# FINAL MEETING SUMMARY
**Community Environmental Working Group**

***"Striving for Continuous Environmental Improvements at Intel"***

**Date:** December 4, 2018
**Time:** 2:00–4:00 p.m.
**Location:** New Mexico Environmental Department, Air Quality Bureau

**CEWG Members Attending**
John Bartlit, NM Citizens for Clean Air & Water
Mike Williams, NM Citizens for Clean Air & Water
Hugh Church, American Lung Association in New Mexico
Dennis O'Mara, Corrales resident, Corrales Residents for Clean Air and Water

**Non-Members Attending by Phone**
Lynne Kinis, Corrales resident, Corrales Residents for Clean Air and Water

**NMED Air Quality Bureau Staff Presenting**
Liz Bisbey –Kuehn, Air Quality Bureau Chief
Ted Schooley, Permit Section Chief

Jessie Lawrence, Facilitator
CJ Ondek, Recorder

**PROPOSED AGENDA**
- Presentation on Air Quality Permitting
- Questions

## NMED Presentation:

**Slide 1: New Mexico Environmental Department Air Quality Bureau**

*Presentation by Liz Bisbey-Kuehn, Air Quality Bureau Chief, and Ted Schooley, Permit Section Chief*

Liz Bisbey-Kuehn said the presentation purpose was to provide an overview of the Clean Air Act, its architecture, a history of some of the programs, and a look at how the permitting process works. She said they would not discuss Intel's permit at this meeting but keep it more general.

**Slide 2: How Are Criteria Pollutants, HAP and VOC Regulated Under the Clean Air Act (CAA)?**

- *The Clean Air Act (CAA) of 1970 identified six common air pollutants of concern, called criteria pollutants. The criteria pollutants are* ***carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide****.*

Liz Bisbey-Kuehn said there were many different versions and modification of the Clean Air Act (CAA) since it was established in 1970. The original CAA identified six common air pollutants of concern called "criteria pollutants." These were: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. These pollutants were regulated differently than other pollutants. Each one has an allowable concentration in the ambient air—the amount the public can be exposed to without having an adverse impact. Epidemiologists established these numbers based on vulnerable population such as children and elderly.

- *The CAA 1990 Amendments regulated Hazardous air pollutants (HAP), also known as toxic air pollutants or air toxics, and are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. EPA is working with state, local, and tribal governments to reduce air emissions of 187 toxic air pollutants to the environment.*

Liz Bisbey-Kuehn said in 1990 the CAA was amended significantly to add 187 toxic air pollutants known as hazardous air pollutants (HAP), which were known or suspected to cause cancer or other serious health effects.

- *40 CFR 51.100(s) - Definition - Volatile organic compounds (VOC)*

Liz Bisbey-Kuehn said the definition of volatile organic compounds (VOC) were regulated in specific ways under the CAA and to understand the details read the rule 40 CFR 51.100 and review methodically to learn where a VOC fell under or out of regulatory authority. It was based on criteria defined in the regulation. She said a couple of compounds were removed from the list, but to do so they had to follow a very specific process.

- *Provides a list of compounds that are not defined as a VOC*

**Slide 3: How are HAP and VOC regulated under the CAA?**

- *The CAA requires EPA to regulate hazardous air pollutants (HAP) from large industrial facilities known as major sources in two phases.*

Liz Bisbey-Kuehn said there were metal, liquid and gaseous HAP, as well as an overlap between some VOC and HAP—not all VOC were HAP, but some HAP were VOC. The EPA looked at industries across the US to develop industry-specific standards.

- *The first phase is "technology-based," where the EPA develops standards for controlling the emissions of air toxics from sources in an industry group.*
- *These maximum achievable control technology (MACT) standards are based on emissions levels that are already being achieved by the controlled and low-emitting sources in an industry.*

Liz Bisbey-Kuehn said the maximum achievable control technology (MACT) standards were technologically based (equipment used) and industry specific and based on the lowest possible emissions already being achieved in a specific industry. It was an industrial classification. For example, there was one for turbines, one for boilers, etc., and they all target individual HAP. For each type of equipment there was a different standard of performance. For example, boilers used a combustion process so they looked at regulating formaldehyde.

