FINAL MEETING SUMMARY
Community Environmental Working Group

"Striving for Continuous Environmental Improvements at Intel"

Date: September 16, 2020
Time: 5:15–7:00 p.m.
Location: Remote: By Google Meet and Telephone

Members Attending

John Bartlit, NM Citizens for Clean Air & Water
Mike Williams, NM Citizens for Clean Air & Water
Dennis O'Mara, Corrales resident, Corrales Residents for Clean Air and Water
Alex Lowry, Intel

Non-Members Attending

Erika Edgerly, Intel, Corrales resident
Chuck Wiggins, UNM Tumor Registry

Jessie Lawrence, Facilitator
CJ Ondek, Recorder

HANDOUTS

- CEWG Draft Agenda
- August 19 Draft Meeting Summary
- September EHS Activity Report
- Action-Item Progress Report

PROPOSED AGENDA

- Welcome, Introductions, and Brief Items
- Standing Agenda Items
- Regulatory Engineering in Emissions Monitoring Project
- NM Cancer Concerns Workgroup Assessment
- Review Action Progress Report
- Adjourn

WELCOME, INTRODUCTIONS, ANNOUNCEMENTS, BRIEF ITEMS
Jessie Lawrence opened the meeting by stating the CEWG mission, which was to make environmental improvements at Intel, reduce chemical emissions at Intel, and improve community dialogue. Introductions were made.

Agenda—Revisions and Approval
No comments.

Meeting Summary—Revisions and Approval
No comments.

Other Announcements

- Jessie Lawrence said Chuck Wiggins had replied only the day before as to whether or not he could join the meeting, which was why she only informed the group the day before and she had not adjusted the meeting agenda. He said he would join after his first meeting ends, around 6:30 pm. Ms. Lawrence said she also tried to contact Hugh Church with support on getting connected to the meeting and spoke to his wife. She did not know if he would be on tonight's meeting call.

- Dennis O'Mara said he had contacted Louis Scuderi about tonight's meeting, but Dr. Scuderi said he had a conflict and could not join tonight but hoped to get back to the vegetation project soon. Mr. O'Mara said that Dr. Scuderi did not say if he could attend the November meeting.

Public Comment
Dennis O'Mara said he had experienced several more odor incidents over the last month. The most recent was this past Sunday night. His swamp cooler was off but the windows were cracked open. The odor hit about 1:30 am and proceeded to worsen. Around 2:30 am he experienced the burning sensation in his nose, throat and lungs. He said it smelled like someone had "scorched the bottom of their pound cake," a sweet smell that was hard to describe and was abnormal. He said he did not venture outside to further investigate.

STANDING AGENDA ITEMS
EHS Report
Alex Lowry went through the EHS report. Production equipment servicing Fab 11X was operating at approximately 81% of capacity. The New Mexico Environment Department's (NMED) Petroleum Storage Tank Bureau conducted an inspection on September 9, which they did every two years. There were no findings. He went through the list of information provided to regulatory agencies. These included the Annual Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) Test Report and New Source Performance Standards (40CFR60

Subpart Dc) Test Protocol to NMED, and the Monthly Ammonia Discharge Report and Quarterly Wastewater Analytical Report to Albuquerque Bernalillo County Water Utility Authority.

- Mr. Lowry said Intel received one call from a neighbor concerned about an increase of homeless people in the neighborhood. The neighbor said they had seen people with carts and bedrolls near the campus. The caller was with the Sky View Acres Homeowners Association, which was located south of Corrales. Erika Edgerly added that the area in question included entrances to Intel's walking trail. She said Intel informed their security and asked them to change their patrol patterns to monitor the issue.

- John Bartlit asked if Intel would get a formal report back from the Petroleum Storage Tank Bureau inspection. Mr. Lowry said the last time they conducted an inspection was in 2017, and he thought they just provided an informal report, but he would double check. With the air inspection in February, NMED responded with email correspondence that said there were no findings. Mr. Lowry said he would follow up with the Intel staff person responsible on the inspection outcome. Mr. Bartlit said he was interested to learn about the reporting process and whether a report was provided. Mr. Lowry said that a formal written report was not provided for the air inspection beyond email correspondence from the agency. He thought it might differ by NMED department.

