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

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

**Date:** October 21, 2015
**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
Dennis O'Mara, Corrales resident

**Non-Members Attending**

Lynne Kinis, Corrales resident
Marcy Brandenburg, Rio Rancho resident
Mindy Koch, Intel
Liz Shipley, Intel

**Facilitator**

Mark Bennett, Facilitator
CJ Ondek, Recorder

**HANDOUTS**

- CEWG Draft Agenda Oct. 16, 2015
- Draft Meeting Summary, September 2015
- Action-Item Progress Report, October 2015
- EHS Activity Report September 2015
- Intel Environmental Goals PowerPoint

**PROPOSED AGENDA**

- Welcome, Introductions, Announcements and Brief Items
- EHS Report and EPA 114 Update
- Review Action Item Progress Report
- Discuss Possible CEWG Activities in 2016
- New Business
- Adjourn

**WELCOME, INTRODUCTIONS, ANNOUNCEMENTS, AND BRIEF ITEMS**
John Bartlit opened the meeting by stating the CEWG mission, which is to work towards continuous environmental improvements at Intel and improved community dialogue. Introductions were made.

Agenda—Revisions and Approval
No comments.

Meeting Summaries—Revisions and Approval

- Lynne Kinis asked who conducted the August 26 and 27 air quality inspection reported by Sarah Chavez on page 4, under "EHS Report." Sarah Chavez responded that it was an impromptu inspection by the New Mexico Environmental Department (NMED), and they had not reported the results yet.

- Lynne Kinis referred to page 5, fifth paragraph, and the comment, "Chemical tracking for compliance purposes was not carried out on a daily basis for each tool." She asked if it was usually carried out for each tool. Sarah Chavez responded no. Ms. Kinis asked if she was to assume that the calculation reported to NMED was only based on one Munters unit. Sarah Chavez said that was part of the silica testing, and the purpose was to show that production was running normal. Thom Little had worked with the silica testing task force to figure out tracking chemical usage before, during and after the silica testing, which was agreed to by the task force.

- Lynne Kinis asked what period of time existed between when more silica was used in the process than when the testing took place. Sarah Chavez said the testing was set up to ensure sampling would collect enough volume to determine the level of silica present. The task force worked hard to collect sample over longer periods of time to ensure they could tell whether crystalline silica was formed. Ms. Chavez continued that there was a document on the CEWG Web site that looked at historical, annual HMDS usage from 1993 to 2010. This document showed a decline in usage but she could not recall the actual numbers.

  **ACTION ITEM**: Sarah Chavez will send this document to Lynne Kinis via U.S. mail.

- Marcy Brandenburg asked why it mattered. She said from 1993 to 2010 the fox was guarding the henhouse. She asked why the CEWG would go to the fox to see if "he would cough up the carcasses." Sarah Chavez said they never used zero to calculate emissions from HMDS. They always assumed 100% of HMDS was emitted as silica since 1993. Also, Intel got rid of a majority of emissions based on community concerns and now used stack testing to calculate the majority of emissions today.

- Lynne Kinis said that in the following bullet point on page 5, which reported that Munters burned at 1385º F and Durrs burned at 1350º F, she had in her notes that one of them burned at 1400º F. Sarah Chavez responded that the concern was that crystalline silica formed at 1425º F, but none of the units burned at that temperature.

- Lynne Kinis said her concern was that if Intel started decreasing silica use 7 or 8 years before the task force, then they had 7 and 8 years to burn off silica before testing. Mike Williams said that they had calculated crystalline silica over a lifetime—for 70 years—and then worked backwards so see how long they had to sample. He said that they tested both Munters and Durrs at same time. Ms. Kinis said that the Durrs were burning for years, and the input into Durrs diminished as it was burning, therefore, logically, the amount of residue would be diminished naturally, too. Ms. Kinis asked if Mr. Williams had concluded there was a year when it was "iffy." Mr. Williams replied that he did not go back to other years but rather looked at current conditions and whether would it continue to be a problem in the future. He said the level turned out to be very small.

- Ms. Kinis said she was confused about one of the results, that there was very little left in the old Durrs, since at one point there was white dust on cars. She said the reason they didn't find any crystalline silica in the Durrs is because they had diminished input but continued burning so a large percentage would be gone. Mike Williams said the margin between what it would take to get to that 1 microgram for lifetime would have to be several orders of magnitude—such as a hundred or a thousand times higher—to be a problem in the past

- Mark Bennett asked if they would like to schedule an agenda item to review the documents in detail.