Ted Schooley said it was important to note that for each industry type they first had to identify which HAP were common to that industry type, then they could say what to do to reduce that HAP by industry type. That determination that was the MACT standard. Ms. Bisbey-Kuehn said first the EPA did an inventory of emissions from all the different industries to get an idea of their contribution to overall air toxins, and then based on that list of the most frequently emitted HAP they made rules.

John Bartlit asked if they could find this information as well as information about semi-conductors online. Ms. Bisbey-Kuehn said yes, and there were hundreds of hundreds of documents out there. Intel New Mexico was not considered a major source of HAP, and the MACT rule only applied to major sources of HAP, so Intel did not have to comply with MACT. Ted Schooley added that a facility had to meet the threshold amount to follow the MACT standards; if it was below this amount then they did not have to comply with MACT. Ms. Bisbey-Kuehn said this was the difference between major source and minor source facilities.

- *Within 8 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.*

**Slide 4: How are HAP and VOC Regulated under the CAA?**

- *Also, every 8 years after setting the MACT standards, the Clean Air Act requires that the EPA review and revise the MACT standards, if necessary, to account for improvements in air pollution controls and/or prevention.*

Liz Bisbey-Kuehn said it was important to acknowledge that MACT standards were reviewed periodically (every 8 years) and requirements were changed based on new technologies.

- *Since 1990, EPA has issued regulations limiting emissions of air toxics from more than 174 categories of major industrial sources including chemical plants, oil refineries, aerospace manufacturers, and steel mills. The requirements in a number of these regulations took effect between 1999 and 2011. When fully implemented, these standards are projected to reduce annual air toxics emissions by about 1.7 million tons.*

Liz Bisbey-Kuehn said they were still issuing MACT standards for industry and making frequent modifications to older MACT standards, which were not retroactive but for new sources that have undergone modification or reconstruction at the site.

**Slide 5: Minor vs. Major Sources**

- *Major Title V Source (20.2.70 NMAC)*

Liz Bisbey-Kuehn said there were several permitting regulations had very different applicability criteria. NMED had authority to issue the Title V permits.

- *Title V Operating Permits are required for Title V major stationary sources that have actual or potential emissions equal to or greater than 100 tons per year of any regulated air pollutant; have actual or potential emissions equal to or greater than 10 tons per year of a single Hazardous Air Pollutant (HAP) or 25 tons per year of any combination of Hazardous Air Pollutants; or for all Air Curtain Incinerators and some municipal solid waste landfills*

John Bartlit said the federal law said that states cannot issues laws that were weaker than federal law, and state laws said they cannot establish a standard or emission limit more stringent than federal laws.

Liz Bisbey-Kuehn said NMED was limited to establish its own MACT standards. Mike Williams asked about the state's authority around adopting ambient standards. Ms. Bisbey-Kuehn gave an

example of NMED regulating ammonia (ammonia was not a criteria pollutant) and creating a standard for ammonia.

John Bartlit said that different emission rules applied for major and minor and asked if different monitoring rules applied to major and minor sources. Liz Bisbey-Kuehn said there were different concepts. She clarified that every single permitting regulation had its own definition of regulated air pollutant and so they had to be careful.

Dennis O'Mara said that Intel's permit was a minor source permit, and all the emissions were conveniently 24 tons, just under the limit for major source. Ted Schooley commented that was a good thing, because Intel could have applied for a major permit, which would have increased the allotted amount of HAP emissions. The minor source permit allowed less emissions, thereby reducing the allowable amount of pollutants, which was good for the environment. NMED encouraged facilities to do this. Liz Bisbey-Kuehn said the closer a company's emissions were to the threshold, the more frequently monitoring was required to ensure the company was operating below the limit. There was a baseline and they got more stringent. The types of control devices based on how thermal oxidizers operated had high efficiencies and were very reliable. Also, there was sufficient monitoring to verify how they were operating and emitting pollutants on a continuous basis.

Jessie Lawrence said that she made a note to add the history of the Intel permit to the list of questions for future CEWG agenda items.