  ACTION ITEM: Alex Lowry will check with the Intel staff person working with NMED on the Petroleum Storage Tank Bureau inspection as to how NMED will communicate the inspection outcome.

Regulatory Engineering
See agenda item for information.

LEPC Update
Dennis O'Mara said he has not yet received any notices about the next scheduled meeting and had not followed up. Alex Lowry said he had not received a meeting notice either, and that he also received notices about an hour before the meeting actually began. He did not know how the LEPC sent out meeting notices.

- Alex Lowry said that an Intel representative—an industrial hygienist—attended the LEPC quarterly meeting in the summer and reported that the meeting was only about 15 to 20 minutes long. The main issue discussed was the timeline for completing an all hazards plan in light of COVID-19, and possibly getting a delay in grant funding for next year so they wouldn't have to reapply for funding.

- Alex Lowry said he recently received a notice about a two-day LEPC 101 workshop to be held September 30 to October 1. The topics covered in the workshop agenda appeared to be general. Dennis O'Mara said he had attended a similar workshop last fall and was interested in seeing the agenda this year in case any topics were applicable to his work. Alex Lowry said he would send the workshop agenda to Jessie Lawrence to share with the group.

  ACTION ITEM: Alex Lowry will send the LEPC 101 workshop agenda to Jessie Lawrence to share with the group.

Satellite Image Mapping of Vegetation Change Study
Not discussed.

REGULATORY ENGINEERING IN EMISSIONS MONITORING PROJECT
Jessie Lawrence summarized the discussion from the last meeting combining regulatory engineering with community emissions data. Tonight's discussion should attempt to confirm potential next action steps, Ms. Lawrence said.

- John Bartlit said he researched background information to share. First he researched chemical odors, and found an ATSDR Web site that showed over 650 industrial chemicals and odors. He had emailed the link to the Web site to the group. The list would help the group talk about odors and their characteristics in a consistent way. Mr. Bartlit said the list was searchable by descriptor. He suggested that Mr. O'Mara and his wife review the list to see if they could find a chemical that matched the odor. Dennis O'Mara asked for someone to resend the link. Jessie Lawrence said she would send the link to the group again.

  ACTION ITEM: Jessie Lawrence will resend the ATSDR chemical odor Web site link to the group.

- John Bartlit said the second thing he researched was swamp coolers. He reminded that at the last meeting Mike Williams had suggested that a swamp cooler might be able to change the chemical or physical form of an outside air pollutant as it was pulled indoors through the cooler. He said his research did not yield any specific information about this issue and suggested speaking directly with a swamp cooler expert to learn more.

- John Bartlit said the third thing he looked into was grab sampling technology and equipment. He had found a number of Web sites about grab sampling that seemed quite interesting and varied. Some sites were aimed a professionals and others were geared more to grassroots community groups. These included information on equipment used for a specific purpose and the results. The sites had various degrees of sophistication and

photos of equipment and usage instructions and costs. He said some of the equipment were commercially available and not expensive. He said he would send out some links to the group, with a few comments to consider.

- Dennis O'Mara said he read an op-ed piece in today's *Albuquerque Journal* called "New Mexico's Draft Methane Rule Should Include Advanced Draft Tech," by Pete Roos of Bridger Photonics that was applicable to the discussion. He read the following paragraphs from the article:

> *As the CEO of a methane detection company, I'm driven by making the oil and gas industry more efficient. This helps the profitability and sustainability of the industry, and helps reduce emissions – a rare win-win that also drives our entire crew.*
>
> *Unfortunately, as currently written, the state's draft methane rules rely on archaic and ineffective methods for monitoring industry sites, such as visiting each site on foot and scanning each piece of regulated equipment by hand. Subject to human error, this method is ineffective at reducing emissions, exorbitantly expensive, time consuming, and exposes field crew to needless safety risks.*
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> *Recently developed laser imaging, detection and ranging (LIDAR) technology can scan up to hundreds of sites per day from aircraft and catch greater than 90% of basin-wide emissions. Instead of visiting each site with ground crews and searching each piece of equipment by hand for emissions, operators can receive an "answer key" that pinpoints and quantifies their emissions. The operators then only need to deploy their crews to the emitting equipment. This capability represents massive safety and cost savings for both the state and the operators and has been shown to reduce emissions more effectively than on-the-ground crew monitoring.*
>
> *To allow the oil and gas industry to use advanced technology like this, New Mexico's methane rules need important changes, additions, and reinforcements:*
>
> > *Allow operators to detect methane emissions as a surrogate for detecting VOCs. Research shows that where there are VOCs, there is also methane. However, the current rule specifies only the detection of VOCs, which is more costly and time consuming than detecting methane instead. Allowing the industry to detect methane as a surrogate for detecting VOCs will save time and money.*

