## PUBLIC HEARING

Proposed Endangerment Finding
Regarding Lead Emissions from Aircraft
Operating on Leaded Fuel
Tuesday, November 1, 2022
Commencing at 10:00 a.m.

Transcribed by: Stephanie Lyn Hagen, RPR

JerseyShore Reporting, LLC
Colfax Plaza
Building I - Unit 12
2510 Belmar Boulevard
Wall, New Jersey 07719
732-282-0704 Fax 732-282-0714

(1)	PANELISTS:			
(2)				
(3)		Alejandra	Nunez	
		Kathryn	Sargeant	
(4)		Melina	Williams	
(5)		Rosemary	Kaban	
(6)		Mike	Samulski	
(7)		Marion	Hoyer	
(8)				
(9)				
(10)				
(11)				
(12)				
(13)				
(14)				
(15)				
(16)				
(17)				
(18)				
(19)				
(20)				
(21)				
(22)				
(23)				
(24)				
				ļ

MS. PIGGOTT: Good morning,
welcome to the United States Environmental
Protection Agency's virtual public hearing on the
proposed finding that lead emissions from
aircraft engines that operate on leaded fuel
cause or contribute to air pollution that may
reasonably be anticipated to endanger public
health and welfare. We refer to this action here
as the proposed endangerment finding regarding
lead emissions from aircraft operating on leaded
fuel.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

(14)

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

My name is Jennifer Piggott from ICF, the independent third-party contractor supporting the EPA. I will serve as your meeting facilitator for today's hearing. We are transcribing today's hearing and you can turn on live captioning if you would like to read the verbal dialogue. To turn on closed captions, click on the CC icon that says live transcript at the bottom of your screen and then click show subtitles to view the closed cap captioning and hide subtitles to turn them off. We are also interpreting today's hearing in Spanish.

I will now introduce our

**(1)** interpreter Silvia Colla to provide **(2)** instructions on how to enter the Spanish **(3)** interpretation room. Silvia? **(4)** Again for everybody, you will see the interpretation icon at the bottom of your **(5) (6)** Zoom screen and you will need to select either **(7)** English or Spanish. We will give everyone a **(8)** moment to select that icon and you need to select **(9)** English or Spanish pending what your language of (10)choice is for today's hearing. **(11)** I do want to note Thank you. (12)that this hearing is being recorded. If you do (13)not wish to be part of this recorded hearing, **(14)** please disconnect. We are now ready to begin. (15)I'll turn it over to Alejandra Nunez, the EPA's **(16)** Deputy Assistant Administrator for Mobile Sources **(17)** in the Office of Air and Radiation. Alejandra? **(18)** MS. NUNEZ: On behalf of the (19)

U.S. Environmental Protection Agency and the Office of Air and Radiation, I would like to welcome you to today's virtual public hearing. I am grateful for everyone who has taken the time out of their day to testify and participate today.

(20)

**(21)** 

(22)

(23)

(24)

(25)

**(26)** 

I am Alejandra Nunez, the Deputy
Assistant Administrator for Mobile Sources in the

(1) Office of Air and Radiation. I will be the (2) presiding officer for today's hearing.

In addition, I am joined on the panel by Katheryn Sargeant, the Deputy Director of the Assessment and Standards Division, in the Office of Transportation and Air Quality; Melina Williams from EPA's Office of General Counsel; Rosemary Kaban from EPA's Office of General Counsel; Mike Samulski, the Director of the Large Marine and Aviation Center in the Assessment and Standards Division; Marion Hoyer, Director of the Health Effects Benefits and Air Toxic Center in the Assessment and Standards Division.

our contractor ICF International in the running of today's virtual public hearing. The purpose of this hearing today is to receive comments from interested parties on the proposed action titled proposed finding that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution, that may reasonably be anticipated to endanger public health and welfare which was published in the Federal Register on October 17, 2022.

In this action, the

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

administrator is proposing two findings, that -that lead air pollution may reasonably be
anticipated to endanger the public health and
welfare and that engine emissions of lead from
certain aircraft cause or contribute to the lead
air pollution that may reasonably be anticipated
to endanger public health and welfare.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

**(19)** 

(20)

(21)

(22)

(23)

(24)

(25)

Although EPA's proposed action encompasses both proposed endangerment and proposed cause or contribute findings, for convenience we sometimes refer to this collectively as the endangerment finding.

This hearing provides interested persons the opportunity for the oral presentation of data, views or arguments. When you are finished with your oral comments, members of this panel may ask clarifying questions. This hearing is not intended to be a discussion of the proposed action. While we might ask questions or request additional data or supporting materials, we will not respond to comments in this forum. Instead, we will provide a written response to comments as part of developing any final action related to these proposals.

Finally, let me remind everyone

that in addition to today's hearing, there is also opportunity to submit written comments. The written comment period closes on January 17, 2023 at 11:59 p.m. eastern time. Details on where to submit written comments can be found in the Federal Register notice announcing the proposal as well as on our website. The web address is also in the Federal Register notice for this proposal. All comments on this proposed action whether provided at today's hearing or in writing will be duly considered by EPA.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Now, let me go over how we will conduct this hearing. We are conducting this hearing under section 307(d) of the Clean Air Act to provide interested persons an opportunity for oral presentation in addition to the opportunity to make written submissions on this proposed action.

We are having this hearing recorded and a written transcript will be available for public inspection and copying in EPA's Air and Radiation docket, at Docket Number EPA-HQ-OAR-2022-0389. The transcript will also be available electronically on EPA's website and the regulation.gov website in the same docket.

The official record of this hearing will be kept open until January 17, 2023, the close of the public comment period to provide opportunities for speakers to submit rebuttal and supplementary information. You may submit this additional testimony to the same docket for this action by using one of the methods described in the Federal Register notice announcing the proposal.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The hearing will be conducted informally and formal rules of evidence will not apply.

I will be serving as the presiding officer of today's hearing and as such I am authorized to apply reasonable limits on the duration of that statement of any speaker. We ask that each person try to limit his or her verbal testimony to five minutes as we would like to make sure that there is enough time for every one who would like to speak to have the opportunity to do so.

Finally, while the EPA representatives speaking today will attempt to ensure the accuracy of any descriptions or discussion of the proposed action they may

provide, the official version of the proposal is that published in the Federal Register on October 17, 2021. If there is a conflict between what you hear today and the official version, the official version controls, please refer to the official version of this proposed action in developing your written comments on the proposal. Thank you.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

**(12)** 

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

With that, I will turn it back to Jennifer Piggott from ICF International to go over some logistics for today's hearing.

MS. KONG: Good morning everyone, my name is Kara Kong. I am temporarily taking over for Jennifer, she is having an access issue so I am going to go ahead and take over while she reconnects.

But thank you again, before we go in -- before we begin with the hearing, we will review the agenda and some logistics for today's public hearing. We will hear public comments from approximately ten a.m. until noon, and then we may take approximately a five minute break at eleven a.m. if needed. We will then resume at one p.m. and adjourn for the day at three p.m. with a potential five-minute break

needed at one p.m.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

If at any time during the hearing you are having any technical difficulties, please use the chat feature located at the bottom of your screen to message the meeting host or call (734) 214-4923. Please make note of the phone number for this hearing. The phone number is 1 (669) 254-5252. The webinar ID is 161 489 7387. If you experience difficulty with your internet connection at any point during the hearing, you can call this number to listen to the hearing.

Additionally individual internet connections and bandwidths vary and may impact your viewing experience. We recommend closing all apps and programs and limiting other screening or downloads while participating in the hearing.

This meeting is being conducted using Zoom webinar which mutes all participants automatically. EPA posted the order of speakers for this hearing yesterday on their website as indicated in the Federal Register notice. We ask that you monitor the list of speakers and be prepared to present your comments when it is your

(1) turn to speak.

