

MEETING SUMMARY

Community Environmental Working Group

“Striving for Continuous Environmental Improvements at Intel”

Date: December 16, 2009
Time: 5:00–7:00 p.m.
Location: Corrales Senior Center

Members Attending

John Bartlit, Acting Chair
 Sarah Chavez, EHS Department, Intel
 Hugh Church, American Lung Association

Thom Little, Intel
 Mike Williams, NM Clean Air & Water
 Edward Pineda, Rio Rancho resident

Intel Staff

Frank Gallegos, Intel

Public

Roberta King, Corrales resident
 Judy Hemphill, Corrales resident

Jay Stimmel, Interested citizen

Facilitator

CJ Ondek, Facilitator and Recorder

HANDOUTS

- Draft Agenda
- Draft Meeting Summary November 18, 2009
- Action-Item Progress Report
- EHS Activity Report
- December newspaper ad
- Invitation to AQB to participate in silica testing, response from AQB
- and reply back
- Corrales Comment article
- John Bartlit column, “Synergism Is Well Worth Understanding”
- Report on chemical changes at Intel
- “Comparison of Production Changes from Q308 to Q309”

AGENDA

- Welcome, Introductions, and Brief Items
- Chemical and Emission Changes
- Intel Tour
- Additional Business
- Adjourn

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WELCOME, INTRODUCTIONS AND BRIEF ITEMS

John Bartlit opened the meeting by stating the CEWG mission, which was to work towards continuous environmental improvements and improved community dialogue. Introductions were made.

Agenda—Revisions and Approval

No comments.

Meeting Summary—Revisions and Approval

No comments.

Other Announcements

John Bartlit reported that he contacted Mary Uhl at the Air Quality Bureau (AQB) to invite the organization to participate in designing a plan to test stacks at Intel for crystalline silica emissions as part of the Citizen's Protocol. Mary Uhl declined the invitation due to budget constraints and financial problems at the state and suggested that if the budget situation improved, they would reconsider the invitation in the future. Mr. Bartlit said he interpreted her response as favorable due to its encouraging and positive nature. Edward Pineda said he was concerned that if the AQB does not approve postponing tests that Intel and we agree to, this could kill the project. He asked if they might use the same rationale—budget constraints, not enough staff—to decline looking at the formal Citizen's Protocol proposal. Mr. Bartlit said he thought that would be highly unreasonable and unfair and doubted that would happen. Thom Little said he also thought Ms. Uhl's response was positive under the circumstances, and AQB would be open to reading the formal proposal once it was submitted. Roberta King said she also read Mary Uhl's response favorably, and that Mary Uhl knew what the problems were and how the hands of department personnel trying to help people were tied. Intel is a political football with the Governor dictating to the Secretary of the Environment, who dictates to the official spokesperson for NMED and AQB.

John Bartlit reported on the ATSDR follow-up committee meeting held December 2, 4 p.m. to 6 p.m. The meeting was to discuss Mike Williams' proposed test draft of the silica plan. The draft was projected on to the wall and comments and questions were taken and the draft was revised as necessary. Mr. Bartlit said the process followed at the meeting worked well, and everyone had a say in the language. He also said that the major result of the meeting was to begin with a screening test that would give certain initial information on the amount of silica and crystalline silica present. The screening test would not give information about particle size but would give more information needed for a more detailed test to follow.

John Bartlit mentioned an article by Jeff Radford in the *Corrales Comment* that discussed CEWG's work history, Intel, the Citizen's Protocol and silica testing. He proposed running an

advertisement in the *Corrales Comment* seeking more participation from the community in the Citizen Protocol/silica testing process. He drafted a proposed advertisement for the group to consider and discuss later. Edward Pineda asked that the agenda be amended to discuss the item now due to timing. Mr. Bartlit said the CEWG had discretionary money, since Intel had restored the full budget, to use to pay for the ad. Thom Little said the Village of Corrales contacted him informing him that CEWG had to begin paying rent for the meeting room. The cost was unclear, since the rental agreement said that 501 c3 non-profits would be charged \$10/hour, for-profit organizations would be charged approximately \$20-25 per hour, and private parties would be charged approximately \$30. Mr. Little said that the CEWG did not fall clearly into any of these categories, and he contacted Stephen Littlejohn about the issue. Mr. Littlejohn said he would handle it upon his return. Mr. Little pointed out that the CEWG budget would now have to cover space rental costs.