Lynne Kinis asked if NMED conducted the monitoring itself or did they just take Intel's word on their own self-monitoring. Liz Bisbey-Kuehn said NMED had the authority to request monitoring records, data, etc. Also, regulations required that Intel notify NMED if there was an emissions event, so there was sufficient representation; NMED did check Intel's information to verify compliance.

Lynne Kinis asked if Intel had permission to operate the plant when a majority of RTOs were down and emissions were released unabated. Liz Bisbey-Kuehn said she couldn't answer the question based on the limited information provided and would have to look at the specific scenario. Intel was required to operate their RTOs during normal operations, she said.

Lynne Kinis said this past summer electricity went off at Intel and nine RTOs were down as a result. After several hours, Intel decided to resume operations without abatement of the RTOs. She said she didn't believe that Intel reported the incident to NMED, and she didn't believe it was in their purview to start up operations while the RTOs were unabated.

Liz Bisbey-Kuehn responded that there may have been specific reasons why the pollutants weren't captured during the production line start up. NMED was notified about the incident. She said there was no federally enforceable requirement in the CAA for Intel to capture those emissions during that type of event. Ted Schooley added that it was technically possible for Intel to operate without those control devices working during a short period of time without violating the terms and conditions of their permit limits. If Intel had a safety factor that allowed them to do so and they were running for a short period of time that didn't result in excess emissions, then there would be no recourse. He cautioned that he hadn't really looked at the details.

Lynne Kinis said the problem was there were residents living down hill from Intel in Corrales that were affected by unabated emissions as well as abated emissions. She did not understand how Intel could get away with starting up production full power while the three RTOs were nonfunctioning. NMED was supposed to be there for the community. She "begged" NMED to start thinking this way because no one knew that Intel took it upon itself to start the process with three RTOs off line. Also, she asked who was measuring the synergistic effects of the chemicals that Intel used in their production process. People were dying in Corrales, and the community's hands were tied without having the state behind them. If NMED did not come down and conduct the testing themselves, then what good was it. She said she understood that NMED was "overloaded" and that it was convenient to let any factory submit their own records, but Intel could be lying. Only people who were deceased could tell you that they were lying. Ms. Kinis said she checked with EPA many years ago on the number of people with pulmonary fibrosis in a town the size of Corrales. Liz Bisbey-Kuehn said she understood Ms. Kinis' frustration, because not all pollutants were regulated in the same way under the CAA. NMED derived their authority via the CAA, and this presentation hoped to share with the community NMED's boundaries of authority.

**Slide 6: Minor Construction Permits**

- *Minor Construction Permits (20.2.72 NMAC)*
- *Minor Construction Permits are required for facilities with potential emissions either greater than 10 pounds per hour (pph) or 25 tons per year (tpy) of pollutants with a national or state ambient air quality standard (such as nitrogen oxides and carbon monoxide).*
- *This permit must be obtained before the facility is constructed or modified.*

Liz Bisbey-Kuehn said "facilities" referred to any source of emissions not categorically exempt. They used predictive formulas to determine this regulation.

**Slide 7: Additional Permitting Information**

- *Prevention of Significant Deterioration (PSD) permit (20.2.74 NMAC)– pre-construction permit required if potential emissions:*
    - *≥250 tons per year (tpy) of any one criteria pollutant* (power plants and refineries, for example)
    - *≥100 tons per year (tpy) of any one criteria pollutant for selected sources*
- *Notice Of Intent - not a permit, but a registration required for facilities that have a PER more than 10 tpy of any regulated air contaminant (including VOC). Refer to 20.2.73 NMAC*
- *No Permit Required (NPR) determination - facilities may request AQB help in determining if they need a permit. This is a courtesy provided by the department and is not required by regulation. Adequate justification, including description and location of the facility and calculation of all emissions is required.*

Liz Bisbey-Kuehn said that Slide 7 looked at the other types of regulations that NMED had. The nonattainment permit was for facilities operating in nonattainment areas. In New Mexico, there was a nonattainment area in Doña Ana County on the border of Mexico. It required them to install the lowest achievable emission rate technology.