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

**(22)** 

(23)

**(24)** 

(25)

[2] In a moment, we will display the

anticipated order of the speakers. As we proceed, I will place the names of the next five speakers into the chat so you can see when your turn is coming. If you are speaking today, you will receive a notification on your screen that you are being promoted to the role of a panelist shortly before your speaking time. You must accept that invitation to be able to unmute when you are called to provide your comments. This will allow you to turn on your camera which we encourage you to do so. Speakers connected by telephones should unmute their phones when called to comment.

Each speaker will be given five minutes to speak, please state your name and any organization you are representing at the beginning of your comments. If you are not registered to speak but you would like to, please contact us now via the chat feature or by sending an e-mail to epapublichearing@icf.com or call (734) 214-4923.

Now, we will begin our public comments. The speaking order is currently

displayed on the screen. We ask that each person limit their verbal comments to five minutes as we like to make sure there is enough time for everyone who would like to speak to have the opportunity to do so. At the end of your time, I'll jump on and ask you to quickly wrap up to allow others the opportunity to comment. If you are not able to complete your comments with the allotted time, you may submit them in writing before the end of the public comment period which ends on January 17, 2023. We encourage you to provide your full written statement and any additional comments of any length to regulations.gov using Docket Number EPA-HQ-OAR-2022-0389. One moment, please, working on an access issue real quick with Jennifer. She is back on. Alright, we will go ahead and keep moving forward. We will go ahead and paste the first five names into the chat. So the first five names are Cynthia Richson, Robert Olislagers, Jim Coon, Jasmine Jimenez and Mayra

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

**(20)** 

(21)

(22)

(23)

(24)

(25)

the chat.

Pelagio, and in one moment we will post those in

(1)	MS. PIGGOTT: Kara, I am back on,
(2)	can you hear me?
(3)	MS. KONG: Yes.
(4)	MS. PIGGOTT: Thank you everybody
(5)	for your patience, we are experiencing some
(6)	technical difficulties this morning. Give us
(7)	just one moment to fix one more thing on the back
(8)	end and then we will begin hearing your comments.
(9)	Again, thank you for your patience and we
(10)	apologize for the technical difficulties we are
(11)	having this morning.
(12)	Okay. Ladies and gentlemen, I
(13)	will be introducing each speaker in turn. Please
(14)	speak slowly and clearly so our court reporter
(15)	can record these proceedings accurately.
(16)	Additionally, since we are
(17)	interpreting today's meeting, we need to speak
(18)	slowly to allow time for our interpreter to
(19)	translate into Spanish. I apologize in advance
(20)	for mispronouncing anyone's names.
(21)	The first speaker will be
(22)	Cynthia Richson. Cynthia, I am going to promote
(23)	you to panelist.
(24)	Cynthia, you should have
(25)	received a prompt promoting you to panelist that

**(1)** will allow you to unmute and turn your camera on **(2)** if you wish. **(3)** MS. RICHSON: Hello, can you **(4)** hear me? MS. PIGGOTT: Yes, go ahead. You **(5) (6)** have five minutes. **(7)** MS. RICHSON: Thank you very much, I am Cynthia Richson, the town board chair **(8) (9)** for the Town of Middleton in Wisconsin. The town (10)is a co-petitioner on the Earthjustice Petition. **(11)** We strongly support the EPA's proposed (12)endangerment finding for leaded aviation gas. (13)We also welcome the EPA's **(14)** current review to update the 2008 lead national (15)ambient air quality standards. There is no safe **(16)** level of lead exposure which is cumulative. **(17)** I would like to tell you about (18)our situation here in Wisconsin. C29 is a (19)recreational airport that shares a boarder with our town, however, the airport is owned by the (20)**(21)** adjacent municipality, the City of Middleton. (22)Due to westerly winds, at least 70 percent of all C29 aircraft take off over the Town of Middleton. (23) (24)This is a densely populated area comprised of (25)many residences, schools, playgrounds and parks.

Due to the repetitive low altitude flight paths of these recreational aircraft, we receive daily dustings of airborne lead. Unfortunately, we cannot find new air to breathe.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

**(19)** 

(20)

(21)

(22)

(23)

(24)

(25)

In addition, the city continues to build multi-family affordable housing immediately adjacent and east of the airport which is downwind. This raises significant social justice issues.

To make matters worse, this year the city adopted a master plan for the significant expansion of this recreational airport. If the EPA does not take immediate steps to require a timely transition to unleaded aviation gas, we will soon be dusted with greater amounts of airborne lead from recreational aircraft using leaded aviation gas.

Wisconsin does not test all children for lead poisoning. As a result, the vast majority of the children in the area have not had their blood tested for lead so we do not have the data needed to conduct a Miranda like study. However, we do know that out of all 72 counties in Wisconsin, the county we live in has

the second highest airborne lead emissions from aircraft using leaded aviation gas.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Toxic airborne lead from aircraft is a significant public health issues. In order to obtain more information about airborne lead from C29 piston-engine aircraft burning leaded aviation gas, the town recently hired Trinity Consultants to do an airborne lead study. There are no other sources of airborne lead in the town other than aircraft. first modeled the densely areas where aircraft lead emissions occur from C29 and then conducted field air sampler testing. The air sampler testing both validated the Trinity modeling study and confirmed breathable airborne lead at ground level from these aircraft operations in the community.

Exposure to airborne lead is particularly dangerous because it is absorbed so efficiently by the lungs at nearly 100 percent. It is even more dangerous for children because they breathe at a faster rate than adults and therefore are exposed to a greater dose.

Lead has long-lasting and devastating effects on the developing brain that

**(1)** can include permanent loss of IQ in children. **(2)** There is no effective treatment once airborne **(3)** lead particles are inhaled by a child. **(4)** prevention is key and there is already an FAA approved unleaded high octane aviation gas GAMI's **(5) (6)** G100UL that can safely be used by all piston **(7)** engine aircraft. **(8)** In 2023 we respectfully request **(9)** that you make a final positive endangerment (10)finding that lead emissions from general aviation **(11)** aircraft using leaded half aviation gas causes (12)toxic air pollution that endangers the public (13)health and welfare. Airborne lead from leaded **(14)** aviation gas is an urgent public health crisis. (15)Leaded aviation gas must be banned expeditiously to protect children's health, development and their (16)**(17)** ability to thrive going forward. **(18)** Thank you for the opportunity to (19)testify today. MS. PIGGOTT: Thank you for your (20)**(21)** comments. (22)Okay. Our next speaker is Robert Olislagers. Robert I am going to promote (23)you to panelist so you can unmute. (24) (25)Robert, are you with us?

(1)	MR. OLISLAGERS: I am. And I
(2)	am trying to get my video set up here as well.
(3)	There we go. Thank you.
(4)	MS. PIGGOTT: You have five
(5)	minutes, thank you.
(6)	MR. OLISLAGERS: Thank you, good
(7)	morning. My name is Robert Olislagers. I am the
(8)	Senior Coordinator of the Eliminate Aviation
(9)	Gasoline Lead Emission or EAGLE initiative.
(10)	EAGLE is an industry government coalition
(11)	consisting of the Federal Aviation Administration
(12)	and ten associations representing aviation and
(13)	fuel manufacturers including the National
(14)	Association of State Aviation Officials; The
(15)	Aircraft Owners and Pilots Association; the
(16)	National Air Transportation Association; the
(17)	General Aviation Manufacturers Association; the
(18)	International Counsel of Air Shows; the
(19)	Experimental Aircraft Association; the National
(20)	Business Aviation Association; the American
(21)	Association of Airport Executives; Helicopter
(22)	Association International; and the American
(23)	Petroleum Institute.
(24)	EAGLE was formed in February of
(25)	2022 to facilitate the transition to lead free

aviation fuels for piston aircraft by the end of 2030 without compromising the safe and efficient operation of the fleet and the economic strength and viability of general aviation industry. As you will hear from some of our EAGLE partners, we are united in this goal.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

General aviation already reduced leaded emissions from AVGAS by more than half since the late 1970s. The regulatory process initiated by the EPA today is the appropriate course for a thoughtful, orderly and safe transition to a lead-free aviation future by the end of 2030 with the full cooperation of the Federal Aviation Administration and industry, EAGLE supports and is committed to reaching this goal.

pillars to achieve a lead-free industry. Two pillars are managed by industry, the first is focused on identifying the tasks that must be accomplished to allow unleaded fuels to be offered in the market. The second is focused on research and development and innovation, the other two pillars are managed by the Federal Aviation Association and focus on test and

evaluation of candidate unleaded fuels and related to regulatory and policy objectives.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

In addition, there are two tracts available for FAA safety review and authorization. First the traditional supplemental type certificate process or STC. An STC insures that any changes to aircraft and engine designs continue to comply with the applicable airworthiness requirements.

