a resident of Oregon faces a 400,000 in 1 million lifetime cancer risk and that any decrease smaller than 10,000 in 1 million lifetime cancer risk would be undetectable in the population. We also note that a Hazard Index of 1 equates to no observable adverse effects in the most sensitive populations over a lifetime of exposure.

### Existing Sources

The proposed allowable risk levels for existing facilities are extremely low and will cause great harm to Oregon businesses if adopted. DEQ has provided no scientific basis for the proposed existing source allowable risk levels or discussion of tradeoffs between risk reductions and increases to health risk from economic impacts. Instead, DEQ’s lone justification has been that the proposed allowable risk levels seem to be “middle of the road” in comparison to other programs (i.e., those enacted in Louisville, Kentucky, New Jersey, New York, Rhode Island, South Coast Air Quality Management District, and Washington). We strongly disagree with this both factually and as a basis for establishing policy. DEQ has previously committed itself to a regulatory path based on sound science and good public policy. By proposing to set Oregon’s allowable risk levels by simply averaging a subset of values that it believes are in place in other

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<sup>1</sup> See <http://cleanerair.oregon.gov/about/> (last accessed on April 21, 2017).

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jurisdictions, DEQ has clearly strayed from that commitment. DEQ and OHA have not produced any data to support their belief that the program will not, as Richard Whitman states on the CAO web page, “require wholesale changes in any of Oregon’s vital urban and rural industries that would disrupt our communities or our economy.” In fact, the proposed allowable risk levels have great potential to disrupt local economies and, therefore, communities.

The allowable risk values proposed by DEQ are exceedingly stringent and will make DEQ’s program the most aggressive in the western U.S., if not the entire country. DEQ’s comparison to Washington’s program fails to consider that Washington’s program looks exclusively at new and modified sources and does not consider cumulative impacts as part of the permitting process. We have previously discussed the merits of such an approach, but DEQ has disregarded those comments. To the extent that DEQ insists on a program addressing existing sources and cumulative risk, Washington’s program is not relevant. However, the California programs are relevant as they address existing sources and cumulative risk. DEQ’s proposed allowable risk levels will create an Oregon program significantly more restrictive than the programs in place in comparable California air districts.

DEQ’s proposed existing source allowable risk levels are dramatically more stringent than the risk levels for existing sources in effect in the three most comparable California air districts. The three California air districts with a mix of existing sources most similar to those in Oregon are the Bay Area Air Quality Management District (“BAAQMD”), South Coast Air Quality Management District (“SCAQMD”) and San Joaquin Valley Air Pollution Control District (“SJVAPCD”). Each of these air districts has an established air toxics program that looks at existing sources. The allowable risk thresholds for these air districts are summarized in Table 1 below. As can be seen in the table, DEQ’s proposed allowable risk levels for carcinogens are 10 times more stringent than those implemented by BAAQMD and SJVAPCD and 2.5 times more stringent than those implemented by SCAQMD. Likewise, DEQ’s proposed allowable risk levels for non-carcinogens are between 3 and 10 times more stringent than those implemented by BAAQMD<sup>2</sup>, SJVAPCD and SCAQMD.

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<sup>2</sup> After roughly 30 years of implementing its current program, BAAQMD is considering increasing the stringency of its allowable risk levels. Rather than supporting DEQ’s proposed allowable risk levels, we believe that this serves as a useful example of how a program can mature. Applying a new program with extremely stringent risk levels is likely to cause regulatory, economic and community disruption. Using a less extreme approach will protect the public while allowing a less disruptive introduction of the program and leave open the possibility of increasing the stringency of the program in the event that it is demonstrated that a more stringent approach is needed to protect the health of Oregonians. This is a responsible and effective approach.

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**Table 1. Comparison of DEQ Proposal to Comparable CA Programs**

Agency	Allowable Risk Threshold (in 1 million excess lifetime cancer risk)	
	Cancer	Non-Cancer
Bay Area Air Quality Management District (San Francisco)	100	10
South Coast Air Quality Management District (Los Angeles)	25	3
San Joaquin Valley Air Pollution Control District	100	5
DEQ Proposed	10	1

No scientific or policy basis has been presented for why Oregon should start the CAO program with allowable risk levels dramatically more stringent than those in the comparable California air toxics programs. Nor has there been discussion or consideration of the tradeoffs between stringency and risk to health from economic impacts.

