MEETING SUMMARY
Community Environmental Working Group

"Striving for Continuous Environmental Improvements at Intel"

Date: November 20, 2013
Time: 5:00–7:00 p.m.
Location: Corrales Senior Center

Members Attending

John Bartlit, NM Citizens for Clean Air & Water
Mike Williams, NM Citizens for Clean Air & Water
Hugh Church, American Lung Assc. in NM
Sarah Chavez, Intel
Robinson Shields, Rio Rancho resident
Dennis O'Mara, Corrales resident
Edward Pineda, Rio Rancho resident

Non-Members Attending

Lynne Kinis, Corrales resident
Natasha Martell, Intel
Andrew Moen, Intel
Frank Gallegos, Intel
Mary Jane Rodriguez, Corrales resident
Liz Cummings, Corrales resident
Pat Cummings, Corrales resident
Cara Gallegos, Corrales resident
Phil Gasteyer, Mayor of Corrales
Daren Zigich, NMED
Ned Jerabek, NMED
Keith Riesberg, City of Rio Rancho
Peter Wells, City of Rio Rancho
Roberta King, Corrales resident
Tamara Gutierrez, Corrales resident
Jeff Radford, *Corrales Comment*
Lee Ross, *Rio Rancho Observer*
Bob Walton, Resident

Facilitator

Stephen Littlejohn, Facilitator
CJ Ondek, Recorder

HANDOUTS

- Draft Agenda
- Draft Meeting Summary October 2013
- Action-Item Progress Report
- EHS Activity Reports
- Media reports and articles, as available
- HF Preliminary Progress Report
- Code Red Report
- NMED materials as available
- History of Permit Discussions

PROPOSED AGENDA

- Welcome, Introductions, Announcements and Brief Items
- NMED Public Comment Meeting: Intel Title V Permit
- Additional Business
- Adjourn

WELCOME, INTRODUCTIONS, ANNUNCEMENTS, AND BRIEF ITEMS

John Bartlit opened the meeting by stating the CEWG mission, which was to work towards continuous environmental improvements at Intel and improved community dialogue. Mr. Bartlit summarized CEWG's activities. He said the CEWG's mode of operating was to gather and discuss information from all sources. The CEWG had discussed Intel's permits for many years. Information on this discussion over time was outlined in the handout "Intel Permit Discussions" and available on the CEWG Web site for download, along with all other CEWG materials.

Agenda—Revisions and Approval

No comments.

Meeting Summaries—Revisions and Approval

No comments.

New Facilitator Introduction

John Bartlit announced that a new facilitator was hired to replace Stephen Littlejohn, who was retiring. Sarah Chavez said both Intel and CEWG members interviewed a group of highly qualified facilitators and selected Mark Bennett for the job. Mr. Littlejohn said he would meet with Mr. Bennett in December to begin the transition of duties. Mr. Bennett's tenure would begin in January 2014.

ATSDR Update

John Bartlit said he spoke monthly with Peter Kowalski at the Agency for Toxic Sbustance and Disease Registry (ATSDR), who was working on a final report that included a review of the New Mexico Department of Health's (NMDOH) investigation of pulmonary fibrosis cases in Corrales, and a CEWG silica emissions testing report. In their latest conversation, Mr. Bartlit stated that Mr. Kowalski said he had finished the draft report and distributed it in-house to three people for review. Their comments were expected next week. Mr. Kowalski would make the draft revisions and send it for review to the New Mexico Environment Department (NMED), NMDOH and the Environmental Protection Agency (EPA) in Dallas. These organizations had about three weeks to return their draft comments to Mr. Kowalski. A separate external peer review of the NMDOH report and the CEWG silica testing report, which would take about a month, was also planned, and the results would be included in the ATSDR's report. If all went well, the ATSDR should have a completed final report to the public and Intel by February. Mr. Bartlit said he had asked Mr. Kowalski, as requested at last month's CEWG meeting, if in-house

and agency comments were available for public view. Mr. Kowalski had said this was not normally done, and he would have to ask to get approval, which would further delay the process. Mr. Kowalski had suggested to request comments through the Freedom of Information Act after the final report was issued; this process would take several months to complete. Mr. Bartlit said his next talk with Mr. Kowalski was scheduled for December 16.

