DRAFT MEETING SUMMARY
Community Environmental Working Group

"Striving for Continuous Environmental Improvements at Intel"

Date: February 16, 2022
Time: 5:00–7:00 p.m.
Location: Remote: By Zoom and Telephone

Members Attending

John Bartlit, NM Citizens for Clean Air & Water
Sarah Chavez, Intel
Dennis O'Mara, Corrales resident, Clean Air for All Now (formerly Corrales Residents for Clean Air and Water)

Non-Members Attending

Erika Edgerly, Intel, Corrales resident
Travis Peacock, ABCWUA
Danielle Shuryn, ABCWUA
Merat Zarreii, ABCWUA
Chris Daul, Representing Sandoval County Commissioner Katherine Bruch
Russell Trujillo, Corrales resident
Ben Orner, Journalist, NBC4, Columbus, Ohio
Kathleen Holmes Cates, Rio Rancho Resident
Chuck Wiggins, UNM
David Morris, ABCWUA

Jessie Lawrence, Facilitator
CJ Ondek, Recorder

HANDOUTS

- CEWG Draft Agenda
- January Draft Meeting Summary
- February EHS Activity Report
- Action-Item Progress Report
- Draft New Member Process
- CEWG Questions for ABCWUA

PROPOSED AGENDA

- Welcome, Introductions, and Brief Items
- Standing Agenda Items
- Planned Intel Expansion and Permit Revision
- New CEWG Member Recruitment and Other Steps
- Intel Water Use with ABCWUA
- NM Cancer Concerns Work Group Assessment
- Regulatory Engineering in Emissions Monitoring Project
- Review Action Progress Report
- Adjourn

WELCOME, INTRODUCTIONS, ANNOUNCEMENTS, BRIEF ITEMS
Jessie Lawrence opened the monthly meeting by stating the CEWG mission, which was to advocate for continuous environmental improvements at Intel New Mexico, reduce chemical emissions at Intel New Mexico, and improve community dialogue. She said the CEWG had a request from a reporter to record the meeting for their reporting purposes. She asked if anyone had any objection to this. No one objected. Introductions were made.

Agenda—Revisions and Approval
No comments.

Meeting Summary—Revisions and Approval
No additional comments.

Other Announcements

- Jessie Lawrence announced that she would be leaving as the CEWG facilitator because she had accepted a full-time job.

- Dennis O'Mara said Louis Scuderi could not make tonight's meeting and shared information about his vegetation study with new meeting attendees.

- John Bartlit said all meeting attendees were welcome to ask any clarifying questions or comments during the meeting.

Public Comment
None.

STANDING AGENDA ITEMS
EHS Report
Intel's Sarah Chavez gave the month's EHS report, which provided monthly information on onsite regulatory activities, site events, and neighborhood calls and emails. She said Intel designated the neighborhood into four zones to protect people's privacy, and that the zone map was posted on the CEWG web site. Ms. Chavez said this past month Intel received an email from a community member in Zone 3 about a vehicle illegally parked on Intel property near the trail entrance. Intel site events concerned ongoing onsite construction. Regulatory submittals were regular reports to the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) and New Mexico Environmental Department (NMED), as well as clarifying information on the Air Quality Permit to NMED. She said EHS page two listed agency acronyms, full names, and descriptions.

Regulatory Engineering

See agenda item for information.

LEPC Update

Dennis O'Mara said the Sandoval County Local Emergency Planning Committee (LEPC) started about three years ago but was interrupted by COVID-19. One of its requirements was to have a response plan in the event of an accidental chemical release, as well as to maintain records on chemical inventories in their jurisdiction. The Sandoval County LEPC has been working to develop the plan and hired a contractor who shared a plan template to complete for Sandoval County. At the recent January meeting, the plan was presented for comments and feedback. Also required were ways for citizens to inquire about the local facilities that held chemicals stockpiles. The County also had to assign personnel resources to coordinate the plan. The LEPC met quarterly, and the next meeting was in April. Mr. O'Mara said he attended LEPC meetings as both a representative of the CEWG and Clean Air for All Now.

PLANNED INTEL EXPANSION AND PERMIT REVISION

- Dennis O'Mara said he was concerned about Intel's abatement equipment being old and needing to be updated. He asked if Intel's permit modification had been approved yet. Sarah Chavez explained that because it was an administrative permit modification, it was effective upon receipt. There was no formal approval of the application. Dennis O'Mara replied that he was assured by the person in charge that he would be informed about the permit modification's progress and decisions, and he hadn't heard a peep from NMED, which seemed to be typical when it came to Intel.