Establishing the CAO program with unduly stringent limits will create substantial and excessive burdens for Oregon sources. DEQ and OHA recognized at the outset of the CAO process that it was seeking to reduce air emissions from manufacturing sources, not to achieve the unattainable goal of eliminating all risk from air emissions. That, as has been repeatedly explained, was the reason for calling the program *Cleaner Air Oregon*--the agencies recognized that the goal was focused improvement and not elimination of all risk. DEQ's policy goal of focused improvement made sense in light of DEQ's own conclusion that manufacturing sources are not a significant source of the overall air emissions that may present risk in our communities. Notwithstanding this clear policy goal, DEQ is proposing a Hazard Index that comports with a standard of no observable adverse effects in the most sensitive populations. This is inconsistent with and goes well beyond the stated policy goal of focused improvement. Similarly, DEQ is proposing excess cancer risk levels 1000 times below anything that is actually detectable in the community. This too is exceedingly stringent and inconsistent with the stated policy goal. Requiring existing sources to meet allowable risk levels substantially more stringent than those required in other parts of the country will burden those sources with substantial costs that their competitors in other states do not bear -- and which many Oregon sources will not be able to bear-- and that do not materially benefit the health of Oregonians.

Establishing the CAO program with excessively stringent limits will also make implementation of the CAO program unduly slow and expensive, which benefits neither industry nor the public. If adopted as proposed in the draft framework, CAO will require that DEQ move hundreds of sources through the evaluation process instead of focusing its limited resources on those sources posing the most risk. We appreciate DEQ's efforts to develop screening steps to identify and screen out the lowest risk sources with the least investment of time and money. However, if the allowable risk levels are unduly stringent, many sources will be forced into the more expensive

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and resource intensive (for both the sources and DEQ) levels of evaluation. This will slow down the implementation of the program and DEQ will be unable to assess the highest risk sources in a timely manner. As has been noted previously, SCAQMD has a mature program with tremendous staffing resources and yet moving a single source through the evaluation process takes several years and the agency can only handle a few sources per year. If the CAO program is unduly stringent, then the CAO program will get bogged down and fail to meet expectations. DEQ must learn from its experience implementing the Portland Air Toxics Assessment and ensure that it is capable of following through on what it commits to doing. In short, incorporating needlessly stringent limits into the CAO program will make the program administratively impossible to implement and jeopardize the program's credibility. That outcome benefits no one.

We note that at the last Advisory Committee meeting, DEQ suggested a regulatory concept identified as a "conditional risk level." This concept was not clearly or fully described in the draft CAO framework document. The framework document sent to the Advisory Committee members uses the term "conditional risk level" just once, as a potential means to terminate the requirement for annual public meetings prior to reaching the allowable risk level. Nowhere else in the document is the concept of a conditional risk level mentioned. Nonetheless, during the last meeting, DEQ expanded upon the concept of a conditional risk level, explaining that if a facility could not achieve the allowable risk levels, but demonstrated it was using Toxics Best Available Control Technology ("TBACT"), then it would be allowed to continue to operate (i.e., under a conditional risk level tied to TBACT). We support the idea that a source not be curtailed or shut down if it is implementing robust controls, but still cannot reach the allowable risk level. However, the conditional risk level pathway is no substitute for DEQ establishing rational and appropriate allowable risk levels to start with. Branding a source as exceeding the allowable risk level adopted into DEQ's rules will open that source up to lawsuits and community concern, as exemplified by the law suits that have been filed against each industrial source that, to date, has been subject to enhanced DEQ scrutiny (regardless of what risk was ultimately identified). Therefore, it is imperative that DEQ combine the concept of conditional risk levels with reasonable allowable risk levels.

We strongly recommend that DEQ revise the existing source allowable risk levels in the first phase of the program. We support allowable risk levels of 100 in 1 million excess lifetime cancer risk for carcinogens and a Hazard Index of 10. Those risk levels are consistent with the range of values in the comparable California programs and would enable the CAO program to focus on sources with the greatest estimated risk potential. Once DEQ identifies and addresses those sources exceeding these values, it can assess whether further program changes are justified.