Other Announcements

Lynne Kinis shared a paragraph from the November 9th *Corrales Comment* that quoted a retired Los Alamos chemist. Below is the excerpt:

> *As retired chemist Marsh [Fred Marsh, a retired Los Alamos National Laboratory chemist] pointed out, "Intel would be allowed to release an entire year's amount of any permitted compound, no matter how toxic, in a day, or an hour, or as short a time as they wish. The Intel permit allows them to release 5.9 tons of phosgene (a deadly chemical warfare agent that caused 80 percent of the poison gas deaths in World War I) in an hour, which would kill thousands, if not tens of thousands in nearby communities.*
>
> *"If Intel did this, they would be in full compliance with their permit."*

Ms. Kinis pointed out that this was just one questionable compound. She said she would like the NMED to address this comment. Edward Pineda added that the CEWG had heard this comment eight years ago or more, and he would appreciate Intel addressing this issue. People's health should be above business, Mr. Pineda emphasized.

Public Comment

Liz Cummings asked about air monitoring and testing at Intel. Sarah Chavez gave a summary on Intel's testing history. She said Intel was required by its permit to do extensive stack testing over the last 10 years—quarterly on its thermal oxidizers (and now more recently annually) and annually on its scrubbers—so there was a tremendous amount of data available. Also, NMED hired a consultant to test around the fence line as part of the Corrales Air Quality Task Force. Intel hired a certified third party to conduct the testing.

NMED PUBLIC COMMENT MEETING: INTEL TITLE V PERMIT

Ned Jerabek, Manager for Major Sources, Air Quality Bureau Permit Department, and Daren Zigich, Permit Writer, from New Mexico Environment Department's (NMED) Air Quality Bureau, gave a presentation on Intel's Title V Permit.

- Ned Jerabek presented first. He emphasized that he and Mr. Zigich were present tonight to listen to the public's comments and concerns, and if NMED had the authority to address it in the permit they would. He stressed that none of the applicable requirements in Intel's existing permit were changing, including emission limits. Intel became a major source for greenhouse gases because of a Supreme Court decision that gave the EPA the authority to

regulate greenhouse gases. Intel had always emitted the greenhouse gases, but now they were regulated. He said the purpose of the Title V operating permit program was to place all applicable requirements under the umbrella of one permit. He welcomed all comments, either orally, written or e-mailed; they would consider all comments as they finished the technical analysis.

- Daren Zigich presented next, referencing the PowerPoint that accompanies this Meeting Summary. First he gave background. He said the mission of Air Quality Bureau was to protect the health and welfare of the community to the extent that it was possible. The Clean Air Act required the EPA to set National Ambient Air Quality Standards for a limited number of pollutants. Most of these standards were established in the 1970s, and little had changed over the years. The core criteria pollutants had stayed the same for a couple generations. Most of these pollutants were by products of combustion and volatile organic compounds (VOCs) that contributed to ozone issues. Both federal and state standards applied, and in some cases the New Mexico standards, which were influenced by local industry, were more stringent. Mr. Zigich said that in the 1990s, NMED created addition standards for toxic air pollutants that OSHA regulated at large manufacturing facilities. These newer regulations had to ensure there was enough dispersion of pollutants at the fence line to meet occupational exposure regulations. Stack heights was one example of a dispersion method. The EPA had a list of 188 hazardous air pollutants, which were different from the NMED's list. EPA had chosen not to set ambient standards but controlled toxic pollutant levels at the fence line.

- Mr. Zigich explained Intel's permit history. Intel operated under a construction permit for many years, which was triggered by potential emission rates greater than 10 pounds per hour (pph) or 25 tons per year (tpy) for any pollutant subject to state or federal air quality standards. States dealt with minor source, while the federal government handled major source levels. Intel was kicked into a Title V major source operating permit because it had emissions greater than 100,000 tpy of carbon dioxide equivalent. He showed a slide that listed numbers from Intel's current New Source Review (NSR) permit: All criteria pollutants < 100; all individual HAP < 10; and total HAPS < 25. Also, because Intel's state regulated toxic air pollutants fell well below emissions levels or were adequately dispersed, the state did not regulate these levels in the minor and major source permits.

- Mr. Zigich discussed EPA and greenhouse gases. He said the EPA found global warming to be a public danger with greenhouse gases being responsible. This set the way for changes to regulations. The EPA added greenhouse gases into the mix of what could be permitted in the Clean Air Act, with a threshold set at 100,000 tpy. Sources of CO_2 were methane, nitrous oxide, sulfur hexafluorides, hydrofluorocarbons, perfluorocarbons, and other fluorinated greenhouse gases. Intel emissions contained a mix of these pollutants, which were not equivalent in terms of global warming potential. For example, methane is

stronger than CO_2. The EPA devised a global warming potential scale with CO_2 as the standard and assigned a numerical value of 1, with the other chemicals ranked in reference to it.