The second is an industry government program called Piston Aviation Fuels Initiative or PAFI, which is focused on generating the necessary airworthiness data for the FAA to issue a fleet authorization.

Major progress towards obtaining a lead-free environment currently underway includes four high octane unleaded fuels and development towards FAA authorization. Each of the candidate fuel providers pursue lead free high octane AVGAS using different formulas while maintaining the performance properties necessary for safety.

Just two months ago, the FAA issued an STC to General Aviation Modifications, Inc. or GAMI for their G100UL unleaded AVGAS. It

is the first FAA authorization of a high octane
unleaded fuel for a large segment of the general
aviation fleet. This moves the industry a step
closer to an unleaded future.

Swift Fuels, Inc. is also close
to completing tests and evaluation for its 100
octane fuel with the goal of receiving an STC in

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

octane fuel with the goal of receiving an STC in 2023. Swift Fuels already makes 94 octane unleaded fuel available in the marketplace today.

In addition, two high octane unleaded fuels are being tested through PAFI involving Afton Chemical and Phillips 66 as well LyondellBasell and VP Racing. Both candidate fuels have made significant progress and expect to begin full scale testing towards FAA fleet authorization soon.

To make a successful transition, however, it is critical to the safety of the general aviation fleet to maintain 100 low lead aviation or 100 low lead aviation fuel available until unleaded fuels are widely available throughout the national airport system.

The general aviation sector includes some 20,000 landing facilities in the United States including more than 5,000 public

**(1)** use airports. It has a fleet of more than **(2)** 220,000 aircraft used for such diverse activities **(3)** as firefighting, recreational use, search and **(4)** rescue, flight training, law enforcement, emergency management, and serving rural and **(5) (6)** remote areas to name a few. **(7)** The industry supports more than \$1.2 million and contributes more than \$247 **(8) (9)** billion in economic impact annually. Thank you (10)for this opportunity to comment and for more **(11)** information, please go to info@flyeagle.org, (12)thank you. (13)MS. PIGGOTT: Thank you for your **(14)** comments. (15)Our next speaker is Jim Coon, **(16)** Mr. Coon, I am going to promote you to panelist. **(17)** Mr. Coon, you should be able to unmute and turn (18)your video on if you would like. **(19)** MR. COON: Okay. We are trying (20)-- okay. Hold on. Okay. **(21)** MS. PIGGOTT: We can hear you, Mr. Coon. Go ahead you have five minutes. (22)MR. COON: Good morning, thank (23) (24)you for the opportunity to convey the views of (25)the general aviation industry regarding the

Agency's proposed endangerment finding with respect to lead emissions from aviation gasoline.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

As mentioned, my name is Jim

Coon, I am the Senior Vice President of

Government Affairs and Advocacy for the Aircraft

Owners and Pilots Association. AOPA is the

world's largest aviation organization

representing the interests of more than 300,000

pilots and aircraft owners across the United

States.

I speak today on behalf of the general aviation industry including the General Aviation Manufacturer's Association, the National Business Aviation Association, National Air Transportation Association, the Experimental Aircraft Association and the Helicopter Association International.

I would like to outline three main points today. One, the general aviation industry supports and is working towards a safe and orderly transition to an unleaded future as soon as possible. Two, any transition must be done safely and smartly which means we need current fuels available today until an unleaded fuel can be commercialized and widely distributed

across the country. This is for pilot safety reasons and for the viability of the general aviation industry. And three, real progress toward a higher octane unleaded fuel solution is being made. The FAA in September authorized the use for one fuel for most of the general aviation feet and three other fuels are moving towards FAA authorization.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The general aviation industry supports an estimated \$247 billion in economic output and 1.2 million jobs in the U.S. It provides a lifeline to many towns across the country and provides critical services in times of natural disasters, such as hurricanes, flooding, wild fires and provided support for the nation's battle against Covid 19.

GA is served by more than 5,000 public use airports, more than 13,000 private airports and airstrips and 5,500 heliports across the country. General aviation provides essential air travel options to businesses and the public merging links between thousands of companies, their suppliers and their customers.

General aviation also protects our environment by providing the most efficient

and cost-effective way to conduct such activities as wildlife surveys, aerial mapping of wetlands, and detecting pipeline leaks.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Let me again reiterate the general aviation industry's firm and collective support in removing lead from aviation gasoline and any transition in pursuing this goal must be done safely and smartly. The industry and the FAA have been working on this unleaded transition for many years.

Congress has allocated more than \$47 million to test and evaluate candidate fuels through the PAFI program which stands for Piston Aviation Fuels Initiative and as the AOPA President Mark Baker has often stated if this were easy, it would have been done already.

Our industry has joined with the FAA in a broad coalition of organizations in Eliminate Aviation Gasoline Lead Emissions initiative commonly referred to as EAGLE. EAGLE is designed to ensure that all stakeholders in this issue are coordinated and focused on the orderly and safe transmission to a lead free AVGAS future just as we heard from the previous speaker Robert Olislagers, the Senior Coordinator

of EAGLE.

(1)

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

(2) It is important for everyone to

know that significant progress is being made in identifying unleaded fuel solutions that will work for the entire general aviation fleet of piston powered aircraft, and to put some context around the amount of AVGAS being used each year which is about 180 million gallons, this amount of automotive fuel is being burned on American roads and highways in just four hours each day. Regardless, we all want a lead-free aviation system, in fact, the FAA recently issued an authorization for the use of a 100 octane unleaded fuel developed by general aviation modifications incorporated known as GAMI of Ada, Oklahoma for all General Aviation piston aircraft engines and airplanes. This was done through the supplemental type certificate or STC pathway, taken to move this fuel in the commercialization AOPA select aircraft manufacturers and others are planning to conduct demonstration programs for GAMI's G100UL fuel. In addition, Swift Fuel is located in Indiana is currently working through the FAA authorization process for it's 100 octane unleaded AVGAS and has said that

(1)	it hopes to complete FAA certification in 2023.
(2)	Swift already supplies it's 94 octane unleaded
(3)	fuel to a limited number of airports.
(4)	MS. PIGGOTT: That's time.
(5)	Please wrap up your comments.
(6)	MR. COON: Okay. We at the
(7)	industry believe it's vital that the FAA be given
(8)	the resources needed to expedite the testing,
(9)	validation and demonstration for all FAA STC
(10)	authorized and other potential unleaded fuel
(11)	solutions. As I mentioned earlier, any
(12)	transition to a fully unleaded solution is one
(13)	that needs to be done safely and smartly.
(14)	Many of the 220,000 piston
(15)	airplanes and rotorcraft in the current fleet
(16)	require higher octane 100 low lead fuel to fly
(17)	safely.
(18)	MS. PIGGOTT: Thank you for your
(19)	comments. I need to move onto the next speaker.
(20)	Thank you.
(21)	MR. COON: Okay. Thank you.
(22)	MS. PIGGOTT: Okay. Our next
(23)	speaker is Jasmine Jimenez. Jasmine, I am going
(24)	to ask you to unmute.
(25)	MS. JIMENEZ: Can you hear me?