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### New Sources and New Emission Units

For reasons similar to those stated in relation to existing sources, DEQ should revise its proposed allowable risk values for new sources and new emission units.

We recognize that new sources might merit the consideration of TBACT because entirely new equipment is being installed. However, subjecting a new source to allowable risk levels of 10 in 1 million excess lifetime cancer risk and a Hazard Index of 1 is excessive for the same reasons stated in relation to existing sources. New sources should be subject to allowable risk levels no more stringent than 25 in 1 million excess lifetime cancer risk and a Hazard Index of 5. These allowable risk levels would be substantially more stringent than the existing source allowable risk, but not so punitive as to make it impossible to develop new manufacturing facilities or create new manufacturing jobs in Oregon.

The addition of new emission units at an existing source should not be subject to more stringent allowable risk requirements than the facility is already subject to. New emission units should be required to demonstrate that they are employing TBACT and that the facility as a whole is meeting the facility-wide allowable risk level. Otherwise sources will be unable to make relatively simple modifications to existing sources for fear that it would trigger, at the least, a lengthy permitting process and, at the worst, cost-prohibitive measures. Such a program would incent sources to continue to operate less efficient and higher emitting equipment which is bad public policy. Such a program would also serve as a significant disincentive to businesses choosing between expanding their operations in Oregon, or, instead, deciding to go elsewhere.

### Community-Wide Assessments Should Not Be Part of the CAO Program at this Time

The CAO program should not include a requirement for multi-facility assessments at this time. None of the other six programs (in Louisville, New Jersey, New York, Rhode Island, SCAQMD, and Washington) to which DEQ has compared its draft proposed CAO framework include anything remotely similar to the community-wide assessment process that DEQ has proposed. As described at the Advisory Committee meetings, the concepts underlying the community-wide assessment component of the CAO program are poorly developed at best. For example, there is no apparent logic behind proposing a range of allowable risk bounded on the lower end by a value that is half the average risk across all counties in Oregon and bounded on the high end by a value that is twice the average risk across all counties in Oregon. This approach averages values from counties with robust manufacturing sectors with values from counties that are almost entirely agricultural. This approach does not make good sense. There has been no demonstration of how this would improve air quality in any particular location. This concept is not sufficiently well developed or understood to be a part of the COA at inception.

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DEQ should not proceed with the community-wide assessment program unless and until a more thorough assessment of its costs and benefits has occurred. The draft proposed CAO framework indicates that DEQ would put a moratorium on all new industrial growth in areas deemed to exceed the community-wide risk threshold. The idea of creating economic dead zones in Oregon as a result of two or more facilities impacting a single receptor at levels exceeding an arbitrarily selected community-wide allowable risk level is bad policy. Not only would this harm the businesses in those areas, but it also doesn't recognize our competing laws like land use that mandate manufacturing facilities be sited in certain areas. In short, such a program will cause far more harm than good to Oregonians. We urge the Department to table this part of the CAO program for the time being and focus its efforts and limited resources on the single source program. The community-wide assessment concept requires more thoughtful consideration prior to proposal. Such a community-wide assessment program, for example, would benefit greatly from the development of an emissions trading program. Such an element would take significant time to fully develop and, to date, has not even been discussed.

### The CAO Program Should Focus on Actual Risk and Not Hypothetical Risk

We understand that the foundation of the CAO program is that Oregonians deserve to know what risk is posed by the facilities near them. If one accepts this premise, then no good is served by overstating the risk. This is a fundamental concept in the SCAQMD program and one that DEQ should emulate. Under the SCAQMD program a source assesses the risk from its actual emissions in a particular year and not on permitted levels as proposed by DEQ in the draft framework. Under the SCAQMD program, if actual emissions materially change, a source can be required to reassess its impacts and, if it triggers the Health Risk Assessment requirement, periodically update its evaluation. This approach provides the public with a more realistic sense of what risks are present than would be presented if a source had to assess permitted emission levels. For example, in SCAQMD a facility with a permitted emergency generator only models the risk associated with the typical operations of that unit, as evidenced in a prior year, and not the hypothetical emissions associated with operating the generator for hundreds of hours. If that source had to assess risk from a generator operating 200 hours per year when it actually only ran the generator for 10 hours a year, the public would be misinformed as the potential risk from the facility's generator would be grossly inflated. DEQ has an obligation to Oregonians to ensure that the program accurately characterizes risk and does not spread misinformation. The most appropriate way to do so is to require the assessment of actual emissions that can be checked and verified. Using hypothetical emissions serves no public purpose.