- Mr. Zigich showed a slide with the greenhouse gases emitted by Intel to demonstrate a mix of different chemicals, with each compound having a multiplier based on potency. Intel accounted for about 1% of the Title V source emissions in the state. The bulk of Intel's greenhouse emissions came from the chip manufacturing process. These compounds were inert, which meant they were low in toxicity but stayed in the atmosphere for hundreds of years. Mr. Zigich said that if people were interested, they could get the data on greenhouse gas emissions as reported over the years by Title V facilities in New Mexico by visiting: www.nmenv.state.nm.us/abq/GHG_data_outreach_VER20_Final.pdf

- Mr. Zigich discussed how NMED set limits for Intel. The EPA had to figure out how to set limits on facilities that were not new but had been operating for years. They developed the Plant-wide Applicability Limit (PAL) to address this issue. To set the greenhouse gas annual emissions cap, a facility looked back at the previous 10 years and took an average of any two representative and consecutive years. Intel chose Years 2003 and 2004 for an average of 320,797 tpy with a 75,000 tpy modification added for a PAL annual cap of 395,797 tpy CO^2 equivalent. Intel has to live under this cap for 10 years with some flexibility for change. PAL limits established the cap; monitoring, reporting and recordkeeping verified an organization stayed under their cap.

- Mr. Zigich said the PAL limit gave operational flexibility to Intel, which because of the wide range of chemicals they used in their processes might find a different chemical to use with a lower multiplier. With PAL Intel could change chemicals as long as the greenhouse gas cap was not exceeded. PAL also required additional record keeping and reporting that went to NMED and EPA, so a lot of good information was going to these agencies that hadn't been before. Because greenhouse gas is a global warming issue and not a localized pollution problem, no modeling or standards were set for it.

- Mr. Zigich continued that the Title V permit core reiterated Intel's new source or construction permit, and the PAL permit was included as an attachment. It renewed every five years, and new regulations would be added, if necessary. The Title V permit required more monitoring, recordkeeping and semi-annual reporting than a standard new source review permit, as well as an annual compliance certification and an annual compliance inspection. The annual compliance certification required the facility head to sign off to ensure compliance annually. The annual compliance inspection was an annual inspection by NMED of the Intel facility site.

Question and Answers

- Lee Ross asked about the high multiplier for $SF^{6.}$ Daren Zigich said he did not get into science of global warming potential with this presentation, but some pollutants were better at holding infrared radiation in the earth and therefore were present much longer, while CO^2 eventually converted to something else.

- Dennis O'Mara said that the recent accident at Intel's plant in Arizona released nitrogen flouride, which had a17,000 multiple and stayed in the atmosphere for 500 years. Mr. Zigich responded that trifluoride was similar to refrigerants—the chemicals regulated to protect the ozone level that remained for many years in the atmosphere.

- Edward Pineda said that for the sake of clarity "tpy" was "per year." These were rolling annual averages, and the amounts could be interpreted as being released throughout the entire year or, if something happened, in one day or one hour. Mr. Zigich said that some of the criteria pollutants, from combustion sources, had to meet hourly emission values rated at full capacity of a boiler or other emission source, which was limited. This was an issue with refineries and gas plants, since accidents could occur there. Some plants had limited production capacity, and the only time there could be a large release was if they were storing a large amount of chemicals onsite and experienced a critical failure. This was a staff safety issue. He added that other regulations existed outside of the Clean Air Act purview that limited the potential for accidents, for example, regulations for first responders and OSHA. Sarah Chavez added that Intel did not store large quantities of chemicals onsite. They operated using a just-in-time chemical delivery system.

- Jeff Radford asked about the different compliance standards between Intel's current permit and the new permit. Ned Jerabek said Intel was obligated to be in compliance with permit conditions in the New Source Review (NSR) permit, and these conditions were based on testing and other similar conditions. The new Title V permit held Intel to a higher standard—they had to conduct an annual compliance status analysis, certify it and send to NMED.