- Marcy Brandenburg said she would like to know more information. She reminded that they were dealing with the past, since people have already died and were dying. She reminded that no one had the information from back then, and that the "data tables came from the fox" and meant nothing to the community. She said anything done prior to FTIR monitoring meant nothing because no external agency provided oversight. Intel did their own calculations, and no one paid attention until Steve Martinez did his own calculations and found errors. She said Intel did not come from a place of honor and trust, and today children had lesions on their fingers from playing in the dirt. They had things there that could be a superfund site, and that was dealing with the past.

- Mark Bennett said one thing they could do was to set a whole meeting aside to address an agenda item about these issues.

- Marcy Brandenburg said she would love to do that and have a public meeting, with Intel creating an outreach campaign that called for people with illness, pulmonary fibrosis and ALS, to attend.

- Dennis O'Mara said he was concerned about the reliability of screening levels, particularly in regard to long-term exposure, even at low levels. Because there was an unknown level of risk more work needed to be done to continually reduce emissions.

ATSDR Update (Conversation with Peter Kowalski)

John Bartlit said he spoke with Peter Kowalski several times to invite him or others at ATSDR to participate by phone in CEWG meetings to further discuss issues of interest to the CEWG. Mr. Kowalski was willing to remain engaged with the CEWG and not necessarily about the report, but he was traveling to Sierra Leone for one month related to work on the Ebola outbreak and would return in mid November.

Regulatory Engineering Update

John Bartlit said he was traveling to California to make a pitch for regulatory engineering. He showed meeting attendees a booklet he produced for the trip and offered to send an electronic version to anyone who wanted one. He explained that regulatory engineering was about finding better ways to measure emissions—quicker, faster and cheaper. Also, what could be done to find better tools for regulating sites. He said he would continue to promote this idea. There are endless tools in the world today that were used in sensors, software, computer programs, etc., none of which were used in regulation.

Other Announcements

- Dennis O'Mara said he recently became a member of the Corrales Residents for Clean Air and Water (CRCAW). Also, he attended the most recent meeting of the Sandoval County Emergency Planning Committee on October 9. The first item on the agenda was a brief discussion of the County Emergency Preparedness Guide for residents. The Guide is now in final format, and once it is added to the County website, Dennis will participate in compiling a message to be sent to the entire county over the Code Red System. The message will have 3 parts: (1) a test of the Code Red System and explanation of its purpose; (2) information about how to enroll phone numbers, e-mail addresses, etc.; and (3) instructions on where and how to download the guide. Once funding is identified, the guide will be printed for distribution at community events.
- Dennis O'Mara reported that Western Refining made a presentation at the LEPC about their recent exercise to test their boom equipment on the Rio Grande near the Bernalillo bridge. Western Refining has a crude oil pipeline that runs under the Rio Grande about 10 miles north of Bernalillo. While they say that the likelihood of a leak into the river is minimal, they want to be prepared in case it ever happens. The presenter also said that

Western Refining will make their boom equipment available anytime a spill would occur, regardless of the source.

- Mark Bennett said the CEWG was just informed that Corrales had lost their reservation for the community space, and Sandoval County had use of space shortly before 5 pm, and we should not assume that we could set up the space before 4:45 pm.

Public Comment

Marcy Brandenburg said that she felt that her time was wasted by attending CEWG meetings. She said she appreciated what everyone did individually, but it just wasn't where her focus was. She said she had been in touch with the Intel people in Portland, and read the following excerpt from a story in KATU news:

> *Reached about this story, Intel said it was aware of the reports of ALS. But spokesman Chuck Malloy communicated to KATU News: "Based on our investigation and based on the data we have seen we don't believe there is a correlation between Intel and ALS."*
>
> *We asked Dr. Richard Clapp from Boston University to review what we found. He produced the most comprehensive examination on record looking at employee chip making plants like Intel. It found a statistically significant increase in ALS cases among some of IBM plant workers. He fought IBM in the court for years to go public with his findings, and won, publishing the results in 2006.*
>
> *Dr. Clapp called the questions raised by KATU "important" and worthy of more study. "I think there will be probably others that will pick up and take this further, and be able to do some research that might be published in a peer reviewed academic journal. Such a study, Dr. Clapp said, would "add to our knowledge about what goes on in this particular industry."*
>
> *Intel is facing some intense scrutiny right now over the chemicals it's releasing into the community from its plants in Washington County.*

- Ms. Brandenburg continued that the Oregon health authority conducted a study and found that:

> *Year after year of data reveals each time Intel slowed or stopped production, as it did in 2004, when its processors hit a "thermal wall" or in 2010, when it mothballed Fab 20–the ALS rate in Washington and Multnomah counties also dropped. In the years Intel made a killings so did ALS. Death rates in Washington and Multnomah Counties after 2008, as Intel's sales surged to meet the rising demands of PCs.*

- Ms. Brandenburg said she thought the "feds" were going to save them like a white knight but she was wrong. Now her focus was to work with the community in Portland, the families of those who died, Intel workers who are sick and affected, and the writers who works with the *Oregonian*. Chandler was next.