### The CAO Program Should Focus on Actual Receptors and Not Hypothetical Receptors

The CAO program should focus on receptors where people are actually exposed for meaningful periods of time. Any assessment of chronic exposure should only take place where people live

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or congregate for prolonged periods of time. If the receptor is a residence, the inhabitants should not be assumed to remain in their house continuously for 70 years. For acute exposures, receptors should only be considered where people have a realistic possibility of remaining for at least 24 hours. For example, a road or railroad line where people cannot and will not stop and remain for more than a handful of minutes, let alone a full 24-hours, should not be considered when assessing acute exposures. Realistic exposures should be assumed in all evaluations.

### Modeling Should be Reviewed with Sources to Ensure Accuracy

The Department should include as an express requirement in the rule that before any modeling (screening or otherwise) is distributed outside the Department, the source will have a meaningful opportunity to review the work and comment on it. Department staff are only human. They can make inadvertent errors despite the best of intentions. Requiring that the staff share any assessment with a source before sharing it outside the Department will minimize errors that could cause neighbors to under or overestimate the risk from a particular source.

### Monitoring Should Always be an Option

Modeling is inherently inaccurate. While a useful tool, a model makes numerous assumptions and is designed to over-estimate risk. On the other hand, monitoring documents the reality of what is really in the community. In a perfect world, the CAO program would rely entirely on monitoring. While we recognize that this may not be feasible, if a source wants to proffer monitoring data, either from its own monitor or from another monitor with publicly available data, those data should take precedence over any modeling results. In addition, if a source does not screen out of the CAO program prior to conducting modeling, it should always have the option of performing a year of ambient monitoring (with DEQ oversight) as an alternative to engaging in modeling. The data that such monitors would generate would be superior to any information generated by a model and would provide far more valuable information to the community. Therefore, any sources that choose to make that investment in monitoring should be incentivized to do so.

### Non-Cancer Assessments Should be Target Organ Specific

During the last Advisory Committee meeting, there was a lack of clarity as to when (or even if) DEQ would distinguish between target organs when assessing non-cancer cumulative risk. At least three of the programs to which DEQ has compared its draft CAO program framework (Louisville, New Jersey and Rhode Island) do not even take the step of assessing non-cancer risk on a cumulative basis. Where cumulative non-cancer risk is assessed, it is only appropriate to do so by reference to the increased risk to each target organ. It would be misleading and a misuse of data for the Department, at any phase of the assessment process, to add up the risks associated with disparate target organs for comparison to the applicable hazard index. That approach is not

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used in any other program, is bad science and is inconsistent with the intent that the CAO program rely on good science. There is no scientific basis for adding risk values from different target organs when evaluating cumulative risk.

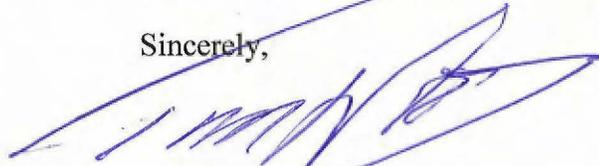
Conclusion

There are many other elements of the program that we would comment on, but the CAO program structure is not sufficiently clear at this time to do so. We look forward to seeing the draft rules and having an opportunity for meaningful review of what is proposed. We hope that these comments help sculpt the proposed rule language.

In closing, we wish to note our tremendous concern with the accelerated process that this monumental rulemaking has taken. Rushing the process risks undermining the expressed desire to rely on sound science and good public policy and, as a consequence, risks undermining the legal footing and, ultimately, the legitimacy of the CAO program. The outcome of this process is important; that must be reflected in how the process is supported and carried out. Rushing through the process to get to a result usually results in a poor product. DEQ and OHA should take the time necessary to fully vet this program internally and externally, resist the urge to rush the process and make sure they comprehensively consider the impacts this program will have.