- Dennis O'Mara said he wanted to reiterate his interest in hearing about chemical concentrations in Intel's waste stream. He said that Intel would not reveal these concentrations due to proprietary confidentiality issues. He found it hard to believe in this day of age that Intel really believed that their competitors did not know what Intel was doing, and that Intel did not know what their competitors were doing. The reason he wanted those concentrations was to look into equipment that would match up with Intel's waste stream. He said he was disappointed that Intel wouldn't share that information, and for no good reason.

- Dennis O'Mara said from the permit he surmised that Intel had two kinds of Munters thermal oxidizer models based on their model numbers. He asked for an explanation on the difference between those Munters thermal oxidizer models. Sarah Chavez responded that she wasn't sure if the different numbers meant the models were made in different years or if there were any equipment differences. She would have to ask and would report back to Mr. O'Mara. Mr. O'Mara said Intel would be adding 5 new thermal oxidizers and asked what the model numbers would be. Ms. Chavez said she hadn't seen the model numbers on the new equipment. The model numbers might vary but the equipment

operation was the same, and they were fairly simple in how they operated and worked. She said she might not get the model numbers until the new equipment arrived on site, but she would certainly get information on the difference between the model numbers on the current equipment.

ACTION ITEM: Sarah Chavez will inquire about the difference in Munters thermal oxidizer models currently used by Intel as well as try to find out the model numbers on the new thermal oxidizers that Intel is purchasing for expansion.

- Dennis O'Mara asked about removal efficiencies. Ms. Chavez said they varied depending on inlet concentrations. The higher the amount of volatile organic compounds (VOCs) going into the unit the better the removal efficiency. Intel intended to get over 90%, but sometimes it could go up to 95% or 99%, depending on inlet concentrations. The flip side was that the more VOCs put in, the more the outlet concentrations coming out the stacks. Both sides had to be looked at to get to removal efficiencies.

- Dennis O'Mara asked if Intel ever thought about rerouting the emissions into another piece of equipment to further reduce emissions. Sarah Chavez said no, because with low concentrations and lower amounts in the stacks, it was likely that would not reduce concentrations. She also reminded that to operate the thermal oxidizers required burning natural gas to remove VOCs, so Intel would be putting out more chemicals to get rid of chemicals. All of this had to be looked at to ascertain the environmental impact.

- Dennis O'Mara pointed out that Intel's thermal oxidizer equipment was 12 to 14 years old, and that the wear and tear on the equipment must be tremendous. He said he was surprised that Intel was not thinking about replacing the current equipment with new equipment.

- Sarah Chavez said Intel was required to follow manufacturer recommended maintenance at specified frequencies. The permit required that Intel keep records of the maintenance. Also, Intel continuously tracked parameters. Temperature was a key parameter to check to make sure units were working correctly and was tracked continuously. Also, Intel tested the units every year to see if if stack emissions changed. Any changes in any of these things could indicate something was wrong. This process was consistent with how industry managed equipment. She added that although they were older pieces of equipment, there was plenty to do to replace parts to ensure they operated well.

- Dennis O'Mara asked about moving existing equipment. Sarah Chavez said Intel was not physically moving any equipment. The equipment was permitted to be installed in a new location that was never built. So the permitted sources—points on a map—were being

moved to the north end of the site. They were installing new equipment, scrubbers and oxidizers, in Fab 11 X and Fab 9 buildings. She referenced the map that was a part of the permit application that showed locations. To maintain redundancy, three or four units would be located together. Redundancy meant that if one unit shut down unexpectedly or had to be taken down for maintenance, another unit could handle the load and ensure the emissions would not be emitted unabated.

- Dennis O'Mara asked the number of new scrubbers Intel would be adding and their make and model. Sarah Chavez said she not have that level of detail handy at the moment.

- Dennis O'Mara said that 24 out of 27 scrubbers were made by Harrington Plastics, and Intel had 5 different models of Harrington Plastics scrubbers. He asked about the differences in models and how were they used. Sarah Chavez said Intel was adding 8 scrubbers. Scrubbers were simple machines—a big fiberglass box with filler, a spray bar and pumps— with fewer parts to replace. Most likely the models were the same type of equipment. Mr. O'Mara asked for more information about the different scrubber models as well as the model numbers of the new scrubbers.