- Ms. Brandenburg said Intel should spend more time sending out flyers to the community asking people that are sick to register with the CDC and to educate doctors to inform their patients with ALS and Pulmonary Fibrosis to also register. This would help determine ALS clusters around chip-making sites. John Bartlit said that was the last item in the last bullet on the agenda. Ms. Brandenburg said that the CEWG should blanket the community with information to educate them about ALS and CDC registration. She said she did not expect Intel to help the community, but she did expect communities to take care of each other.

- Dennis O'Mara said that he wrote an extensive editorial published in the *Corrales Comment* in which he issued two challenges to Intel: 1. To develop and publish a plan that talks about short-term, mid-range and long-range efforts to reduce emissions from scrubbers and thermal oxidizers; and 2. To write another letter to the community that sent the revised and corrected ATSDR press release. He said he was amazed that ATSDR did not mention the most important report conclusion in their press release, which was that the issue of Intel emissions posing a health risk was still up in the air. Because it had been almost two months since the original material was distributed, Mr. O'Mara suspected Intel would not respond to his request; still, he wanted to ask directly.

- Mindy Koch said that their intention with the letter was to initially communicate about the public meeting and encourage attendance, so it did not seem that, with timing, it was feasible to send another letter. It made more sense to share the results and talk about other areas to move forward.

- Dennis O'Mara said it did make sense to him to correct a letter that included a faulty press release. He said it wasn't Intel's fault that ATSDR screwed up the press release, and he was willing to give Intel the benefit of the doubt that it wasn't possible to stop distribution before the meeting, although he did have a conversation with Natasha Martell-Jackson before the meeting to derail and fix it. However he still believed that the whole issue should be corrected, and if Intel did not correct it, he would publically criticize Intel in the community for not taking action.

- Lynne Kinis said that it was two months since Mr. O'Mara made his request and he still hasn't gotten a straight answer, and the community hasn't gotten a straight answer.

- Mindy Koch said that Intel did not say that they would not put out another letter, but they were willing to discuss what should be communicated in a new letter, including the reissued press release from ATSDR and the recommendation that was left out. Intel also wanted to discuss putting together recommendations about the ALS registry or education around it. It made sense to put all these items together in one letter.

- Liz Shipley said she had been on sabbatical and was not aware of the letter.

**EHS REPORT AND EPA 114 UPDATE**

- Sarah Chavez said that she had neglected to note on the EHS Report that Intel had a quarterly meeting with the Bernalillo County Water Utility Authority on 9/24.

- Sarah Chavez noted that at approximately 5 AM on 9/20 technicians received an alarm for a hydrochloric (HCL) acid leak in the chemical tank area. At 9:52 am the safety plan was completed and technicians were able to enter the area and found that a valve malfunctioned on a pump, which allowed 210 gallons of 36% aqueous HCl to spill into the containment berm and sump. The valve was repaired and the liquid was pumped to the acid waste treatment system. Ms. Chavez said monitoring was conducted throughout day and nothing was detected outside the immediate area, and Intel did not believe there was any health or safety impact to anyone on site or in the community. NMED and EPA were notified, and EPA requested follow up. Intel continued to provide verbal notifications to regulatory agencies.

- Dennis O'Mara asked if the Rio Rancho Fire and Emergency Department was contacted. Ms. Chavez said, no, it was handled on site by trained personnel. Mr. O'Mara referred to a minute-by-minute evaluation he made in a timely way for the Arizona accident a couple years ago. Looking at the delays from the time the incident was first recorded to when EMS was contacted, he wasn't so concerned about EMS being on site in these kinds of circumstances as he was about local emergency folks being notified about the issue and having the option to notify the community using the code red system. Internal processes at Intel could lead to substantial delays to the point where it was too late for community members to do anything but take shelter and pray. He said he had touched base with Bryan Burrows from time to time on this issue.

- Marcy Brandenburg said imagine what would happen if every time something happened at Intel and EMT was contacted, then the media would put in on the news and people would realize they were living next to a very dangerous source. That was why Intel had its own emergency team on staff.

- Dennis O'Mara said he wanted to make the point that when there was an incident like this the EMT people should be informed so they can decide if the community needed to be informed. It was not Intel's place to make that decision.