MS. PIGGOTT: Yes, you are unmuted, go ahead you have five minutes.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

**(19)** 

(20)

(21)

(22)

(23)

(24)

(25)

**(26)** 

MS. JIMENEZ: Thank you for the opportunity to express what is going on in my neighborhood or part of it. I have lived for approximately 43 years within one mile from Reid-Hillview. We have a child under 11 years old in the household and we were not aware that planes are being operating with lead fuel.

We are very concerned about the current damage to our health, the lead has done to our family especially our children and community. Children are particularly vulnerable to the effects of lead, exposures to low levels of lead early in life have been linked to an effect on IQ learning, memory and behavior. There is no known safe level of lead in the body. Further it does more internal damage to the vital organs.

Everyday residents, pregnant women, children and adults are being slowly poisoned by lead particles from exhaust of private planes continually flying in circles. Those fumes at the airport and gas fumes is escaping during refueling. Additionally, there are nine schools

located within the flight pattern used by pilots while flying in circles. Reid-Hillview is exposing East San Jose children and the whole community to noise irritation, lead pollution and lower standard of living that results from lead exposure and the imminent danger for plane crashing into our living spaces. Those pilots are not professional pilots, which make them more dangerous to our community. East San Jose children and adults have been physically and mentally harmed on a daily basis by the incessant noise from Reid-Hillview This county land should be used in a way planes. that benefit a larger percentage of county residents while not exploiting, abusing the life for all the county residents and ignoring civil rights for children and the Spanish community The county airport system just a welfare for the rich. Stop thinking in terms of what is convenient for every pilot and start thinking in terms as to what is best for East San Jose and Santa Clara County. We ask that you close Reid-Hillview immediately. We cannot afford waiting another 8 to 10 years for Reid-Hillview Airport to be closed and exposing our community for further health damage.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

**(26)** 

(1)	Further inspire the children to
(2)	be a first-rate school system. Thank you. I
(3)	hope my comments are well understand. Any
(4)	questions or comments?
(5)	MS. PIGGOTT: Thank you for your
(6)	comments.
(7)	Our next speaker is Mayra
(8)	Pelagio. Mayra, I am going to promote you to
(9)	panelist.
(10)	MS. PELAGIO: Hi, everyone. Are
(11)	you able to hear me?
(12)	MS. PIGGOTT: Yes, go ahead you
(13)	have five minutes.
(14)	MS. PELAGIO: Good morning
(15)	everyone, my name is Mayra Pelagio, I am the
(16)	Executive Director LUNA, Latinos United for a New
(17)	America, a small non-profit organization working
(18)	to unify the Latino communities in the Silicon
(19)	Valley to promote civic participation in the
(20)	areas of housing, immigrants rights, education,
(21)	health and the environment.
(22)	I am here today to talk about
(23)	the harm that lead aviation fuel has done to
(24)	communities in East San Jose particularly around
(25)	Reid-Hillview Airport. In August of last year,

the board of supervisors in our county, Santa Clara County, were presented with a study that spanned for over 11 years taking blood lead level samples from children living within a one point five-mile radius of this airport. The results showed clear statistics with children living closer to the airport having higher levels of lead in their blood. This study and the statistics results irrefutably explain how damaging lead aviation fuel is to public health and I know this is not the only study that can prove to the EPA how damaging lead exposure is to children and adults alike.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

No level of lead is safe. In children it can cause severe development irregularities and in adults who have been exposed to lead for prolonged periods of time, it can -- they can develop severe health issues such as cardiovascular diseases.

In our region, Santa Clara

County was responsive to the needs of the

communities who have been exposed to lead and we

partnered with them to ensure that everyone

living under the one point five-mile radius

within the airport which is a source of emissions

received the information about lead and the health effects it poses.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Our community leaders
distributed information about the damaging
effects of lead and resources to obtain lead
testing but even with this information, our
families are still left with no tangible
resolution to the real problem which is exposure
to leaded fuel. Santa Clara County has banned
the sale of leaded fuel in the airports, but
pilots are still able to refuel in other sites
and as they have shared in multiple media outlets
they do refuel with leaded fuel and do continue
to operate out of the Reid-Hillview Airport.

We cannot continue to wait.

There are ten schools located in within these airport and our children are continuing to be exposed to airborne lead pollution every day. I heard earlier that a transition to non-leaded fuel needs to be a just transition but it is not -- but it is not just by any means to communities who continue to suffer through the environmental injustice of being exposed to airborne lead pollution.

I know that we are very

**(1)** fortunate to have the support we have from local **(2)** governments and I am deeply concerned that other **(3)** communities are being exposed to airborne lead **(4)** pollution from leaded aviation fuel without any regulations that can help, that can keep them --**(5) (6)** help them especially with children who are **(7)** developing. I urge you to take these **(8) (9)** comments into consideration when you are (10)conducting your endangerment finding and think of **(11)** all of the communities that continue to be (12)effected by allowing the use of leaded aviation (13)fuel from small aircrafts. Thank you so much and **(14)** I yield the rest of my time. (15)MS. PIGGOTT: Thank you for your (16)comments. **(17)** Okay. Ladies and gentlemen, we **(18)** have posted the names of the next five speakers (19)into the chat. The next five speakers are Gloria (20)Lechuga, Alfonso Mendez, Rita Birrueta, Amalia **(21)** Ponce, and Migdalia Rodriguez Cubides. (22)Gloria, I see that you are on (23) the Zoom. I am going to promote you to panelist. Gloria, you should be able to unmute. (24)(25)MS. LECHUGA: Buenos días. Me llamo Gloria Lechuga. He vivido en el este de San **(26)** 

(1) José por los últimos 20 años en el vecindario de (2) Cassel.

(3) Me siento muy insegura,

(4) especialmente afuera, dónde tengo mis plantas,
 (5) pensando en todo el aire contaminado que llega por
 (6) parte de las avionetas pequeñas que salen del

(7) aeropuerto cerca a mi casa.

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

(22)

(23)

**(24)** 

Me preocupa más en cómo afecta a los niños que van a las escuelas cerca del aeropuerto Reid-Hillview. Los resultados del estudio del plomo son alarmantes. Están enviando a los niños que viven cerca, a 1.5 millas del aeropuerto que tanto está afectando su salud física y mental. Ellos necesitan un ambiente libre de contaminación.

Gobierno de los Estados Unidos, ¿ustedes han pensado en el futuro de estos niños y de mi comunidad? Hemos hecho de todo y nada que nos escuchan. Hemos tocado puertas. Antes que se hiciera el estudio del plomo en este sector del Valle de San José solicitamos firmas para que revisaran que estaba pasando. Ahora que recibimos información sobre el estudio de plomo me preocupa más y exigimos ayuda inmediata para tener mejor

(1) | calidad de aire.

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

(22)

(23)

**(24)** 

Le exijo a la Agencia de

Protección Ambiental que actúe ahora para proteger

la salud pública de todos nosotros, especialmente

la salud de los niños física y mental como lo

dije. ¿Qué futuro espera para los niños? Tenemos

que pensar en su educación en su futuro porque

ellos son el futuro de nosotros de ustedes más

como más jóvenes. Gracias.

MS. LECHUGA (TRANSLATED): Good morning. My name is Gloria Lechuga. I have lived in east San Jose during the last 20 years, in the Cassel neighborhood.

I feel very unsafe, in particular outdoors, where I have my plants, thinking about all the polluted air we get from the small airplanes that takeoff from the airport close to my house.

I am more concerned about how this impacts the children that go the schools close to the Reid-Hillview airport. The results of the lead study are alarming. It is being sent to the children that live nearby, within 1.5 miles of the airport, which impacts significantly on their

(1) | physical and mental health.

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

(22)

(23)

**(24)** 

have you thought about the future of these children and of my community? We have done it all and you are not listening. We have knocked at doors. Before the lead study was conducted in this sector of the San Jose valley, we requested signatures to review what was going on. Now that we received the lead study information, I am even more concerned, and we demand immediate help to improve our air quality.