- Mr. O'Mara said this latter paragraph on methane emissions as a surrogate to VOCs really caught his eye, and the rest of the op-ed had advice on how to make monitoring "better, faster, cheaper." He said using "methane as a surrogate for VOCs" reflected what he had been long thinking about but couldn't articulate, which was the possibility of having less expensive but yet sophisticated enough equipment that could identify "certain things that suggested the presence of other things." John Bartlit said one chemical can be a tracer for a group of other chemicals, and he believed this held potential for Intel's emissions due to the quantity of data Intel had collected over the years. Mr. Bartlit asked if Mr. O'Mara could send the article to the group. Jessie Lawrence said she would send both the link and a copy of the article to the group. Dennis. O'Mara suggested that after everyone had read the article the CEWG might contact Pete Roos to see if he were willing to talk at a CEWG meeting.

  ACTION ITEMS:
  - Jessie Lawrence will send to the group a link to and a copy of the above article from today's Albuquerque Journal.
  - After everyone had read the article, the CEWG will discuss contacting Pete Roos to see if he were willing to talk at a CEWG meeting.

- Jessie Lawrence asked the group about next steps, including project options, discussion options, etc. John Bartlit said he heard two or three things on the table right now: 1. Placing drone equipment at Intel stacks; 2. Collecting grab samples from Dennis O'Mara's home; and 3. Investigate further information in the *Albuquerque Journal* op-ed. Mr. Bartlit said they could select one or all three of these issues to look into.

- Dennis O'Mara said he was absolutely interested in collecting grab samples from his house, if possible, and he would even try to recruit other neighbors to participate. He knew of another person in his neighborhood who was "knocked for a loop" from recent odors and was interested in looking into it.

- John Bartlit described grab bag technology in broad terms. The grab sampler metal sphere was evacuated and sealed off with a valve, and when odors were present the valve was turned to release a vacuum that suctioned the gases present in the house at that time into the metal sphere. Once the sphere was full, then the valve was turned to seal the contents inside and then sent for analysis. Cost depended on what was being analyzed.

- Jessie Lawrence asked Alex Lowry his thoughts on potential Intel support. Mr. Lowry said he and Erika Edgerly would talk with Intel plant managers about the idea to get their thoughts on funding. The grab bags were not expensive, he said. Mr. Bartlit added that the analysis cost more than equipment. Mr. Lowry said Intel would probably want to see

a well flushed out protocol on how to proceed. Also, he asked if there was a way to understand what source was contributing to the odors. Erika Edgerly said she had a similar question on potential sources. Mike Williams said they could find chemicals that were a signature of the source using measurements taken at the stack top to determine if there was a connection—a fingerprint. He added that this was the most reliable way to get information. Ms. Edgerly said that could be part of experiment design.

- Dennis O'Mara expressed concern about the ability of dispersion data to determine the extent of emissions distribution. Also, he reminded that in the past Intel had suggested that the odors came from other sources, such as the crematorium, the dry cleaners, the water treatment plant, the agricultural products used in Corrales. etc. He vehemently disagreed with these suggestions, because "we all know what those things smell like." He said that he would not tolerate the current discussion going down this path.

- John Bartlit said he envisioned following the Citizen's Protocol similar to the CEWG's process for crystalline silica. Using the Citizen's Protocol they would establish and agree to the design process before learning the results to ensure a meaningful effort. Mike Williams said he was concerned about knowing enough right now to define the items for a Citizen's Protocol. He suggested considering a pilot study to develop the protocol. They would have to conduct preliminary sampling, most likely, and look for ratios between various compounds.