- Jeff Radford asked about NMED inspections at Intel. Daren Zigich said the last visit NMED made to Intel was four or five years ago. Now with the Title V permit, NMED would make an inspection visit to Intel every year. During these inspections, the inspector had the permit, made a checklist based on the permit, and asked for records to demonstrate compliance. The inspection consisted of a full compliance evaluation of every condition in the permit. The inspector toured the facility to get a general idea of equipment conditions. Also he/she inspected Intel's records

- Lynne Kinis asked, as a member of the community living directly downhill and east of Intel, if any other Title V facility existed in the middle of residential community in New Mexico? Ned Jerabek replied yes. Ms. Kinis said there were many ailing citizens in Corrales, and she believed their illness was caused by Intel emissions. Did NMED or EPA monitor Intel or just take their word for their emission levels? Mr. Jerabek said that Intel used a third party for testing whose credibility was well proven. Ms. Kinis responded that the third party was paid by Intel. She relayed a story from the 2003-04 task force, when Intel did not like the testing results and asked them to repeat the testing. They did and the results changed.

- Lynne Kinis emphasized that NMED represented the people, so how did they know whether they were being fed the truth? The community did not think Intel was being truthful with NMED. The Title V dealt with greenhouse gases, but what about the other chemicals that were making people sick? Mr. Jerabek said NMED's enforcement section had the authority and discretion to address citizen concerns about a testing procedure or methodology they believed was inaccurate on criteria pollutants identified and established in regulations. If the community believed, through research and study, that there were pollutants not being regulated that they needed to be, then they should go through the proper political channels to demand for regulation. Ms. Kinis said the community had been doing this for almost 20 years but to no avail.

- Daren Zigich added that the community had other avenues to check if they were concerned about short-term releases. Phosgene was regulated under other areas, and the thresholds were usually very small. With regards to air permits, NMED had reasonable assurance that Intel was not violating its thresholds.

- Roberta King asked if the figures contained in NMED's presentation were English pounds or metric tons. Mr. Zigich responded that NMED permits used English tons (2000 lbs), while the EPA used metric tons to be in alignment with global standards and the metric system. The metric ton was 10% higher than the English ton—2200 lbs vs. 2000 lbs. Mr. Zigich added that the *Corrales Comment* mentioned metric tons, which was an error.

- Roberta King said when Sarah Chavez gave oral reports on Intel requirements, her response was often, "We aren't required to report on that." Liz Cummings said the community would like Intel to report on the number sick employees due to environmental issues. Frank Gallegos said Intel had a robust onsite system that included an occupational health and clinic. He said there was a privacy issue between doctor and patient, so he had not seen any health-related numbers on employees, but he did not know of anyone at Intel who got sick. He added that OSHA monitored Intel, and employees could report their

work-related illnesses to OSHA. He suggested members of the community ask OSHA for a report on Intel employees and illness.

- Stephen Littlejohn passed out NMED postcards for people to write their questions. Ned Jerabek requested people to send their questions or comments to NMED by December 1 to be considered before the permit deadline.

- Stephen Littlejohn explained that the Meeting Summary captured the discussion, and it was sent out to attendees to check for accurate reporting. If something was inaccurately reported or missed, the CEWG could correct or add to it. People could contact him with their changes.

- Dennis O'Mara said that under the existing permit, certain chemicals Intel used were monitored and regulated, but other chemicals used were not because these chemicals were not included in the original regulations. Daren Zigich replied that some chemicals Intel used were regulated like VOCs or as a by-product. Others, like HF, were hazardous air pollutants. Some of the greenhouse gases became other things in the manufacturing process. With the Title V permit, NMED would now be able to get a better look at chemical usage at the Intel facility, including the amount used and how they were used.

- Dennis O'Mara asked if NMED would be capturing any new chemicals that weren't regulated under the existing permit. Daren Zigich responded not in the sense of them being VOCs or hazardous air pollutants, but some broke down into other compounds. Sarah Chavez said Intel had been reporting on fluoride compounds since 2000, of which one of the byproducts was HF, so this data was part of the state records for years. Intel also reported their fuel usage. Mr. O'Mara asked if Intel was using chemicals that were not regulated. Ms. Chavez said yes; they were using chemicals that were not regulated in the Clean Air Act.

- In response to a comment by Jeff Radford on continuous emission monitoring, Daren Zigich said NMED needed to establish a reason for requiring this kind of monitoring. Continuous emission monitoring started with the acid rain program, because it was a cap and trade program, and they needed accurate data to exchange money correctly. He added that continuous emission monitoring was not without inaccuracies and downsides. Another reason for continuous monitoring was the need for strict controls, which was usually written into federal rules. He said currently there was not a good argument for putting continuous monitors on Intel. Also, Intel did eight-hour runs of stack testing; other industries did not do that kind of testing.