- Lynne Kinis said the fumes from the incident were going into the air for almost 5 hours, and yet people living near the area had no idea that they were breathing in this tainted air. She also asked if Albuquerque Water was informed that this HCl leak was pumped into their wastewater system.

- Sarah Chavez said it always went into their waste water system. She also clarified that Intel monitored throughout the day to determine if there were any contaminants in the air. Ms. Kinis asked what the smell was like. John Bartlit said what HCl smelled like was listed on the EPA Web site.

- Marcy Brandenburg asked if Intel had evidence of any verification of notice to NMED. Sarah Chavez said it was a phone call and she would ask how they logged calls. Ms. Brandenburg said she had no faith in the process because one hand did not know what the other hand was doing. She emphasized that she could not believe what Intel had said.

  **ACTION ITEM**: Sarah Chavez will contact NMED to ask about their spill recovery hot line and logging calls.

**DISCUSS POSSIBLE ACTIVITIES BY CEWG IN 2016**

John Bartlit said Mindy Koch had replaced Brian Rashap as the new site corporate services manager responsible for facilities operation and infrastructure, including pollution control. Mr. Bartlit said years ago, in August 2004, Ms. Koch was the Intel representative at CEWG meetings. He added that at tonight's meeting Ms. Koch would address Intel's environmental goals going forward.

- Mindy Koch said the CEWG's goal of "continuous environmental improvement" stuck with her all these years and was something both Intel and the community could agree upon. The CEWG had been beneficial at identifying things for Intel to work on, and for getting insight from different members of the community, and she would like to continue that. She acknowledged that the CEWG's pursuits did not satisfy everyone's interest. Also, she said that she had no delusions that the CEWG and Intel would always agree, and that was ok.

- Mindy Koch presented on Intel's most recent corporate responsibility report and the 2020 goals, including environmental goals. She said she wanted to discuss how things worked

within Intel's corporate structure and how to gain traction and their support to pursue ideas. Intel was more apt to support places of common interest, she said.

- In slide 2, Mindy Koch explained that one of the more focused areas of Intel's interest was in greenhouse gas emissions reduction. Dennis O'Mara asked how Intel achieved a 22% reduction of greenhouse gas emissions and what was meant by a "per unit basis." Ms. Koch said the reason why the goals were communicated in a per unit basis was because even if production dropped, a unit, which was a chip, reflected what was manufactured. Also, most of the reductions were accomplished through changes in abatement technology via changes in process chemistry or recipe. She added that the corporate responsibility report was an Intel corporate-wide report and not New Mexico specific. Sarah Chavez said that greenhouse gases were part of the combustion process, so the energy reduction efforts played into the numbers through actual changes and efficiencies.

- Mindy Koch said reducing the amount of energy Intel consumed also reduced the amount of air emissions that occurred in the state. Another goal that was somewhat relevant to emissions was around "green chemistry." Sarah Chavez defined "green chemistry" as trying to find processes that avoid the production of toxins and wastes, which included toxic emissions. The "chemistry" referred to chemicals that the processes started with and what alternatives were available to help reduce toxin and waste production.

- Dennis O'Mara asked if the recent Intel changes around biocides, which was connected to the cooling towers, was an example of green chemistry. Sarah Chavez said yes, that Intel found a nontoxic alternative, table salt. Part of this initiative was to work with tool manufacturers to come up with green chemistry processes that were beneficial to the industry. Dennis O'Mara said he believed Intel had the financial capabilities and intellectual capacity to pursue much more, and he had repeatedly asked Intel to pursue creative solutions to reducing emissions.

- John Bartlit asked if there would be a more detailed report on Intel's having reduced greenhouse gas emissions by 22%. Ms. Koch said that clicking on the following link would lead to the annual report, which provided more information:

  h=p://csrreportbuilder.intel.com/2014PDFfiles/CSR-.-2014_Full-.-Report.pdf

- Mike Williams asked if the screening was for new chemicals. Sarah Chavez said it likely wouldn't impact the processes New Mexico was running right now, so they were looking at next generation design to implement. Ms. Koch said the cooling tower/biocide project was an example of where Intel NM could make progress and get broader support because it aligned with overall corporate goals. Dennis O'Mara said that the person who figured it

out should be rewarded for his creativity. He said in the past he had communicated establishing some kind of competition for talented Intel people to devise creative solutions.

- Mindy Koch discussed slide 3, which showed the corporate hierarchy, and how to get into the structure to leverage things happening elsewhere and in New Mexico. At the executive level there was a clear corporate commitment to 2020 goals. She stressed that the online report version was interactive and could not be captured in the hard copy

- John Bartlit proposed sending Dennis O'Mara's challenge to Intel headquarters and tie it to their own corporate goals, so that they see the connection and speed up their interest in it. Ms. Koch said Intel NM shared Mr. O'Mara's editorial with other Intel centers, so the information and suggestions did not just stop in New Mexico.