  ACTION ITEM: Sarah Chavez will inquire about the difference in scrubber models currently used by Intel as well as try to find out the model numbers on the new scrubbers that Intel is purchasing for expansion.

- Dennis O'Mara said he had the same concern about scrubber age as he had about thermal oxidizer age. Some of the scrubbers were 25 to 27 years old. Sarah Chavez said that Intel had to follow the same permit requirements for scrubbers around preventative maintenance, recordkeeping, parameter monitoring, etc. as well as annual stack testing.

- Dennis O'Mara said that Intel's existing abatement equipment was old, and he found it hard to believe that the technology hadn't advanced and improved. The position of Clean Air for All Now was that Intel must replace their old equipment with the new, most up-to-date, technologically advanced equipment.

- Kathleen Holmes Cates asked about water use in Intel's scrubber process. Sarah Chavez said the water was disposed into an onsite water collection system, adjusted for pH, and then sent to the Water Authority's treatment facility for management before discharge.

- Dennis O'Mara said he had one more thing to address. He said he had asked how much emissions would increase as a result of the expansion and was told Intel didn't know. He used a crude method to try to determine an answer. He looked at the number of new thermal oxidizers and scrubbers added to those that already existed. If every thermal

oxidizer and scrubber were emitting the same amount, which he knew they didn't but used this premise as a crude exercise, then thermal oxidizer emissions would increase by 60%, and scrubber emissions would increase by 30%. Those numbers made him unhappy and would make the impacted community members unhappy, too. It was not pleasant to think about.

INTEL WATER USE WITH ABCWUA

- Danielle Shuryn, ABCWUA Compliance Division Manager, gave a presentation in response to the CEWG questions. She said the Compliance Division objectives were to: 1. Manage wastewater, reuse and drinking water quality regulatory requirements to include sample collection, laboratory analyses and data management, water quality special studies and investigations, permit management and compliance reporting, public notice requirements, compliance facility inspections, and pretreatment education and enforcement; and 2. Establish routine monitoring processes to ensure water quality standards were met.

- Ms. Shuryn said the ABCWUA's compliance requirements came from federal laws, regulations, and standards; tribal water quality standards; state laws, regulations and standards; and local ordinances. Primary federal laws that drove the Water Authority's water quality actions were the Clean Water Act (1972) passed by Congress to regulate discharges of pollutants and the Safe Drinking Water Act (1974) to establish minimum standards to protect drinking water. The Environmental Protection Agency was authorized by Congress to write the regulations and had to hold a documented public comment period before the regulations became final. The regulations were documented in the Code of Federal Regulations (CFR) Title 40: Protection of the Environment. CFR 40, Part 122-133 covered aspects of the National Pollutant Discharge Elimination System (NPDES) surface water discharge.

- Ms. Shuryn explained that sovereign Tribal Nations had the right to govern themselves and held the same powers as federal and state governments to regulate internal affairs, including setting separate water quality standards for waters on tribal land. Because the Pueblo of Isleta (POI) was downstream of the Water Authority on the Rio Grande, the Water Authority had to follow the water quality standards set by POI for wastewater discharged into the river. The EPA enforced the POI water quality standards through NPDES permits.

- Ms. Shuryn said the New Mexico Environmental Department (NMED) Surface Water Quality Bureau (SWQB) implemented and enforced the regulations related to surface water in NM with approval of the Water Quality Control Commission. They also set surface water quality standards for NM stream segments; developed total maximum daily

loads pollutant limits for NM stream segments; determined which NM stream segments were impaired or not meeting standards; set stormwater discharge permits; and assisted with watershed and wetland protection and restoration. The SWQB also supported the federal enforcement of the NPDES program by certifying the NPDES permits issued by the EPA to ensure that the permits met state regulations.