**Slide 8: Air Permit Process:**

- *New Mexico Environment Department (NMED) Air Quality Bureau issues and enforces New Source Review (NSR) pre-construction and Title V operating permits. The United States Environmental Protection Agency (EPA) can also enforce this program within the State.*
- *This authority applies to all New Mexico counties **except** Bernalillo County and Indian Lands.*
- *Primary reason facilities must obtain a permit – potential emission rate of regulated pollutants exceeds a threshold value.*

Liz Bisbey-Kuehn said that the City of Albuquerque had own Air Quality Bureau, which was why NMED did not have authority in Bernalillo County.

**Slide 9: Permit Content**

- *NSR Construction permit – Authorizes construction and operation of a source. Imposes limits on emissions to ensure compliance with ambient standards. Imposes monitoring, recordkeeping, reporting to ensure practically enforceable.*
- *NSR includes minor sources and major sources*
- *Within the major source category, permits include Major Prevention of Significant Deterioration (PSD) Sources and Non-Attainment Permits*
- *PSD permits includes Best Available Control Technology.*

- *Non-attainment permit includes Lowest Achievable Emission Rate*.
- *Title V permit – Compiles all applicable requirements, including NSR permit. Imposes monitoring, recordkeeping, reporting as needed. Requires semi-annual reports on monitoring and annual compliance certification*.

Liz Bisbey-Kuehn said that Slide 9 provided an overview of what the NSR Construction permit did, including putting emissions limits on individual pieces of equipment. Each piece of equipment that had an emissions limit had to have a monitoring and recording process to ensure federal enforceability. The Title V was a composition of many, many subparts of the CCA into one document. It also had specific requirements for demonstrating compliance to NMED on a monthly basis and reporting twice a year, which required compiling the hundreds of pieces of data into semi-annual and annual reports. The annual report was very comprehensive.

John Bartlit asked if Best Available Control Technology was defined by the EPA. Liz Bisbey-Kuehn said it was standardized across the country.

Mike Williams asked if the monitoring referred to emission rate and not ambient air. Liz Bisbey-Kuehn said the monitoring was to show compliance with the emissions limit established in the permit.

John Bartlit said he had been discussing regulatory engineering at CEWG meetings. The future could have a computer chip sending monitoring signals to NMED rather than to Intel. This could eventually relieve Intel of record keeping and remove doubts in the community around self-monitoring. Ted Schooley said that NMED did use continuous electronic data recording, which was tangential to what Mr. Bartlit was talking about and a "next step" kind of thing. He didn't know technology-wise and legal-wise what they could require but it was interesting. It was not instantaneous yet, but they were getting closer.

**Slide 10: Administrative Review, Completion Determination and Public Notice**

- *Conduct administrative permit application review*
- *Rule the application administratively complete or incomplete*
- *Issue the Department's Public Notice*
- *Notify modeling upon completion of emissions review*

Liz Bisbey-Kuehn said that the administrative permit application review process was very complex and lengthy—hundreds of documents of technical data. NMED had 30 days to rule the application administratively complete or incomplete. After a positive ruling then they issued a Public Notice and commenced with a technical and regulatory review of the information in which they reviewed all the emissions data, factors and calculations and asked questions. Once that was approved NMED gave the go-ahead to the air dispersion modeling section; modeling

was required for NMED to issue any permit. They had to demonstrate that the emissions impacts did not exceed the authorized ambient air quality concentration. They also could not exceed the prevention of significant deterioration (PSD) increments, which were a small fraction of the air quality standard.

**Slide 11: Evaluate regulatory requirements, develop SOB and draft the permit**

- *Complete regulatory & technical review*
- *Complete public review**
- *Complete EPA review**
- *Develop SOB & write the draft permit*

** Steps not required for all permits*

Liz Bisbey-Kuehn said that the public notice triggered a 30-day public comment period, and if public comments were received, that triggered a second 30-day technical review period afterward. Persons commenting had 30 days to review the technical analysis before NMED issued the permit. This was not required by the CCA.