- Mindy Koch referred to Intel's Environmental Sustainability Oversight structure, which showed that the Board of Directors and senior level executives met to discuss and form policies. The next level, the Sustainability Committee, provided the structural support to pursue things. The next level, Management Review Committees and Business Groups, were the ones who looked at various ideas to see if they were worthy to pursue. The next level was Employee-Driven Initiatives, which fell into general community initiatives, for example, setting up composting in the Village and reducing bromide in the cooling towers, which did reduce emissions in a different way.

- John Bartlit said there was an "Internet of Things" group at Intel, and he was making an effort to get his regulatory engineering booklet to this group to inspire some kind of positive action.

- Mindy Koch said her purpose of attending the CEWG meeting was to share Intel's 2020 corporate environmental goals and give a background on the structure for the group to use as a starting point for their moving forward in 2016. She discussed slide 4, which showed a variety of projects that occurred at Intel NM to create environmental improvement. These projects came from conversations with the CEWG over time and prompted changes around continuous environmental improvement, and she would like to continue in the same vein. Some projects were adopted by other Intel sites outside New Mexico, for example, the exploreintel.com Web site, which all sites now had, and having a forum for community dialogue (the CEWG).

- Sarah Chavez said slide 5 had additional information on potential emissions reductions related to 2020 goals. These included:
  - GHG Emissions Reductions

  - GHG are also reported as VOCs and therefore VOC emissions will also be reduced
  - GHGs from the manufacturing process are routed to scrubber stacks
- Energy Conservation (happened at the state level)
  - Some energy reduction projects result in less onsite fuel use and therefore less emissions – NOx, CO, VOCs, SO2, Particulates, GHG and HAPs
- Green Chemistry Screening and Selection
  - Green chemistry involves designing chemical products and processes in ways that avoid the creation of toxics and waste.
  - Intel is co-leading a project through the International Electronics Manufacturing Initiative (iNEMI) to evaluate chemical alternative assessment frameworks, methodologies, and tools in the electronics and semiconductor industries. This example was Intel partnering with other industries to drive standards (chemicals and tools).

**ACTION ITEM**: Sarah Chavez will provide a hard copy of the entire 2020 goal report (about 120 pages) to Lynne Kinis

- John Bartlit said it was beneficial to articulate to Intel that the CEWG was working on ideas that were consistent with their environmental goals. He said he would draft language to in a letter to send to Intel. Dennis O'Mara said this was all well and good, but it was not good enough. How should the group communicate the idea that the long-term plan was appreciated, but the sense of urgency and importance was really critical. How to move faster?

  **ACTION ITEM**: John Bartlit will draft language to send to Intel around CEWG's pursuits being consistent with Intel's environmental goals.

- Lynne Kinis said that the ATSDR came into play because a person from CRCAW made the call. The greenhouse gases and surprise visit by EPA and 114 letter that outlined their suggestions to Intel happened because she (Ms. Kinis) made the call. She said it disturbed her that Intel produced slides that listed all the things "Intel" has done. It was only when Intel was being shoved by a federal agency that they woke up and paid attention, or when the CEWG kept on picking on an issue, so that Intel "throws them a grape" to shut them up. Intel was trying to say that they were innovative and did things on their own. They were trying to take credit and it "bugged" her. She said she was happy things have changed, but not happy at how slow it was, and that was controlled by the corporation. Intel waited for the community to push them to the limit. It irritated her when Intel took credit where credit wasn't due. Greenhouse gases was an EPA issue, and they had to pursue it because they were slapped with a penalty. She said it would be refreshing to have something come from the corporation to the community.

- John Bartlit proposed inviting the Association of ALS to CEWG meetings as a way to kick off creating an ALS registry in New Mexico. He added that Peter Kowalski said the ATSDR had hired a PhD in atmospheric science from Ohio State, and Kowalski said the CEWG would be able to interact with him for ideas.

- Mindy Koch concluded by saying she was with the CEWG when it began, believed in its mission, and was committed to working on continuous environmental improvement with the group.

- John Bartlit reported on an action item to send an email to the silica testing task force stating that the CEWG had voted that the task force's mission was concluded, and he thanked them for their efforts. He said John Alsobrook had responded that it was a privilege to serve.

**NEW BUSINESS**
No new business.

**MEETING ADJOURNED**

**NEXT MEETING:** November 18, 2015, 5 to 7 pm, Corrales Senior Center.