- Dennis O'Mara emphasized that the odors usually occurred in the wee hours of the morning. Dry cleaners were closed, gas stations were not doing business at that time, the crematorium operated in the afternoon, between 1 pm and 3 pm, and the water treatment plant was shut down and water redirected to two new plants. Also there was not enough agriculture occurring in Corrales to be the odor source.

- John Bartlit said there was a difference between fingerprinting and dispersion modeling, although there could be a relationship. Mike Williams said that now they were probably talking more about what they could get from fingerprinting rather than dispersion modeling.

- John Bartlit suggested adding a unique tracer to Intel's stacks that was not found elsewhere in the environment. Intel had done something similar in the past. If the tracer showed up in grab samples collected from Mr. O'Mara's home, then they learned something new. Mike Williams said the tracer needed to be routinely added, and it was better to find a natural tracer associated with Intel's process.

- John Bartlit said lots of work needed to be done, but at this point they could pick the projects to focus on. Jessie Lawrence asked the group where they wanted to go next. It would involve focused discussion of action steps, research questions, and perhaps having volunteers assemble these ideas more coherently for the November 18 meeting.

- Mike Williams said he would be happy to develop an outline on his thoughts, especially literature on specific modeling techniques. Dennis O'Mara said he would be happy to help. John Bartlit suggested that Mr. O'Mara outline his perspective on how the grab sampling project might work, and Mr. Williams could also outline his perspective. They could work separately or together. Mr. O'Mara said that he did not have a preference either way, but in the next couple of weeks he did not have any time, but would be able to dedicate time toward the project after October 1. John Bartlit suggested that Mike Williams write his outline first, and then both he and Mr. O'Mara could respond.

- John Bartlit asked how Intel wanted to interact on this project. He reminded that all parties would have to agree on a protocol. Alex Lowry said he would talk to Sarah Chavez about the crystalline silica process and how to proceed, since he had not participated in the Citizen's Protocol in the past. He said that Intel would be happy to provide feedback upon request, but his initial thought was to let the design team develop the project. John Bartlit reviewed the CEWG's consensus policy. With the Citizen's Protocol, everyone would have to agree ahead of time on the project design. A member could abstain from consensus, but that action did not kill moving forward. Alex Lowry said he would review past meeting summaries to get an idea of the process. John Bartlit said the community created a task force to participate in the Citizen's Protocol, with some members assigned by the then mayor.

- Jessie Lawrence asked Mr. Lowry if his gathering information from Ms. Chavez would put a pause on the other members moving forward with gathering background information. Mr. Lowry said he really did not know the process, but he did not think his trying to understand Intel's role would affect the others' efforts. John Bartlit said that whatever modest progress CEWG members made on gathering information might help Intel understand their ideas better.

- Alex Lowry added that he liked Mike William's idea of exploring using a tracer or fingerprint to help understand where the odors in Mr. O'Mara's residence were coming from, but he did not know what that might look like. John Bartlit said that using the Citizen's Protocol they would have to address that problem and how to proceed before they implemented the design and had results.

- Jessie Lawrence summarized next steps. By the November meeting there would be some initial work on drafting background information and ideas. What that might look like was still not fully determined. Mike Williams would begin a first draft, and then Dennis O'Mara and John Bartlit could help to flesh it out as a subcommittee of the CEWG to try to have something in draft form in November. John Bartlit added that they could go through three or four rounds amongst themselves and try to identify difficult technical and political points.

  ACTION ITEMS: Mike Williams will begin to compile an outline with his ideas on grab sampling, using a tracer, etc. He will send his outline to Dennis O'Mara and John Bartlit to help further develop these ideas. The goal is to present a coherent draft to review at the November CEWG meeting.

NM CANCER CONCERNS WORKGROUP ASSESSMENT

Jessie Lawrence welcomed Chuck Wiggins to the meeting and introduced attendees. She said the purpose of this agenda item was to have a discussion on next steps after the NM Cancer Concerns report.