We look forward to an ongoing dialog to establish a practical and effective program.

Sincerely,



Thomas R. Wood

cc: Richard Whitman  
Leah Feldon  
Lynne Saxton  
Jill Inahara  
Mike Freese (AOI)  
Heath Curtis (OFIC)

**TO:** Joe Westersund  
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**FR:** Steven A. Anderson (Committee Member)

**RE:** Additional Insights & Comments

**DT:** May11, 2017

A month ago, you asked for input on the questions below. Since that time there has been discussions with the Salem community regarding Lead exposure in a West Salem Neighborhood. I have some additional insight to share that augments my comments at our last Clean Air Oregon meeting in Springfield. I hope that they will be helpful, even at this late date, in our ongoing efforts to construct a health-based air toxics program for Oregonians.

- *Does the proposed structure of screening steps and allowable risk limits make sense? What improvements would you propose?*
- *What should happen if a facility is above allowable risk limits?*
- *How should this rule handle risk posed by multiple facilities located in one area?*
- *The draft framework tries to address environmental justice concerns primarily through highly protective risk based concentrations and allowable risk, and through enhanced public engagement. Do you have other suggested approaches?*

Recognizing that the Salem situation was not the result of a point source emission release, feelings and concerns expressed are instructive to the questions that we, as a committee, have been wrestling with as well as important to factor into the rule making proposal; even now in the process.

As to the question: ***Does the proposed structure of screening steps and allowable risk limits make sense? What improvements would you propose?***

The structure makes sense (as presented to the committee at our Springfield meeting) and would be expected to be understandable to the lay audience (my verbal comments from our last meeting). However, based upon local discussions since then, I strongly recommend that we add a fourth category for **“Environmental Persistent Risks”**. This was my verbal suggestion at our last meeting and relates directly to #8 within the Proposed Framework for Clean Air Oregon; Cumulative Risks and Background. There should be four categories here; not three as shown currently for #8. They should be:

- Chronic cancer risk
- Chronic noncancer risk
- Acute noncancer risk
- Environmental persistent risk

People want to know what chemicals from an industrial point source are persistent and will bioaccumulate in the community; their backyard. They do not want to hear that somehow this has been factored into a conservative estimate within a single (inhalation-based) estimate. This was the answer provided by staff at our last meeting. From community conversations, this needs to be clearly stated and shown in, and throughout, the screening process and on into the more detailed analysis at each subsequent level for air toxics. It is a matter of wanting to know. It is a matter of not being told “trust me”. Therefore, a fourth category (as stated above) needs to be part of the process in the final rulemaking process.

Scientifically this is defensible. The chemical properties of air toxics, how they move and accumulate in the environment, and environmental justice concerns requires a new approach here. The previous methods for treating air contaminants does not work for air toxics. There are chemicals that have a mechanism of action via (primarily) the inhalation pathway. There are other air toxics that not only act via inhalation, but other pathways due to their persistence and bioaccumulation in the environment. Risk Communication and full disclosure demands that this not be left out of our final rulemaking process. Four categories for #8. Not three.

As to the question: ***What should happen if a facility is above allowable risk limits?***

I have made a sound case for setting the upper allowable risk limit for carcinogens at 100 in a million excess lifetime cancer risk, and a hazard index level of less than or equal to 5 for each body system affected. The hazard index level should be an upper limit and should not be exceeded. The 100 in a million cancer limit could be looked at as follows. (Please review my previous verbal discussion and written comments.)

Of the 100 in a million cancer risk level, 50 in a million would be allocated to industry within a 5-kilometer area surrounding the industrial point source. (See discussion below.) The other 50 in a million will be allocated to account for background cancer risk in the area from all other non-point sources (known or not) within the 5-kilometer area. 50 % of the area (airshed) for industrial points sources of air toxics and 50% to account for all other non-point air toxics sources in the area (background).