**Slide 12: Incorporate comments, undergo management review process and issue permit**

- *Incorporate C&E, industry, public, and EPA comments as appropriate*
- *Obtain Modeling approval to issue*
- *Submit permit for management review & signature*
- *Issue permit to the applicant*

Liz Bisbey-Kuehn said that once the permit was written it was sent to NMED's Compliance and Enforcement section to review for federal/practical enforceability. The applicant made the permit available to the public after it was written. Ms. Bisbey-Kuehn emphasized that lots of stakeholders (industry, public, NMED and EPA) were involved in the process. NMED had three to four levels of review in their office before a permit was issued.

**Slide 13: Air Permit Process: Permit content**

- *Construction permit – Authorizes construction and operation. Imposes limits on emissions to ensure compliance with ambient standards. Imposes monitoring, recordkeeping, reporting to ensure requirements are federally and practically enforceable. PSD permit includes Best Available Control Technology. Non-attainment permit includes Lowest Achievable Emission Rate.*
- *Title V Operating permit – Compiles all applicable requirements, including NSR permit to ensure ongoing compliance. Imposes monitoring, recordkeeping, reporting as needed. Requires semi-annual reports on monitoring and an annual compliance certification*.

Liz Bisbey-Kuehn said that an organization could not break ground until they received a construction permit.

John Bartlit said that the term "enforceable" was a legal EPA definition. Liz Bisbey-Kuehn said the standard was to produce enough information that a reasonable person could determine whether or not the emission limit was met.

**Slide 14: Total Active Permits and Registrations**

- *The Department regulates the following number of facilities within its regulatory jurisdiction:*
- *735 General Construction Permits*
- *1062 Regular Part 72 permits*
- *3538 Notice of Intent Registrations*
- *231 Title V facilities*
- *3 General Operating Permits for Air Curtain Incinerators*

Liz Bisbey-Kuehn said that this slide gave an overview of NMED's total active permits and registrations. Dennis O'Mara asked if, compared to the 231 Title V facilities, Intel emitted by far the most HAP. Ms. Bisbey-Kuehn said Intel was not a Title V but a minor source. The San Juan Generating Station was the largest Title V facility in the state, and there were a lot of power plants and refineries, also. Intel was part of the "1062 Regular Part 72 permits," and its emissions were much lower than the Title V organizations.

**Slide 15: Compliance and Enforcement Section**

- *The Compliance and Enforcement Section determines compliance with applicable requirements and enforces air quality regulations and permits*
- *The AQCA authorizes the Secretary to assess civil penalties for violations of the Federal Clean Air Act and its implementing regulations, the NM AQCA, and the NM Air Quality Regulations*
- *A primary purpose of enforcement is to deter noncompliance*
- *The Compliance Reports Group reviews records and reports required by permit and regulation*
- *The Compliance Inspection Group inspects facilities to determine compliance with permits and regulations*
- *If areas of concern are identified by inspectors or reports staff, they are referred to the Enforcement Group for review and potential issuance of a Notice of Violation*

Liz Bisbey-Kuehn said NMED had the authority to charge $15,000 per day per violation of the CCA and its implementing regulations, the NM AQCA, and the NM Air Quality Regulations.

NMED had about 23 staff members in Compliance and Enforcement section tasked with ensuring facilities were in compliance, issuing violations. About seven staff members were in the Compliance Reports Group, and eight staff in the Compliance Inspection Group.

John Bartlit asked if they saw any differences in administering the CCA by a sitting US president's administration. Liz Bisbey-Kuehn said that the CCA was powerful and any changes they saw were minor. Ted Schooley said that it took two to three years to make any changes to the CCA, and if it was a controversial change it took longer, so long that by the time the next administration took over they would probably drop the change. He said he had been working for almost 20 years at NMED, and the way the CCA was administered was a constant. Ms. Bisbey-Kuehn added that regulations were historically supported by robust technical, scientific evidence and economic rationale and undoing that robust record was really challenging. The current administration could not just eliminate CCA provisions.

Mike Williams asked about hydrogen sulfide, and if it was treated like a criteria pollutant with set performance standards. Liz Bisbey-Kuehn said it was treated like a criteria pollutant but it did not have performance standards. The oil and gas industry had to control hydrogen sulfide because it was so dangerous. Ted Schooley said NMED did ambient modeling for it.