- John Bartlit asked Chuck Wiggins if anything relevant to the discussion had occurred with the cancer group he had met with earlier. Chuck Wiggins said no and provided an update. He said that the New Mexico Department of Health (NMDOH) was working tirelessly on COVID since he attended the last CEWG meeting. So while his cancer group continued to meet with NMDOH, it was on a much more limited basis. He reminded that the cancer report was released about a year ago, and he joined CEWG meetings in December and February. In these CEWG group discussion as well as in individual meetings with Dennis O'Mara, he said he had compiled a long list on issues to address.

- Dr. Wiggins acknowledged the potential to update the report in November 2020 with an additional three years of data. He said he wanted to do this and apply past experience and lessons learned to do the analysis better than before, for example, communicating better and doing it quicker. He would also take into account the CEWG report response and revise it to address these questions. He asked CEWG members to share their thoughts.

- Dennis O'Mara, asked if data from 2000 to 2005 data were available to use and in the correct format. Chuck Wiggins said primary reason they chose 2006 to begin with was because that was the year they began to code cases geographically by Census track definition used in the 2010 Census. He speculated that in areas of the state that were well established, Census tract definitions didn't change for the 2020 Census. He said that he

would investigate. If the definitions did not change, then the update would be simple. If definitions changed then he would have to do homework on how to handle it.

- Dennis O'Mara said he would like to see the data added to the report, if possible, and appreciated Dr. Wiggins willingness to take another look with the new data. He reminded that they had talked about giving special attention to areas of statistical significance or close to statistical significance. He also reminded that Dr. Louis Scuderi had offered assistance with his expertise to take a closer look at some of the data issues, and he was still interested in doing so. Chuck Wiggins said that he hadn't followed up with Dr. Scuderi but was still interested in his participation.

- Chuck Wiggins shared recent leadership changes at NMDOH that might impact their work. State epidemiologist Mike Landon had retired, and Dr. Wiggins wasn't sure who currently held the position. He did know that the State was looking for a new State epidemiologist. He said the Cabinet Secretary Kathy Kunkel had said she would leave when they found a replacement for her, and that also might have an impact.

- Dr. Wiggins said November 1 was the official date where the Cancer Registry declared the most recent years data collection complete. He would have a meeting the following Monday to confirm, but they had about 98% of data. His team had to move from traveling in person to collect the data to collecting it virtually. He suggested moving forward with updating the report despite some potential issues with 2018 data.

- John Bartlit said he agreed with Dr. Wiggins suggested way of moving forward. He clarified that sometimes the CEWG spoke as a single voice using a formal procedure to reach consensus, and other times members offered their individual ideas. He wanted to make sure that Dr. Wiggins understood that these processes were behind the written responses to the cancer report. Dr. Wiggins said he had received some good points that were important to consider for this second round. He said he was committed to doing it better and faster. He wanted the CEWG involved and wanted Intel's involvement, too. His goal was to develop a timeline and get an update at each meeting. He was adamant that it would happen quickly and not drag on like the first version. Dennis O'Mara said this sounded good.

- Jessie Lawrence said the CEWG met every other month and the next meeting was in November. She would add the "Cancer Study" as a standing agenda item, and she could follow up with him regularly to get updates. Dr. Wiggins agreed with this process, and said the NM Cancer Concerns group was meeting on Friday, and he would bring their attention to this discussion to get their feedback. He added that the Tumor Registry had some independence with moving forward with research they were interested in.

- Chuck Wiggins said he still had a conflict in November with meeting timing but could come again at 6:30 pm or even at the beginning of the meeting. John Bartlit said they could also change the CEWG meeting time.

- Dennis O'Mara said if Dr. Wiggins had anything to share between meetings he could contact Jessie Lawrence and send information to her to share with the group. She could also get a reply from the CEWG to Dr. Wiggins, if needed. Chuck Wiggins said he would provide an update if there is information to share.

- John Bartlit asked Chuck Wiggins if he might be interested in learning about regulatory engineering. Dr. Wiggins said he always was interested to learn new things. Mr. Bartlit said he would work with Jessie Lawrence to send him some information about regulatory engineering.

  ACTION ITEM: John Bartlit will send documents about regulatory engineering to Jessie Lawrence, who in turn will send to Chuck Wiggins.

CEWG members thanked Dr. Wiggins for all his work with the CEWG.

ADJOURN: 7:00 PM

NEXT MEETING: November 18, 2020