- Ms. Shuryn said NM streams and rivers had numeric criteria for pollutants based on how the water would be used. For arsenic, these water quality standards were:
  Drinking Water Supply = 0.010 mg/L
  Irrigation = 0.100 mg/L
  Livestock Watering = 0.200 mg/L
  Aquatic Life Acute = 0.340 mg/L; Chronic = 0.150 mg/L

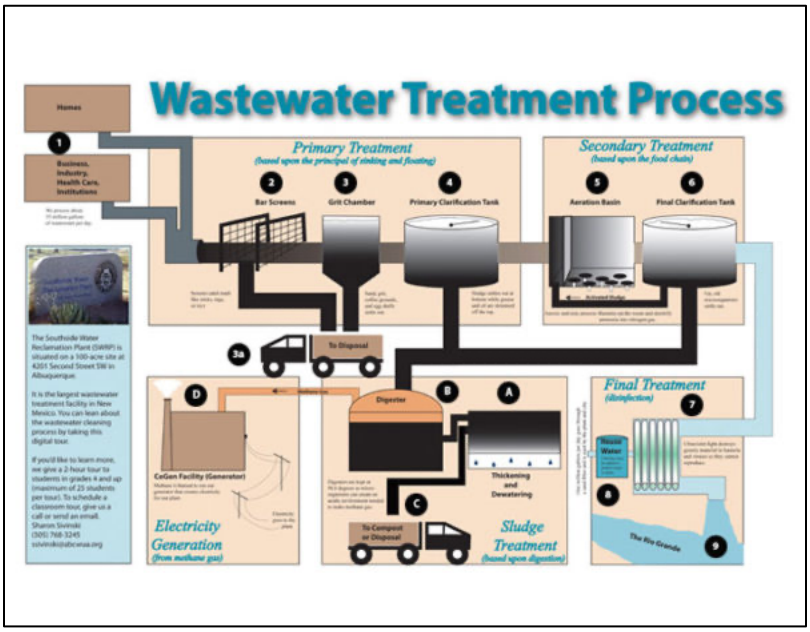
- Ms. Shuryn said the EPA issued the NPDES permit, which set acceptable levels of pollutants in discharges to water bodies based on stream segment conditions and TMDLs. The permit required a Pretreatment Program for large wastewater systems and set requirements for sludge and biosolids. For ABCWUA, the EPA issued and enforced the NPDES permit in coordination with NMED and Pueblo of Isleta.

- Ms. Shuryn said ABCWUA's Pretreatment Program was implemented through the Sewer Use and Wastewater Control Ordinance. This ordinance set the requirements for sewer system users on prohibited discharges; local limits of pollutants; industrial permits; and inspection of food services establishments, dental establishments, and hauled waste. The Pretreatment Program enforced ordinance violations.

- Ms. Shuryn said the Sewer Ordinance set the local limit for arsenic. Data from the sewer system was analyzed every 5 years to establish local limits for pollutants discharged into the sewers. The local limit for users discharging arsenic into the sewer system was 0.0510 mg/L. Arsenic was a natural water contaminant common to the Middle Rio Grande largely due to volcanic rock to the north in the Jemez Mountains that impacted water quality during recharge to the aquifer. Many studies were published about arsenic groundwater in this area.

- Ms. Shuryn said that as an industrial permitted user of the ABCWUA sewer system, Intel was required to monitor discharge quality and report results. ABCWUA provided Intel with non-potable water from two ABCWUA wells that were high in arsenic (0.014 mg/L). Intel planned to receive 3 million gallons per day (MGD) for processing and return 2.5 MGD to the sewer after use. ABCWUA expected that all the arsenic in the water would return to them for treatment.

- Next Ms. Shuryn explained the wastewater treatment process. The Sewer Ordinance limited user discharges of arsenic to 0.0510 mg/L. On average, about 50 MGD of wastewater entered the treatment plant with an average daily arsenic concentration of 0.0051 mg/L. Ms. Shuryn showed a graphic depiction of the ABCWUA treatment process.



- Ms. Shuryn said after completing the treatment process wastewater effluent was either discharged to the river or further treated and distributed in purple pipe for landscape and field irrigation. Treated wastewater effluent to the river had an arsenic concentration of 0.0021 mg/L on average. ABCWUA did not have a specific limit for arsenic in the NPDES permit because what was disposed was significantly lower than the arsenic numeric criteria. She explained that arsenic removed from the water in the treatment process settled into sludge, which was removed to be applied to land or further processed into compost after completing the treatment. EPA regulations in CFR 40 Section 503 set a limit for the amount of arsenic in the biosolids at 41 mg/kg. On average ABCWUA biosolids had 16.2 mg/kg of arsenic.