**Slide 16: Emission Factors**

- *Some EF are more accurate than others:*
    - *EPA Reference Method stack tests on the actual equipment (most accurate, but typically result in lower emission factors)*
    - *Manufacturer's specifications (accurate and usually predict slightly higher emissions than stack tests)*
    - *EPA AP42 EF (less accurate, but more conservative predicting higher emissions)*
    - *EF approved by other states (in absence of above EF)*
    - *Industry specific EF for processes (w/o above EF)*

Ted Schooley presented on the remaining slides. He said when an organization submitted a permit application they had to predict their emissions based on emission factors. Emission factors had a hierarchy in that some were better than others in predicting the amount of emissions; this did not necessarily mean they were better for the environment or more useful. The bullets on the slide were listed in order of accuracy, with the first the most accurate. EPA reference measure stack tests were done on the actual equipment onsite, and they typically predicted lower emissions. So using stack tests, permitting emissions limits would be lower and harder to achieve. Plus, they were expensive to do. Dennis O'Mara asked if what they were talking about was putting a piece of equipment at the exit of the stack and measuring, which was what Intel did. Liz Bisbey-Kuehn said yes, in accordance with a reference method associated

with each method listed that included hundreds of pages to follow to verify. Ted Schooley said they could go and witness that reference method test if NMED deemed it necessary.

Ted Schooley said manufacturers had specifications on their equipment on the emissions amount. These specifications were less accurate in one way because the manufacturer had to make sure every piece of equipment met the limit, but highly accurate in that they knew what the equipment did emit. The EPA AP42 EF were developed for different industries. These were less accurate than the manufacturer specification but more conservative in that they predicted higher emissions. So the facility that used this method would normally emit much less than what the AP42 EF predicted. In instances where there was an industry that the EPA did not develop emission factors or there were no manufacturer's emission factors, states might have done their own testing and developing of emission factors. Other states might use these emissions factors in the absence of other emission factor data. The last one was that industry sometimes analyzed types of emissions from other processes. These were only relied upon when no other information was available.

**Slide 17: Emission Factor Approval**

- *AQB can disapprove a proposed EF only with good reason. AQB cannot arbitrarily disapprove a proposed EF:*
    - *EPA Reference Method stack tests - Being the most accurate, AQB is predisposed to approve.*
    - *Manufacturer's specifications: AQB typically approves*
    - *EPA AP42 emission factors: AQB typically approves*
    - *Other states' EF: in absence of the above, typically*
    - *Industry specific emission factors – can be approved upon careful scrutiny and in absence of better factors*

Ted Schooley said a proposed emission factor could only be disapproved for a good reason. He said NMED only relied on industry-specific emission factors when there were no other factors available. The manufacturer's specifications and EPA AP42 emission factors were usually more conservative and predicted more emissions, and that brought in more regulations. NMED was okay with this and fairly certain they would not be broken if they passed modeling that gave NMED confidence that the ambient air quality would not be negatively affected.

**Slide 18: Emission Factor Review and Approval**

- *Choice of EF is an important decision with multiple consequences - principally excess emissions.*
    - *More conservative EF have built in safety factors. Subject to AQB disapproval, Industry is allowed to choose the EF, resulting in the amount of risk it assumes.*

- *Higher EF predict higher permit limits, which, all else being equal, have higher built-in safety factors. Higher inherent safety factors tend to result in less excess emissions.*
- *Higher emission limits do not correlate with higher actual emissions. Emissions are limited by the controls and the operating requirements.*

Ted Schooley said NMED reviewed and approved the emission factors. Those used without built-in safety factors would more likely get a violation

John Bartlit asked what NMED did if a company said their emission factors were zero. Ted Schooley said that was a dangerous position for a company to take because if they emitted anything higher than zero they would get a violation. Companies tended to want to project higher emissions. In fact, NMED had to stop them often from predicting emissions too high. They had limits on safety factors; typically they allowed a 25% safety factor. If a company cited zero, Mr. Schooley said that was a mistake.