Given this paradigm, if the area (5-kilometer airshed surrounding the industrial source defined in the 5-kilometer receptor grid used in the air modeling) is such that an industrial air toxic source seeking a permit, and it is shown that its contribution will cause the area to exceed the 50 in a million allowable risk limit after all control measures are applied, it should not be outrightly denied a permit unless the area affects an environmental justice community or is immediately adjacent an environmental justice community. In this case, the 50 in a million allow risk level is not to be exceeded.

Areas that are not environmental justice areas (as described above), and if it is deemed that there is reserve capacity within the background 50% allocation to non-point sources other than industrial point sources, then the source could be allowed an administrative allowance for up to no more than five years. This is a policy consideration that incorporates provisions to protect environmental justice communities and yet acknowledges a position in some minds that there is a degree of conservatism in the cancer risk calculations that would allow for not having a hard and fast immediate cutoff.

How this could work is allowing the area (5-kilometer airshed) capacity for industrial sources to go up to 60 in a million for no more than five years. If on the fifth-year anniversary the source has still not reduced the industrial air toxics in the area surrounding the source to the 50 in a million allowable risk limit or less, then it must curtail emissions to achieve this level or shutdown. The source would be required to enter into an agreement acknowledging this requirement with no "wobble room" out of it. The industrial air toxics source would so enter this permitting agreement at their own risk realizing that they have a five year window to be below the 50 in a million allowable risk level for the area with their contribution. This will afford some flexibility while maintaining the stated 50 in a million air toxic allowable risk limit for industrial sources within the airshed.

As for the question: ***How should this rule handle risk posed by multiple facilities located in one area?***

After reviewing staff's presentation on this matter and air modeling protocols, this area should be at least a 5-kilometer radius surrounding the industrial air toxics source seeking a permit to release air toxics into the airshed. During the Springfield meeting, DEQs air modeling expert provided clear evidence for the use of a 5-kilometer receptor grid surrounding an industrial point source of air toxics emissions. This would not be outside standard modeling protocols. Further evidence was provided that the 1.5-kilometer radius suggested for looking at cumulative impacts was more likely than not to have few, if any, additional industrial sources impacting that area. Thus, negating the concept of cumulative impacts in application.

Remembering the allowable risk level discussion above where the contributions of all industrial air toxic sources within this 5-kilometer area would be set at a 50 in a million excess lifetime cancer risk level or less, and a hazard index level of less than or equal to 5 or less for each body system, here is why the 5-kilometer radius:

Staff made the point multiple times during the Springfield meeting that the 1.5-kilometer radius was so small that it would be hard to have multiple sources that would pose air toxics levels to exceed the suggested allowable risk levels. This idea that the 1.5-kilometer radius is so tightly constructed that cumulative impacts would not be possible to a degree to cause a concern (as suggested by staff) negates setting the area so small. If it is this small excluding the possibility of have a number of sources to result in cumulative impacts, then why cumulative impacts?

The air modeling discussion highlighted the models having receptor grids out to a 5-kilometer radius. It also noted that the concentrations at this radius will be low. This may be true in many cases; however, by setting it at this 5-kilometer radius one allows for a reasonable modeling effort and accounting for multiple industrial point sources of air toxics in the area so as to have a fair and reasonable accounting for cumulative impacts. Additionally, this will be scientifically and policy supportive of addressing environmental justice communities and concerns reasonably and fairly.

As for the question: ***The draft framework tries to address environmental justice concerns primarily through highly protective risk based concentrations and allowable risk, and through enhanced public engagement. Do you have other suggested approaches?***

I believe that my suggestions above to staff's proposed framework go straight to the matter of providing a stronger framework, to that which was presented at the Springfield meeting, for addressing environmental justice concerns. By including:

- an environmental persistent risk category (now four not three as proposed),
- a 5-kilometer area (airshed) radius verses a 1.5-kilometer (as proposed),
- flexibility for allowing up to 60 in a million cancer risk with a five-year compliance schedule in areas that are outside, or adjacent to, environmental justice communities,

With inclusion of the points (as presented herein) strong case can be made for a health-based air toxics program that is health protective for Oregonians, addresses environmental justice communities throughout Oregon, and allows for business activities in Oregon that encourages economic grow all within responsible stewardship and use of the air we all breath.

Your consideration to my comments and suggestions are appreciated.

Thank you.