I demand the Environmental

Protection Agency act now to protect our public

health, in particular the physical and mental

health of our children as I have said. What future

will our children have? We must think in their

education, in their future because they

are our future, they are your future, since they

are younger. Thank you.

MS. PIGGOTT: Thank you for your comments. Okay. Our next speaker is Alfonso Mendez. I am not seeing you on the Zoom, if you are a callin only user, please press star nine to raise your hand. Alfonso Mendez.

(1)	Okay. Our next speaker is Rita
(2)	Birrueta. I am going to promote you to panelist.
(3)	MS. BIRRUETA: Si. Buenos días.
(4)	Bueno, yo soy Rita Birrueta. Soy residente del este
(5)	de San José. Vivo en una comunidad de apartamentos
(6)	cerca del aeropuerto. Son 354 unidades. Aquí
(7)	vivimos aproximadamente 3000 personas incluyen
(8)	niños de todas las edades, mayormente el somos
(9)	hispanos y asiáticos.
(10)	Muchas de nuestros niños tienen
(11)	autismo, problemas de aprendizaje, problemas de
(12)	habla, este y más más problemas de salud que no los
(13)	deja desarrollarse y aprovechar mejor la educación.
(14)	Entonces ahora con el estudio que
(15)	acabamos de recibir nosotros, pues nos preocupó
(16)	muchísimo de la calidad del aire y todo por la
(17)	gasolina, el combustible que usan los aviones con
(18)	plomo.
(19)	Y estoy aquí para solicitar igual
(20)	que mis compañeras anteriores que piensen en
(21)	nuestras familias, que piensen en nuestros niños,
(22)	que ya no usen este tipo de combustible los
(23)	aviones. Han caído avionetas en viviendas. Entonces

este aeropuerto no es seguro tampoco para nosotros porque estaba rodeado de escuelas, de viviendas, de centros comerciales, de todo. Está dentro de una comunidad, no es que esté fuera sino que está dentro. Estamos respirando todo ese aire. Estamos contaminados por todo lo que emanan esos aviones.

Entonces piensen que sus

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

(22)

(23)

**(24)** 

familias también. ¿Cómo quieren protegerlas? A una comunidad todos deseamos que nuestra familia esté sana, que nuestros hijos crezcan bien, que aprovechen la educación, que se desarrollen como todo ser humano que tiene derecho.

Entonces, estamos aquí para pedir que no más plomo en el combustible, que sea algo rápido porque ya somos muchos años. Yo he vivido en esta comunidad por más de 30 años y siempre ha estado el aeropuerto ahí. Estamos respirando todo ese aire, todo este contaminante.

Entonces me gustaría que nos escucharan, que pensaran en nuestras familias, en nuestros ancianos. Pero yo ya casi voy para la tercera edad entonces todos merecemos una calidad de vida digna. Así que muchas gracias por el tiempo

y cedo el resto del tiempo al siguiente orador. **(1) (2)** Gracias. **(3)** MS. BIRRUETA (TRANSLATED): **(4)** Good morning. Well, I am Rita Birrueta. I am a resident of the East section of San Jose. I **(5) (6)** live in an apartment complex close to the **(7)** airport. There are 354 units. Here there are **(8)** about 3,000 persons including children of all **(9)** ages; we are mainly Hispanic and Asian. (10)Many of our children have (11)autism, learning disabilities, speech impairment and this and more health problems (12)(13)that prevent development and from taking **(14)** advantage of education. Then now with the study that (15)(16)we have just received we are highly concerned about the air quality and all because of **(17)** (18)gasoline, the fuel airplanes use with lead. **(19)** And here I am to request, as (20)well as the people who preceded me, that you think of our families, that you think of our **(21)** children, that you don't use this type of jet (22)(23)fuel. Airplanes have crashed against houses. **(24)** So this airport is not as safe either for us

(1)	because it is surrounded by schools, houses,
(2)	shopping malls, and the like. It is within the
(3)	community; it is not outside rather inside. We
(4)	are breathing all that air. We are
(5)	contaminated with the airplane emissions.
(6)	Then think of your
(7)	families too. How do you want to protect them?

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

**(22)** 

(23)

**(24)** 

A community always wishes for families to be healthy, for our children to grow healthy, for them to take advantage of education, to develop as a human being with rights.

We are here to ask you for a ban on lead in fuel; it has to be quick because many years have elapsed. I have lived in this community for over 30 years and the airport has always been there. We are breathing all this air, a lot of this pollutant. Then, I would like for you to listen to us, to think of our families, our elders. I am almost an elder and we deserve a decent quality of life. Thank you very much for the time and give the rest of my time to the next speaker.

MS. PIGGOTT: Thank you for

(1) your comments.

**(9)** 

(10)

**(11)** 

**(12)** 

I would also like to apologize
to our speaker, we are going to look as to how
this occurred, but an emoji came over the screen,
I am not sure where that came from. No
disrespect was intended. And we will look into
how that occurred, but I do want to apologize
what was seen during that comment.

Our next speaker is Amalia

Ponce, who I am not seeing on the Zoom platform

today. Amalia Ponce, P-O-N-C-E, if you are call

in only user, please press star nine to identify

yourself. Amalia Ponce, P-O-N-C-E.

**(1)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

**(12)** 

(13)

(14)

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

Okay. Our next -- okay our next

(3) speaker is Migdalia Rodriguez Cubides. I am

(4) going to promote you to panelist.

MS. CUBIDES: Buenos días. Mi nombre es Migdalia. Estoy muy agradecida por la oportunidad que la EPA nos da para participar en esta audiencia pública y realizar nuestro comentario.

Actualmente trabajamos una gran población hispana en este sector del este de San José de Santa Clara, California. Y encontramos una comunidad muy preocupada por la contaminación que hay en el aire.

estudio donde dan unas cifras alarmantes y se han hecho muestras allí este estudio. 17241 muestras que le realizaron a los niños y tienen un nivel de plomo en sangre. Estamos muy preocupados como comunidad no solo los que habitan allí sino los que trabajamos también. No es posible que desarrolla actividades

comerciales de aeronaves que circulan en este sector y que está relacionadas con la contaminación del aire a causa de funcionar con combustible con plomo haya una mayor priorización para ejercer su vida empresarial y esté por encima por los por los Derechos Humanos para proteger la salud de todos nosotros los que trabajamos allí.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

Son múltiples fuentes de contaminación en este sector que me generan desconfianza para realizar a todos los que trabajamos en este lugar. Uno de los impactos negativos es la contaminación del aire por diferentes fuentes y ahora añadirle lo que expulsa las aeronaves al ambiente para poder ejecutar su servicio económico desconociendo la combinación de estas sustancias que se mezclan allí y que posiblemente ponen en peligro la salud de todos y de aquellos niños que son muy sensibles para su desarrollo en el crecimiento.

Un segundo impacto negativo en la calidad de vida de todas las personas que habitan

y trabajamos allí por el constante ruido generado

por las aeronaves pequeñas que prestan servicios

hasta altas horas de la noche, repercutiendo en

posibles lesiones auditivas y la tranquilidad para

tener una vida en paz.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

Sin embargo, somos resilientes buscamos la manera de tener hábitos saludables para prevenir el envenenamiento del plomo que cae desde los cielos siendo una solución muy leve contra un gran gigante contaminación del aire que genera efectos adversos a la salud, al medio ambiente y a todos los que habitamos y trabajamos allí en el este de San José.

Inclusive a todos los que tenemos el mismo techo como cielo porque no solamente es San José, es todos los Estados Unidos donde existen estás avionetas que funcionan con pistón y para poderlos manejar tiene que utilizar la gasolina con plomo.