**Slide 19: Federally Enforceable Conditions**

1. ***Limit or Requirement*** *– Defines what the emission limit is and/or what must be done.*
2. ***Monitoring*** *– How frequent and what must be monitored to determine compliance.*
3. ***Recordkeeping*** *– Frequency and content of the records to document compliance for future review.*
4. ***Reporting*** *– Defines how NMED is provided access to the records*

Ted Schooley said that Intel had a part 72 construction permit, which was a legal document that had to be legally and federally enforceable. The four basic elements to guarantee enforceability were:

- Limit or requirement—Had to be unambiguously defined
- Monitoring—Ensures a facility was fulfilling their agreements
- Recordkeeping—The facility records their monitoring
- Reporting— The facility reports their recordkeeping to NMED

**Slide 20: Tabular Formatted Condition**

**206: Hourly Ethanol Production Limit** (*sample condition*)

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|---|
| **Requirement:** Total ethanol produced by the facility shall not exceed 600 gallons per hour. |
| **Monitoring:** A flow meter and data logger shall be installed and continuously operated that measures the hourly flow volume in gallons of produced ethanol |

| |
|---|
| **Recordkeeping:** Records of the hourly flow volume shall be kept including the date, the hour of the day, and the total flow volume of produced ethanol during the proceeding hour in gallons. |
| **Reporting:** By January 31 of each year, the facility will submit a report to the Department including the data required in this condition for all 8760 hours of the year. A synopsis shall be added to the beginning of the report summarizing each hour in the year the hourly ethanol production exceeded 300 gallons per hour. |

Ted Schooley said that Slide 20 was an example of a table found in permits. This format allowed everyone to assess the logic of permit conditions. He said the table gave the basis of the actual permit and how the conditions were structured, which might help understand how the elements in Intel's permit fit together.

## Questions and Answers

- Jessie Lawrence said she would follow up in an email to ask the group if they had any questions for Intel based on the NMED presentation.

- Dennis O'Mara said that as he understood it, there was no template for developing the emissions permit. Every permit was structured to an applicant's specific situation. He asked if this was correct. Ted Schooley said yes and no. All permits were customized to a situation. No single permit was like another but they may share generalities. Monitoring protocols for a common industry was similar to a decision tree for a computer. In New Mexico, there was only one computer chip facility, and so Intel's conditions were very customized because they were unique.

- Liz Bisbey-Kuehn said that Intel's various sites were most likely conducting similar monitoring. The EPA had a control technology fact sheet, and they had their own recommendations for what parameters they monitored for each piece of equipment and control device. For a thermal oxidizer the parameters typically monitored were inflow, outflow, temperature stack, firebox temperature, and resonance time.

- Ted Schooley said that equations accompanied any predictor of emissions in a permit application. NMED looked at the variables in the equation that could change the amount of emissions released. These variables were very important because they were the assumptions behind the answer to the emissions amount. NMED made conditions that said those variables were going to be restricted in a certain way to insure emissions were not too high or above what a facility predicted.

- Hugh Church asked if the current federal administration's desire to eliminate regulations was having an impact on NMED. Liz Bisbey-Kuehn replied that strong administrative records existed that outlined the need for a specific regulation, the danger it posed and the economic and public health costs. They did a cost analysis of these controls to determine the best course of action, so there was robust documentation behind each regulation. These regulations were hard to remove because the scientific evidence and economic rationale was already laid out in court. They could make revisions but they had to put forth considerable effort. There were legal challenges every time an administration tried to make a change that was not scientifically based or controversial or not health-based. Legal challenges often took years of litigation. She added that the EPA maintained the same level of funding as in other administrations and that this administration was more interested in states' rights.

- Dennis O'Mara said one of the sections of Intel's permit that intrigued him was the section on facility-wide allowable HAP emissions in tons per year, and he assumed that for facilities with the same permit type there would be a list but it would be different for each facility. Liz Bisbey-Kuehn said if there were individual HAP greater than one ton per year then those HAP would be listed individually. The combined limit on HAP was an aggregate of emissions that could not exceed 24 tons per in the case of Regular Part 72 minor construction permits.