Hugh Church asked if the ad took the form of a letter to the editor, would it be subject to being edited? Roberta King said the *Corrales Comment* editor would only edit something if it were libelous.

The group discussed the best way to move forward with making a decision on this topic, including whether the draft should be an ad or a letter to the editor, how much it would cost to place an ad, and the wording. Everyone agreed that the best way to handle it, would be to review Mr. Bartlit's draft after the meeting, discuss it via e-mail, learn missing information regarding cost issues, and then finalize the issue at the next month's meeting.

CHEMICAL AND EMISSIONS CHANGES INCLUDING EFFECTS ON 1-HEPTANETHIOL MODELING

- Thom Little and Sarah Chavez presented the attached PowerPoint report: "Comparison of Production Changes from Q308 to Q309." "Q3" stood for third quarter. The following is a compilation of key discussion points. Please reference the attached power point for presentation details.
- Thom Little began the presentation with a look at Intel's VOC and HAPS emissions history and a background summary comparing emissions, production and production area. The presentation, he said, focused on changes in VOC and HAPs, and he used the list of nine key concerns compiled during November's meeting to frame the presentation. Of those nine questions, Mr. Little said his presentation addressed the following four questions:
 1. Is Intel willing to study this complaint and take action if a problem was discovered?
 2. What have been the changes in chemicals over the last year?
 3. Examine the 1-heptanethiol modeling and ask what it means in this situation.

- Mr. Little said he was not clear on this question’s meaning, so it would be addressed verbally and not with slides.
4. Plot production variability to check for correlation.
- Mr. Little said questions 5-9, below, were aligned more with risk analysis and a toxicological study that was beyond the scope of the presentation but may be addressed at a later time. Edward Pineda said that the CEWG was concerned with the issues below and impact on the people and they should be dealt with in a scientific manner. John Bartlit said that the group could begin to address these issues in the future by having a panel discussion on toxicology as was done with epidemiology.
5. Were there any other sources of chemicals that could account for these effects?
 6. What symptoms were associated with the chemicals that have changed over the last period of time and what were the exposure limits?
 7. Were there known interaction effects causing these impacts?
 8. Were there time exposure effects that could explain these symptoms?
 9. How should the effects be tracked over time?

Mr. Little said the above need key definitions. Risks on persons involve risk analysis and toxicology.

- Mr. Little said his presentation addressed usage—the amount of chemical purchased by Intel—and emissions. Sarah Chavez pointed out that the chemicals in the list did not reflect “all” of the chemicals purchased by Intel but only those regulated as a VOC or HAPs. Mr. Little pointed out that although there was a rise in the amount of chemicals purchased by Intel, there was a drop in emissions. Intel’s policy was to only purchase chemicals in an amount that would be used immediately—“Just in Time” policy. Therefore, usage was synonymous with purchase. Mr. Little said another Intel’s corporate policy was, “Design for Environment,” which was to use processes and high-end abatement equipment to help reduce emissions.
- Mr. Little said that, for the presentation, he did not address all the chemicals that Intel tracked, but highlighted a few key chemicals. Also, of the 57 chemicals on the list, not all of them were “new” from Q308 to Q309, including 1-heptanethiol. He reminded the group to pay attention to the scale of the graphs in the presentation. The variation reflected in the presentation was because of production levels and process changes. Sarah Chavez said that usage didn’t necessarily correlate with emissions, since a chemical could be used at high volumes and have low vapor pressure.
- Edward Pineda asked about the chip production cycle time. Thom Little said cycle time varied by process, but often the cycle was five to six weeks. Mr. Pineda asked if the usage was at a constant rate. Sarah Chavez said that chips were constantly being manufactured

and production process did not change from week to week. Mr. Little said that the process was on a microscopic level and consistency was key to the production process.