Es un gran desafío diario por eso agradecemos estos espacios para recurrir a

ustedes como máxima autoridad en la generación e **(1) (2)** implementación de normas ambientales que den soluciones prudentes ya qué es un derecho **(3) (4)** internacional el vínculo que existe entre el ambiente y los seres humanos. Es un derecho civil y **(5)** solicitamos a usted que nos garanticen garanticen el **(6)** derecho a gozar de una vida digna porque no es **(7) (8)** posible que por encima de las actividades económicas **(9)** empresarial se atente contra la vida de las personas de los seres humanos y no solo los seres humanos (10)(11)todos los seres vivos la fauna, inclusive la flora. (12)Agradecemos que tengan presente este este mensaje (13)que estamos dando para poder seguir viviendo (14)dignamente. Gracias. (15)MS. CUBIDES (TRANSLATED): Good (16)morning. My name is Migdalia. I am thankful for the (17)opportunity EPA is giving us to participate in this (18)public hearing to state our comments. (19)Currently a large Hispanic (20)population works in the Eastern section of San Jose, (21)Santa Clara, California. And we find a community

(1) that is very concerned about the air pollution.

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

study that shows alarming figures and samples have been taken as part of a study. 17,241 samples were taken in children, and they show lead in blood. We are very concerned as a community not only for those who live there but also for those that work there. It is not possible to have commercial aviation activities in this area. This is related to air pollution since they use leaded fuel, and their commercial activity is prioritized over the human rights to protect the health of all of us who work there.

There are several sources of contamination in this sector that result in mistrust among all who work here. One of the negative impacts is the air pollution from various sources and now we add airplane emissions to the environment to be able to carry out their economic activities and disregard the combination of these substances that are mixed there and potentially endanger everyone's health,

including the health of children who are very
 sensitive in connection with their growth and
 development.

A second negative impact on

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

the quality of life of all the persons that live and work there is the constant noise created by small airplanes providing services late at night, resulting in potential hearing problems and impacting on the ability to lead a peaceful life.

However, we are resilient. We look for healthy habits to prevent poisoning from lead that falls off the sky, becoming a mild solution against a gigantic air pollution that leads to adverse effects for the health, the environment, and all that live and work there in east San Jose.

All of us that live under
the same sky are impacted because it goes beyond San
Jose and it encompasses all of the United States
where there are piston engine airplanes that need
leaded gasoline.

It is a daily challenge and **(1) (2)** that is why we thank you for these spaces to come to **(3)** you, the highest authority in the development and **(4)** implementation of environmental policies, to give us **(5)** prudent solutions since it is an international right to have a link between the environment and the human **(6) (7)** beings. It is a civil right, and we ask you to **(8)** quarantee us the right to have a decent life because **(9)** it is not possible that your economic activities are (10)above us and impair our lives. This affects not only (11)human beings, but all living fauna including the (12)flora. We thank you that you bear in mind this (13)message to be able to continue to lead a decent (14)life. Thank you. (15)MS. PIGGOTT: Thank you for your **(16)** comments. (17)Okay. Ladies and gentlemen our (18)next speaker, we are going to -- we posted the **(19)** names of the next five speakers but I want to ask (20)one more time, Alfonso Mendez and Amalia Ponce, **(21)** if you are on, please raise your hand or press (22)star nine or send the host a chat message to let (23)us know you are on the Zoom.

	49
(1)	We posted the names in the chat
(2)	of the next five speakers which are Veronica
(3)	Licon, Maricela Lechuga, Richard Offerman,
(4)	Christian Poulsen, and Elaine Miller.
(5)	I am not seeing Veronica on the
(6)	Zoom today. Maricela, I see that you are on, I
(7)	am going to promote you to panelist so that you

**(1)** can unmute. Maricela, you are unmuted. **(2)** MS. LECHUGA: Can you hear me? **(3)** MS. PIGGOTT: Yes, go ahead. You **(4)** have five minutes. MS. LECHUGA: Good morning, my **(5) (6)** name is Maricela Lechuga. I am an airport **(7)** commissioner at Santa Clara County for the **(8)** airport Reid-Hillview. I lives five blocks away **(9)** from the airport for over 20 years. This is (10)where I was raised and I have a very large **(11)** family, I have three brothers and sisters and (12)about 30 cousins just on my mom's side and we (13)mostly all grew up in this neighborhood and it's **(14)** very heartbreaking to have learned about this (15)lead exposure that me and my family and neighbors **(16)** have been exposed to for decades. **(17)** I was so outraged to learn about (18)the lead exposure that when I learned about it (19)last year or a couple of years ago, I initiated a (20)public awareness campaign in 2021 where we **(21)** mobilized the neighborhood and we went door to (22)door informing the neighbors about the lead issue going on at the airport. And many -- many were (23)(24)-- the majority of people did not know, had no

idea that they were being exposed to lead.

(25)

And -- but when they learned about the information, they made the connection, many of them, felt that they were personally impacted, that their families were personally impacted, you know, people made attribute this lead exposure to different health ailments.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

**(19)** 

(20)

(21)

(22)

(23)

(24)

(25)

One woman in particular who I met, got her baby, newborn baby tested after learning this information and the test results were alarming, her baby had high levels of lead, the mom happens to -- her mom happens to be an attorney with means, so she moved her and her baby out of the neighborhood to a different community that's not next to an airport. I mean she has means to, this particular woman has the ability, the privilege to move out, but the majority of the residents that live here in this neighborhood don't have the means to leave, we are not a privileged community. The majority of us, we are a majority of low-income community, immigrant community, and we are mostly people of color, Mexican American, Latino, Asian, Pacific Islander, so -- I really hope that the EPA will think about the harm that it's doing to the community, the harm really outweighs the

(1) benefits.

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

(2) It's -- I don't believe that, at

least in our particular neighborhood that the airplane use, the airplanes are flying to help as much as the pilots say that they are helping. I read the official city and county documents describing the emergency response use and activity at the airport and it's very very minimal.

In fact, one activity that's described in these reports is that the police department uses the microwave to warm up their That's one of the examples that was literally in an official government document. So the risks really outweigh the benefits. The majority of airplanes are actually used recreationally or by students. We have three flight schools at Reid-Hillview Airport. One of them caters to Japanese pilots and another to European pilots because it's easier to get their pilot license in the U.S. than their home countries, so they come here, fly in circles, get the pilot license and go back home, meanwhile we are stuck with the lead levels in our lungs, in our blood that we have to live with for the rest

**(1)** of our lives and we are going to pass down to our **(2)** children for generations. **(3)** So, I hope that you will consider **(4)** that, and the use of lead-based fuel immediately, **(5)** we cannot wait ten years for this to be a slow transition. **(6)** Think about all the children and the **(7)** communities in the U.S. that are going to be impacted in the next ten years if you wait that **(8) (9)** long to phase it out when you know that the (10)majority of these airplanes are not flying for **(11)** emergency purposes, they are flying for (12)recreation or --(13)MS. PIGGOTT: 30 seconds. **(14)** MS. LECHUGA: Or for student (15)pilots who are learning to fly. And this does (16)not justify the harm that it's doing to our **(17)** So, I hope that -- end the use of communities. **(18)** lead based fuel immediately. Thank you. **(19)** MS. PIGGOTT: Thank you for your (20)comments. **(21)** Okay. Our next speaker is (22) Richard Offerman. I am not seeing Richard on the Richard, if you are with us, please (23)Zoom today.

press star nine if you are a call-in only user to

raise your hand, use the raise your hand icon or

(24)

(25)

**(1)** send a chat message. **(2)** Going to move onto the next **(3)** speaker, Christian Poulsen, Christian, I am going **(4)** to promote you to panelist. MR. POULSEN: Thank you very **(5) (6)** much for having me today. I am here, my name is **(7)** Christian Poulsen, I am representing the Duwamish River Community Coalition. **(8) (9)** In Seattle's Duwamish River (10)Valley, the residential neighborhoods of **(11)** Georgetown, South Park and Beacon Hill among (12)others are all adjacent to King County (13)International Airport, Boeing Field. The four **(14)** residential zip codes there, within a few miles (15)of the airstrips include several parks, community centers, schools that serve thousands of children **(16) (17)** under the age of seven years old. **(18)** These neighborhoods are all (19)members of Seattle's most diverse and lowest (20)income areas and are all urban spaces densely **(21)** populated with families, schools, libraries and playgrounds which raise significant environmental (22)justice issues. (23) (24)Several recent studies have

positively linked living near busy general

(25)

aviation airports like KCIA to elevated blood lead levels which the EPA itself says can cause irreversible and lifelong health effects. Even low levels of lead in blood have been show to effect IQ, ability to pay attention and academic achievement.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

(16)

(17)

(18)

**(19)** 

(20)

**(21)** 

**(22)** 

(23)

(24)

(25)

Piston engine aircraft traffic accounts for half of the nation's annual airborne lead emissions. With KCIA alone responsible for nearly 800 pounds of local lead pollution as of 2017. This issue has been compared to the Flint Water Crisis in severity and represents a potential ongoing mass lead poisoning event happening in real time undetected.