- Mr. O'Mara asked if Intel emitted hexachloryl-benzene; the facility-wide limit listed was .5 tons. Liz Bisbey-Kuehn replied that for specific questions for specific chemicals they would need to refer to the permit. If there was a limit listed it didn't necessarily mean it was being emitted. Ted Schooley added that just because Intel had the authority to use a chemical didn't mean they used the chemical. Mr. O'Mara asked how the individual HAP emission limits per year were arrived at. Mr. Schooley said that when a permit application came in-house, NMED reviewed the application to ensure it met the CCA requirements and state regulations and that it did not cause adverse impact on public health by violating ambient air standards. So NMED did not have the authority to say "we want you to build your stacks 20 feet higher," all they had was the ability to look at whether it violated any set standards and say yes or no to the permit. They did not have the ability to tell industry "how" to do something, rather to examine a permit to ensure it met all the necessary regulations.

- Dennis O'Mara asked if the list of 16 individual HAP emissions per year came from Intel. Mr. Schooley said yes, that was Intel's requested list. NMED did not assess whether they needed a specific HAP or not. Liz Bisbey-Kuehn added Intel was required to report those emissions and submit the calculations that supported the identified emissions rate on their application. NMED incorporated the values into the permit.

- Mr. O'Mara said he did not understand why the HAP were listed if Intel was not using them. Ms. Bisbey-Kuehn said Intel was not required to continuously update the permit based on their chemical usage. Intel could voluntarily come in and update the list, but maybe they wanted to leave it as it was because they planned to use the HAP in the future. Regardless of the HAP seriousness, Intel was required to report in its application an estimated quantity that would be emitted. She would need to confirm whether the 16 HAP were listed at the very beginning, because there had been multiple revisions to the permit. A facility was allowed to make small changes in chemical usage based on flexibility in the permit and whether they could show that they did not exceed the limits.

- Mr. O'Mara said it didn't make sense to him that they listed 16 HAP individually and not 187. Mr. Schooley said it didn't make sense to list all the 187 HAP, only the ones that they needed or might need in the future to operate their business. He continued that they most likely used only a subset of the 16 HAP but listed the full 16 because these were the chemicals used in industry processes. This gave them the authority and flexibility to use the 16 HAP at some point in the future if they needed to without changing the permit. It made business sense, he said.

- Dennis O'Mara said he assumed that when there was a bi-annual reporting requirement, that would include two measurements of data, but from what he understood Intel was only required to do stack testing once a year. Ms. Bisbey-Kuehn said bi-annual reporting was required for Title V facilities and Intel had a minor permit so only had to report annually.

- Dennis O'Mara said the community did not see any verification being done; as far as they knew NMED did not go to Intel to check their data. In short, the community was not satisfied and never would be because there was no verification. Ted Schooley said that NMED had visited Intel in the past to watch testing, but the agency had limited resources. If they had verified testing multiple times and found the data to be highly predictable and accurate, then they felt resources were best used in other areas and not just Intel. Their job was to protect the air for everybody in the state.

- Dennis O'Mara reiterated that Intel used dangerous chemicals in a densely populated area, and in the community's view Intel should be a high priority for NMED. Without verification the community would never be satisfied and would never trust the information coming out of Intel and the information Intel gave to NMED.

- Ted Schooley said Intel monitored on a continual basis and was taking millions of data points and collecting them electronically and submitting that data; it would be extremely

difficult for them to fake the data because of the millions of data points that would reveal any glitches. It would be more cost effective for Intel to make sure the emissions met the requirements rather than putting the effort into hiding emissions that were easily met. It would be a terrible business decision for them to expose themselves in this way.

- Dennis O'Mara said it might not be feasible or plausible for NMED to verify Intel's data, but they did not live 500 yards downwind from Intel. A lot of people who were continuously impacted by the emissions would really appreciate and feel comfortable if there was more independent monitoring.

- Jessie Lawrence confirmed that NMED was open to follow up questions. Liz Bisbey-Kuehn said yes and they would be open to another meeting, since this one felt productive. John Bartlit suggested NMED listen by phone to a CEWG meeting to hear how Intel responded to the questions about their permit.