- Thom Little pointed out that 1-heptanethiol usage was at 600 pounds in September '09. Judy Hemphill asked how it was disposed. Sarah Chavez said that it was abated by two tools: thermal oxidizer system and scrubbers system. Ethylene glycol goes out the scrubbers. PGMEA goes to thermal oxidizers.
- Thom Little said that some chemicals included in HAPs were also included VOC, so there was not a "volume used" HAPs number because it would constitute double counting. HAPs emissions dropped from April to September '09, and Intel's new process began in January '09.
- Thom Little said the presentation numbers was dynamic and data could be added regularly to monitor usage and the data showed that emissions from Intel were significantly less than a year ago. Judy Hemphill asked if this was the case, why were community members still getting sick. Mr. Little said he did not have a good answer. Mr. Bartlit said it probably had to do with the chemical involved rather than the volume.
- Edward Pineda asked how the chemicals were disposed. Sarah Chavez said it depended on the process. Some chemicals were consumed into the wafer, some were destroyed in the process, liquids went into the wastewater system, solvents were sent to a waste recycler, and gases went into an abatement system.
- Mike Williams asked when was the pH changed in the scrubbers and how did that correlate to 1-heptanethiol usage. Thom Little said the pH was changed at the end of summer. Sarah Chavez said the slide on 1-heptanethiol usage was misleading because its usage in first half of the year was for one emission factor tool, and then July through September it was for all usage, including the sink emission tool. The slide needed to be corrected and broken down to reflect both tools to be more consistent.
- John Bartlit said HMDS, which was responsible for silica, was not listed in the presentation. Thom Little said it was included in the list of 57 VOCs. Sarah Chavez said they chose a handful of the most significant chemicals to show rather than all 57.
- Thom Little said he would revise the slides and send it to the group. He invited the group to ask any questions through e-mail and he would respond with an answer to everyone. Judy Hemphill asked for a graph that showed emissions for all 57 chemicals since the new process occurred. Mr. Little said he would create a slide similar to the slide "Second Tier Usage Chems," which plotted usage over time. He invited the group to send their editorial comments to him to incorporate into the revised PowerPoint presentation.

- Attendees thanked Mr. Little and Ms. Chavez for their presentation and commended them on their hard work in creating the presentation.

ACTION ITEM:

- Thom Little and Sarah Chavez will revise the slides, add in slide numbers and references, clarify the graphs, incorporate editorial suggestions, and e-mail the revised version to the group.

INTEL TOUR

- Thom Little said that he had a conversation with Jeff Radford, and Mr. Radford preferred taking an Intel tour alone now. Mr. Radford could join the tour for the larger group later, when construction was slow, if he wanted to. After their agreement, Mr. Little said he contacted Intel's Public Affairs Division, who informed him that Intel was not conducting media tours now due to intellectual property issues, a policy that applied nationwide. Mr. Radford responded to the news cordially and asked if he could still visit Intel and ask his questions. Mr. Little said they were trying to work that out with Intel management.
- Edward Pineda asked, in light of this policy, if Mr. Radford would be allowed to join a tour with the larger group. Mr. Little said yes, but it could not happen now. He said Intel Public Affairs was aware that he wanted to conduct the tour.
- John Bartlit asked if the CEWG could sit in on the discussion with Mr. Radford, if Mr. Radford agreed to it. Frank Gallegos said that many of Mr. Radford's questions were reviewed by the CEWG, and perhaps he could come into a CEWG meeting for that discussion. Roberta King said that she did not see why the CEWG should be involved with Mr. Radford's work regarding Intel. Mike Williams said that the suggestion was for the CEWG's benefit and offered an opportunity to be better informed by listening in on the discussion. Edward Pineda said as a member of the media, Mr. Radford's discussion with Intel might be illuminating. Thom Little said that members of the media had a media credential, which meant they were treated differently and had greater access. If CEWG was able get invited to Mr. Radford's discussion, it might be useful. Mr. Bartlit said CEWG would not attend the meeting if Mr. Radford or Intel did not want them to. Ms. King said the CEWG had a tendency to take over a meeting, which would get in the way of Mr. Radford's goals. Mr. Little said the Public Affairs department conducted media events, which were only open to journalists with media credentials. He said he would check with Mr. Radford and Intel if CEWG could be invited to their discussion.