The vast majority of hours and flights flown in piston-engine aircraft are for recreational purposes or training people to fly recreationally both nationally and locally.

Studies of the effects of lead poisoning in children age zero to seven are numerous and frequently cited and studies of their dispersal and concentration of airborne lead pollution in relation to childhood BLLs, blood lead levels, are robust in sample size and

becoming more numerous with renewed interest in lead as a pollutant.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The relationship between proximity to airport and blood lead levels have determined that living within distances of up to over a mile consistently results in elevated blood lead levels in children and that prevailing winds, location of planes, preflight engine check called run up and traffic levels are all critical variables.

There is consensus among the medical and scientific communities that levels detected in children living around general airports similar to KCIA are hazardous. Children living near general aviation airports are likely to be at significant risk of permanent and irreversible damage including increased rates of gun and domestic violence, reduced test scores and graduation rates, lowered IQs and economic production. These effects tend to persist into adulthood and combined with other factors to create harm beyond the families and communities directly affected, measurably reducing economic gains and social cohesions at larger scales that results from increased -- that results in

increased antisocial behavioral traits and decreased aversion to risk and violence.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

We respectfully ask that the EPA finalize the endangerment finding and expedite the transition from leaded aviation fuels in a manner that prioritizes the health and safety of societies most vulnerable members over the needs of recreational pilots and associated business interest to fulfill the EPA's central emission of environmental protection and to finally deliver a measure of environmental justice to long suffering communities that have historically had little agency to protect themselves from lead pollution in general.

Overwhelmingly these claims are tools, I'm sorry, are toys for the rich that are flown at the cost of the poor. There is no safe blood lead level in children. Even low levels of lead in blood have been shown to negatively effect a child's intelligence. Lead is a well-known air pollutant that can lead to a variety of adverse health impacts, neurological effects that lead to behavioral problems. And exposure to airborne lead emissions before age six has demonstrated statistical relationship to violent behavior in

(1) adulthood.

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

(2) Thank you very much and I cede

(3) the rest of my time.

MS. PIGGOTT: Thank you for your comments. Okay. Ladies and gentlemen, before I move onto the next speaker, I'd like to make a few reminders. As a reminder, if you are speaking today, you will receive a notification on your screen that you are being promoted to a role of panelist shortly prior to your speaking time. You must accept that invitation to be able unmute when you are called to provide your comments. This will allow you to turn on your camera which we encourage you to do. Speakers connected by phone should unmute their phones when called to comment.

If you are having technical difficulties or would like to be added to the speaker list please send us a message via the Zoom chat feature which is located at the bottom of your screen by sending an email to epapublichearing@icf.com or call (734) 214-4923.

Additionally, if you run out of time to provide your comments today, you can send additional comments or your full written

**(1)** statements to the EPA and note docket number **(2)** EPA-HQ-OAR-2022-0389 on regulations.gov and we **(3)** will post this information in the chat in just a **(4)** moment. Moving onto our next speaker, **(5) (6)** Richard, I see that you are on, I am going to **(7)** promote you to panelist so that you can unmute. Richard, you should be able to **(8) (9)** unmute. I'll provide you a prompt. (10)MR. OFFERMAN: Hello. **(11)** MS. PIGGOTT: Yes, go ahead. You (12)have five minutes. (13)MR. OFFERMAN: Alright, my name **(14)** is Richard Offerman. I am speaking here today as (15)a concerned citizen. I have lived in the San **(16)** Francisco Bay area, specifically Pleasant Hill, **(17)** since 1987. **(18)** For the last 35 years, my wife (19)and I have lived under the flight paths of our (20)local general aviation airport. Contra Costa **(21)** County operates Buchanan Field in Concord, (22)California next door to Pleasant Hill. When I say busy, I mean Buchanan has well over 100,000 (23)(24)aircraft operations for years, they have been (25)doing this for many years.

I am here today, sorry, troubled as to why the use of leaded aviation fuel remains for the most part hidden from the communities that border the general aviation airfields. My community's environment is in harm's way, and yet only those who listen closely are aware of this clear and present danger that has lingered in our air for years.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

My community needs our EPA to finalize an endangerment finding on leaded aviation gasoline. Please understand what it means to know that a recently conducted health study found alarming elevated lead levels in school children living or attending school within a mile and a half of Reid-Hillview Airport in San Jose, California, and then realize that in January of this year, I found in our local Mount Diablo Unified School District by using their online attendance number there are an estimated 11,464 students attending preschool, elementary, middle and high schools within a mile and a half of the end of Buchanan's runways.

Within this zone there are 13 preschools of which only two listed attendance numbers, 12 elementary schools, three middle

schools and two high schools. There is also a large community college but I didn't add their number into this count.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

We all know that no lead is good for our children. Our families are at risk in their own backyards. We need to have an endangerment finding finalized so our community can work with our county supervisors to quickly ban the sale of leaded aviation fuel AVGAS at Buchanan.

Sadly, Santa Clara County AVGAS study found lead levels near the higher, near the airport to be higher than Flint, Michigan's lead contaminated water crisis. I have read by contrast that drinking water contamination, the release of AVGAS lead into the lived environment, our air, is a continuous daily unabated stream of undeniably harmful toxic lead dust.

Many of the aircraft are recreational aircraft carelessly deliver a lead dusting to our homes and our community with every takeoff or landing. They endanger our community with their leaded gas. Listening today to Mr. Olislager and Mr. Coon, both associated with the airline industry, appear to think that the

**(1)** economic advantages of general aviation should **(2)** outweigh the health of thousands of people living **(3)** adjacent to these airports. Hearing that the **(4)** industry hope to have their efforts completed by **(5)** 2030 is totally unacceptable. How many years has **(6)** this issue already dragged on harming families **(7)** every single day. The unhealthy effects of lead on these children will follow them for their **(8) (9)** whole lives. (10)Again, no lead is good for **(11)** We need to ask that our EPA work children.

children. We need to ask that our EPA work quickly to final -- on this finalization. My community also needs a thorough lead aircraft fuel health study completed here in Contra Costa County just like Santa Clara County created regarding Reid-Hillview.

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

**(24)** 

(25)

As of today, our children's health is knowingly being held at risk and due to the delay in addressing this health crisis, please act now, finalize an endangerment finding. Thank you.

MS. PIGGOTT: Thank you for your comments.

Okay. Our next speaker is

Elaine Miller. Elaine, I see you on the Zoom, I

am going to promote you to panelist. Elaine, you should be able to unmute, I will provide you a prompt to assist as well.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

MS. MILLER: Okay. I don't know why my video is not working. Let me just check this. My camera is not working, I don't know why but I just want to say, thank you very much for having us speak today and presenting our views on this very very important issue.

I am also -- my name is Elaine Miller, I am also the cofounder -- oh, start my video, there you go.

I am also the cofounder of Plain Sense for Long Island, we are located in Nassau County. We are a group of citizens, people, community representing our neighborhoods to protect them from the environmental harm and health effects of the low flying airplanes that we are subjected to on a daily basis.