- Ned Jerabek said the standard EPA set for Title V permits was to establish monitoring that demonstrated reasonable assurance for continuous compliance. The facility needed to produce data at some frequency that showed they could reasonably operate in compliance throughout the year. New Mexico had 258 Title V permitting sources in the state, and a small percentage had continuous emissions monitors, usually for NOX, CO_2, and acid rain because regulations required it.

- Daren Zigich said the numbers from testing at Intel over the years had been low compared to the applicable limits. He acknowledged that it seemed like the community felt the limits set in Intel's permits were too loose, and because they were potentially too loose, the stack test numbers were off. NMED knew with some confidence that Intel's numbers were accurate; the testing numbers and limits were too far apart to justify continuous monitoring given Intel's operations at the current size. When the testing numbers went over the thresholds, then certain regulations kicked in.

- Lynne Kinis commented on a few things. First, Intel started with a major source permit, and then they got a minor source permit in 2000 because they insisted on it. Second, every year Intel got an addition to their permit, they listed some chemicals that they did not intend to use immediately but were there if they needed to use them at some point. Now NMED was saying that some of the chemicals Intel used were not in permit. Ms. Kinis said that she did not know what to believe. Also, some of the chemicals were calculated with an emissions factor of 0, so why bother?

- Ned Jerabek asked if the confusion was that some of the chemicals were regulated by air quality emissions and some were not. Ms. Kinis said the confusion was around what was true. She said she was concerned about health—silica, phosgene, HF, those chemicals that affected health. Corrales has a population of 8,500 with 11 reported cases of pulmonary fibrosis; these numbers were off the charts compared to EPA statistics of 10,000 to 1. She said taxpayers paid NMED to protect the citizens not the industry.

- Dennis O'Mara said he noticed in the presentation that some of the chemical standards had not changed since the 70s. He also assumed that some of chemicals were fairly new and had no standards at all. He said he was skeptical of standards because he did not believe they were based on real research and health impact. He noted as examples lead poisoning, mercury, radiation and cholesterol levels. In 50 to 100 years, people will look back at air quality regulations and say, "What in the world were they thinking?" He had no confidence that particular regulatory levels were protecting health, especially that most were arbitrarily set. He suggested industry and regulators needed to find new waste management technologies to keep toxic emissions from going into the atmosphere.

- Daren Zigich said that the EPA took a different approach to hazardous air pollutants. They regulated the big polluters with control technology—scrubbers and thermal oxidizers—with the hope that the ambient impact would be nil. Doing a health assessment on just one a chemical took years, so they opted for controls instead. In the second phase they looked at smaller sources that were in neighborhoods such as dry cleaners, and went back to create control measures for non-major sources. Now they were starting to rollout regulations for smaller area sources. And eventually they could be getting around to creating specific emission sources for chip manufacturers. But they have looked at smaller sources and tried to put reasonable levels of assurance that the emissions would not harm the community's health and welfare.

- Edward Pineda requested, on behalf of families and residents, that NMED study the effectiveness of Intel's permit to protect the people's health. OSHA protected workers, but NMED could not say the same for the community.

- John Bartlit said NMDOH did a study on pulmonary fibrosis in Corrales, and the report was on the CEWG Web site. This same report was mentioned at the beginning of the meeting as being sent to ATSDR for review by Peter Kowalski, and then reviewed by an external peer review team drawn from the National Institute for Occupational Safety and Health (NIOSH) and from academia. The CEWG was trying to get as much commentary as they could. All documents would be posted on the CEWG Web site.

- Liz Cummings commented that Intel kept too many things secret around health, and she would like to see more transparency from Intel on public health.

- Stephen Littlejohn said that many of the complaints from the community were captured in regular CEWG monthly meetings on the EHS report. Anyone could sign up to be on the mailing list, and people could come to monthly meetings. The CEWG liked to handle the issues that regulatory agencies could not; they dialogue about current issues and filled a vital role in the community.

- Roberta King commented that health was not addressed in the permit only mechanics. She said that ALEC controlled everything, with the goals of making money and corporate control. Nothing would change until ALEC was addressed. She cited dedicated environmentalists who won legal cases that become federal law; but ALEC passed state laws with precedence over federal laws. Chemicals affected the central nervous system and everyone seemed to be in denial of this fact.

Stephen Littlejohn thanked everyone for attending the meeting.

MEETING ADJOURNED

CONSENSUS DECISIONS
None

NEXT MEETING
December 18, 2013, 5 to 7 p.m., Corrales Senior Center