ACTION ITEMS:

- Thom Little will check with both Mr. Radford and Intel if CEWG could be invited to their discussion.

ADDITIONAL BUSINESS

EHS Report

- Sarah Chavez said a revised EHS report was e-mailed December 10th from Stephen to the group, and the main change was a down time on November 17 of 3.83 hours and 6.6 lbs. of emissions on the thermal oxidizer. Another revision she noted was an EPA region 6 air inspection that occurred the week of December 6. EPA inspectors looked at treatment system, chemical use, air permits and an in-depth review of emission factors. Also, NMED visited on December 16 to go through emission factor revision that currently was happening. Ms. Chavez said that this was the first time since she had been at Intel that the EPA had conducted an air inspection. Four individuals from the Dallas office conducted the inspection.
- Judy Hemphill asked how Intel used the EHS report and if management saw the report. Thom Little replied “no.” He said that when there was a complaint, he went through all the data and tracked all the gages, dials, systems, and pH data for the previous two hours, and searched the data for any blips. Publishing that level of detail in the EHS report, he said, would be difficult and not useful. He worked with engineers, including the odor/contaminant task force, to investigate the complaints. He reported that they were at a point right now where they were “looking in the weeds” for the cause of the complaints.
- Judy Hemphill said she was frustrated; there was an odor, and Intel needed to take the data and conduct an analysis to determine what was different from the first 6 months to the second 6 months. She was tired of calling in and did not care if Intel’s systems were “operating normally,” which was what the EHS often stated. Ms. Hemphill underscored that there was an odor, which was a consistent issue, and Intel needed to find a different tactic to deal with it. From her standpoint, she was concerned that the lack of sleep--awakening her and she can’t breathe because there is a chemical irritating her throat--was interfering with her daily life, and the lack of sleep was due to an odor. She believed that action needed to move from odor complaints to analysis of chemicals to see what changed. The complaints were daily and in multiple locations even though only 4 people called in. People are tired of being told that all systems are working properly. John Bartlit commented that Ms. Hemphill’s suggestion made sense—stop analysis of complaints and spend resources on analysis of what changed with the chemicals and usage.
- Thom Little said if the group wanted to see the report done differently, he would comply. Judy Hemphill said if the systems are working perfectly all the time, it was not an anomaly but had to do with the process. She said she was sensitive to the fact that Intel had a new process and did not want to change it so quickly. Mr. Little said he would be willing to work with Ms. Hemphill to develop a first proposal on how to move forward with taking a different tactic to the problem. Ms. Hemphill asked if Intel was prepared to look at a

problem with the new process. Mr. Little said yes, but it was difficult for them to locate what was causing the problem

- Edward Pineda said that the group needed to look at more effective ways of identifying and detecting the odor. He suggested setting up a trailer on one of the hot spots so someone not used to smelling it could spend the evening, or night, or week-end and experience it. Mr. Bartlit said that pollutants had different impacts on different people. Roberta King said that Intel and the group needed to look at the synergistic effects of two or more chemicals and their molecular weight.
- The group was out of time and agreed to add this issue as an agenda item next month.

ACTION ITEMS:

- Thom Little and Judy Hemphill will develop a first proposal on how to move forward with taking a different approach to identifying the source of the odor problem.

MEETING ADJOURNED

NEXT MEETING

January 20, 2010, 5 p.m. at the Corrales Senior Center in Corrales.