- Dennis O'Mara said he was the impetus for this ABCWUA presentation. He explained that an *Albuquerque Journal* editorial about the arrangement between Intel and ABCUWA to build a pipeline for Intel to use non-potable water from two wells caught his attention. The editorial claimed that the water would not contain arsenic after it was used by Intel and returned to the Water Authority. He asked Intel what it was going to do with the arsenic and learned that Intel was going to remove contaminants, including

arsenic, from the water for their plant manufacturing processes, and then return the arsenic to the Water Authority for treatment in its waste stream. Mr. O'Mara said he objected strenuously to the editorial because it made Intel out to be a hero, which was not the case. While it was a great thing to use non-potable contaminated water for Intel's manufacturing process rather than valuable drinking water, it was a "win" rather than a "win-win," which was what the editorial claimed. He said he had objected to the Albuquerque Journal editorial manager about the incorrect information in the editorial and had asked for a correction to be printed. The editorial manager declined the request.

- Dennis O'Mara asked Ms. Shuryn if the wastewater from Intel containing the arsenic was removed or just diluted and dumped into the river. Ms. Shuryn clarified that since the water came from the sewer, it was treated in accordance with the Water Authority's wastewater treatment process. Drinking water on the other hand went to the arsenic treatment plant to remove arsenic for drinking.

NEW CEWG MEMBER RECRUITMENT AND OTHER STEPS

Jessie Lawrence said the intention for this item was a planning discussion about new members and a new facilitator, particularly in the short term as she would be leaving as facilitator soon. Erika Edgerly said Intel wanted to have this conversation first before moving forward with the process to recruit a new facilitator.

- John Bartlit said in the past Intel listed facilitator job requirements, CEWG members commented on the requirements, and then Intel posted the job. A few people responded, and then Intel picked out several potential candidates and held interviews with CEWG members by telephone. Sarah Chavez said she helped to recruit the last two facilitators, and it was about a two to three month process. Because the facilitator before Ms. Lawrence had more time before departing, she was able to help facilitate the job selection process and advertise the job opening in her networks. Intel did not play a part in that. Ms. Chavez emphasized the candidate search was a process. John Bartlit said, in theory, they could use a substitute like they did in the past. Ms. Chavez reminded the substitute facilitator attended the meetings only, while the regular facilitator did all the background work such as managing the newsletter, agenda, etc. There was lots of other work involved. Mr. Bartlit added that losing two CEWG members recently further complicated matters.

- Dennis O'Mara said that from his perspective over the last decade of involvement with the CEWG, the CEWG's weakness was that it hardly had any community-based members. He said he was currently speaking to the community to try to recruit members. Potential members should include either one of two types of individuals: People with expertise around the issues and/or people concerned about Intel and toxic emissions. On

the latter, members didn't need expertise but had to be willing to come to the table as a community member, which would be helpful and valuable. He encouraged people to please consider being a contributing member.

- John Bartlit said he spent a significant amount of time trying to recruit community members when the CEWG first began but people didn't want to participate. He suggested maybe the CEWG's track record over the years would attract new members. Dennis O'Mara said when he mentioned "community" he was referring to Corrales, southern Rio Rancho, and far Northwest ABQ. It would be wonderful to have representation from all three areas, he said. Sarah Chavez added that facilitators also tried to recruit new members. Dennis O'Mara said Kathleen Holmes Cates suggested contacting the Environmental PhD program at UNM to find additional members. They would bring expertise to the table.

- Jessie Lawrence asked for people's suggestions about finding a new facilitator. Erika Edgerly suggested not holding any CEWG meetings for two to three months until they hired a new facilitator yet keep the lines of communication open with the community. Sarah Chavez could monitor CEWG emails and alert Mr. Bartlit and Mr. O'Mara to any pertinent emails. John Bartlit said the CEWG had a record of accomplishing things by email in between meetings.

- Dennis O'Mara thanked Jessie Lawrence for her work as the CEWG facilitator. He said that her work had been "terrific," and the CEWG had a good ride with her in the facilitator chair. He wished her well in her new position. He added that it would be hard to operate without a facilitator. If anything urgent came up, the group could get together informally, and not necessarily hold a public meeting, to deal with urgent issues.

- John Bartlit said they had about 5 facilitators in 17 years. Of those, both Jessie Lawrence and Stephen Littlejohn stood out as wrestling with difficult process issues. He said those ideas were very valuable. He suggested trying their best to replace that aspect. Erika Edgerly suggested looking at the RFP and adjusting facilitator job requirements. John Bartlit added that in the past one requirement was to use CJ Ondek as the meeting recorder, and he would like to continue with this requirement. Dennis O'Mara agreed.

- Jessie Lawrence summarized the conversation. The group agreed to a pause in CEWG meetings, yet the group would continue to communicate. If there was a need they could hold informal meetings, and they would put some thought into new facilitator requirements, including to use CJ Ondek as the meeting recorder.

- On recruiting new members, John Bartlit suggested recruiting people involved in Corrales public life or who participated in CEWG projects. He thought it was a marvelous idea to recruit PhD students at UNM. Jessie Lawrence suggested thinking about other groups with similar interest to reach out to. Mr. Bartlit suggested Chuck Wiggins, who seemed to have a genuine interest and skill in communicating his subject to a general population.

- John Bartlit asked whether they could they have a meeting without a facilitator or if there was anyone who could fill in spontaneously. He suggested CJ Ondek because she had done it in the past. CJ Ondek responded that she was happy to help out in any way that was needed but with the caveat that she was not as skilled as Jessie Lawrence in holding the center. Sarah Chavez said Intel's purchasing system was a little complicated and took time, so it might be difficult to compensate a substitute facilitator. Erika Edgerly said she and Sarah Chavez were committed to moving as quickly as possible to fill the position.

  ACTION ITEM: Erika Edgerly, Sarah Chavez, and Jessie Lawrence will review and update the RFP and send to CEWG members to review and provide feedback. Jessie Lawrence will advise on networks to advertise the job opening.

REGULATORY ENGINEERING IN EMISSIONS MONITORING PROJECT

- Jessie Lawrence asked if there were any updates on the canister testing process. Dennis O'Mara said he was devoting his time and effort on this topic to Clean Air for All Now's canister testing work. He looked at Kurt Parker's list of 10 different companies, and he contacted five that seemed reasonable and interested. That information should be in the meeting summary. He said that was as far as he wanted to take it for the CEWG because Clean Air for All Now had their own process in motion and he needed to devote time and effort to that. He said the CEWG never really moved forward, and he never heard definitively from Intel on whether there was funding to carry out this kind of project.

- Sarah Chavez asked why the CEWG would do canister sampling if Clean Air for All Now was doing it. She reminded that historically the community didn't believe Intel data. She asked what the value was in both groups doing canister sampling, and said this point needed to be honestly discussed.

- John Bartlit asked if Dennis O'Mara would share Clean Air for All Now's canister sampling protocol. Mr. O'Mara said he would share the protocol and results at an appropriate time in the future, and that was all he was going to say about it. Clean Air for All Now was moving ahead; they made some progress, and they were about to make more. He said he would apprise the CEWG when the time came.

- Jessie Lawrence said in summary, it sounded like there was not much more for the CEWG to do on this topic at this time.

NM CANCER CONCERNS WORK GROUP ASSESSMENT

- Chuck Wiggins gave an update on his work. He said they were on track to complete the report for a May or early June release date. In the previous study he provided a draft copy to the CEWG for critical review and comment, and he recommended doing that again this time around. He added that he wished Jessie Lawrence well on her new opportunity. She did such a great job and made him feel very welcome and comfortable, and he wished her the best.

- Dennis O'Mara wanted to clarify that he and Marcy Brandenburg representing CRCAW (now Clean Air for All Now) asked Mr. Wiggins to undertake this study. It was not a study done on behalf of the CEWG but for CRCAW/Clean Air for All Now. John Bartlit reminded that CRCAW initiated several studies in the past, such as the study of pulmonary fibrosis in Corrales, the study of ALS (Lou Gehrig's Disease) in Corrales, and the ATSDR study of Intel New Mexico.

- Chuck Wiggins said that his group, NMDOH, the NM Tumor Registry and the Cancer Concerns Work Group, tried to respond to these inquiries on behalf of everyone. The study and data belonged to the people of New Mexico, and he would make the report available to anyone interested. He said he accepted input from anyone to make the report better—scientists, activists, community members. Mr. O'Mara said the new organization Clean Air for All Now had about 20 members and would invite Mr. Wiggins in the future to present on the report.

REVIEW ACTION ITEM PROGRESS REPORT

Jessie Lawrence asked if anyone wanted to spend time on the Action Item Progress Report, and the group agreed there was nothing pressing to discuss.

ADJOURN

NEXT MEETING: TBD