Let's start with some facts that everybody has been going over but let's reiterate them because you cannot deny them. So lead is a highly toxic and probable carcinogen causing health effects such as brain damage, learning disabilities, reduced fertility, nerve damage and

death. Despite the dangers associated with it, many airplanes continue to utilize leaded fuel putting the health and safety of Americans, especially children at risk.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Lead poisoning causes immense societal harm, such as brain damage, chronic illness, lowered IQ, elevated mortality. Lead exposure in childhood has been linked with violent crimes. Extremely high lead levels can lead to seizures, coma and death. Lower levels tend to cause less detectable harm but there is no safe level of lead.

I just want to also make this statement because this is very important. In 1996, the EPA completely banned leaded gasoline for on road vehicles. Now, I don't know if you took into consideration the outcry of the car industry, but obviously you didn't because you banned it in cars.

So, I also would like to just reiterate that the FAA is a governmental agency, the FAA is a government agency supported by our tax dollars, the government works for the people, we the people of the wards that represent the cornerstone of every American's right to live a

life free from oppression and injustice. We are a nation of laws that aim to protect health, quality of life, security and individual rights.

Under these laws we have created agencies that were intended to serve all the people, but in short time, most of these agencies ended up captured in the service of narrow corporate interests. The FAA is a prime example captured in service of the aviation industry while failing the people solely to benefit airline profit margins.

We the people refuse to continue to be the airline industry's or the FAA's collateral damage. I'd like to leave you with one quote that I think should remain in your heart and in your minds when you are considering whether you are going to continue our communities to be exposed to leaded fuel and leaded fuel emissions.

We must make it an imperative duty to our government to protect the gifts which nature has bestowed on America and to ensure the maintenance of a clean, healthy, wholesome environment for our people.

I thank you very much for the

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(1)	time and I yield my time back.
(2)	MS. PIGGOTT: Thank you for your
(3)	comments.
(4)	Okay. Final call for Veronica
(5)	Licon, L-I-C-O-N. If you are a call-in only user
(6)	please press star nine. Or if you are under
(7)	another name, please send us a chat message,
(8)	Veronica Licon, L-I-C-O-N.
(9)	Okay. Ladies and gentlemen, we
(10)	are almost to the end of our list. Our next
(11)	speaker is Dorinne Tye, and then I see that
(12)	Alfonso Mendez has joined the Zoom. I'll call on
(13)	Dorinne Tye and then Alfonso Mendez.
(14)	Dorinne, I am going to promote
(15)	you to panelist.
(16)	MS. TYE: Sorry, I was having a
(17)	hard time connecting. Can you hear me now?
(18)	MS. PIGGOTT: Yes, you have five
(19)	minutes.
(20)	MS. TYE: Thank you very much
(21)	for the opportunity to speak. In a quick review
(22)	of the origins of the Environmental Protection
(23)	Agency, it reflects a 60 years ago public outcry
(24)	lead to the beginning of the EPA, 50 years ago,
(25)	it would seem it all began over an airborne toxin

killing birds and food chains and injuring human health plus an unusual pollution related fire, invisible large environmental impacts stemming from fossil fuel pollution. Over half of the initial goals of the EPA were to address lead and fossil fuels. Within 25 years all forms of leaded fuel was banned except aircraft fuel. 50 years later this poison has only spread, grown and remains concentrated over U.S. citizens and soils.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

I live in the Pacific Northwest, thus my jaw drops at the irony of EPA's foot dragging amidst public outcry about the airborne leaded toxins millions are exposed to 60 years later distributed by an exempted massive fossil fuel pollution teetering near record highs, extinction rates on par with dinosaur die off, and hugely increased wildlife labeling of critical concern, increased by increasing violence, human life expectancy reductions, mental illness crisis and megafires and here we are telling the EPA we are suffering and begging you to protect us from this known airborne neurotoxin believed to be connected to the fall of Rome and banned in all other fuels resulting

in a steady reduction of violent crime.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

Sorry I skipped over, this known airborne telling the EPA we are suffering and begging you to protect us from this known airborne neurotoxin believed to be connected to the fall of Rome, and banned in all other fuels resulting in a steady reduction of violent crime. Some species rebounded and IQ increased until aviation picked up business to increase lead pollution and transportation fuels to the levels big oil are more accustomed to.

this very thing not to be the roadblock. I understand the egregious error was in place before most of you now in the EPA. But it is time to exercise the authority of your Agency and mandate an immediate discontinuation of this neurotoxin air pollutant distributed by some of the highest known heavy metal and pollutant loads outside of mines and wells.

I implore the EPA to return to your roots which were not participatory with big oil. Please do not allow one more day of the underestimated cumulative impacts from piston engine lead, largely financed through educated

**(1)** dollars which benefit a very small portion of **(2)** individuals. Thank you. **(3)** MS. PIGGOTT: Thank you for your **(4)** comments. Our next speaker is Alfonso **(5) (6)** Mendez from our previous list but I see is now **(7)** on. Alfonso Mendez, I saw on the Zoom but has now exited. Alfonso Mendez, if you are a call in **(8)** only user, please press star nine. **(9)** (10)Okay. Ladies and gentlemen, at **(11)** this time, we have no one us else scheduled to (12)speak. Is there anyone else that did not (13)register to speak, but would like to speak and **(14)** have not already spoken and did not register to (15)speak, please send us a message via the Zoom chat **(16)** or an email to epapublichearing@icf.com or call (17)(734) 214-4923. **(18)** We will now pause us to see if (19)anyone else would like to make a statement during (20)our morning session. (21) As a reminder, this is an ask for people that have not already provided (22)If anybody is on today's webinar and (23)comments. (24)would like to provide a comment and you haven't

already, please raise your hand, send us a chat

(25)

**(1)** message, send us an email or provide us a phone **(2)** call, thank you. **(3)** Again, ladies and gentlemen, we **(4)** have time remaining in our morning session for **(5)** today's hearing. If you have not already **(6)** provided a comment and would like to, raise your **(7)** hand, send us a chat message, send an email to epapublichearing@icf.com or call (734) 214-4923. **(8) (9)** Thank you. (10)Okay. Ladies and gentlemen, not **(11)** seeing any hands raised or additional requests to (12)provide comments during this morning's session, (13)we would like to remind you that there are other **(14)** ways to provide your comments. You can submit (15)your comments to regulations.gov, search for **(16)** Docket Number EPA-HQ-OAR-2022-0389 and these **(17)** comments are all due by January 17 of 2023. **(18)** Again, we will post the website (19)and the docket number into the chat. (20)MS. SARGEANT: This is Kathryn **(21)** Sargeant from the EPA. Thank you to all who (22)provided comments today. We will take a break (23) and resume the hearing promptly at one p.m. eastern time. (24)

(Whereupon, a recess is taken.)

(25)

**(1)** MS. PIGGOTT: Amalia Ponce, I **(2)** have promoted you to panelist so that you can **(3)** It appears that Amalia has -- I see you unmute. **(4)** are unmuted. Can you hear us? MS. PONCE: Yes. **(5) (6)** MS. PIGGOTT: Yes, go ahead, you **(7)** have five minutes. MS. PONCE: Okay, mi nombre es **(8)** Amalia Ponce y yo soy residente de aquí del este **(9)** de San José. Tengo más de 30 años viviendo en esta (10)(11)área. Soy madre de 5 hijos y abuela de un niño de (12)2 años. (13)Aquí hace más o menos como mes y **(14)** medio vino un doctor experto en el plomo. Habló (15)sobre el estudio de los aviones del Aeropuerto que (16)está instalado aquí por muchos años en esté cerca (17)de donde yo vivo y habló sobre la exposición del (18)plomo. Aunque era muy importante saber toda esa (19)información también es muy preocupante porque sí (20)se puede practicar hábitos pero a veces se nos (21)olvida. Es muy impactante saber de todas (22)las causas que genera el plomo y los defectos. Por (23)(24)eso yo insisto a EPA que actúe ahora para proteger

comunidades a las que yo pertenezco que son marginadas por sus niveles de ingresos, su color de piel Y por dónde nacimos. Por favor finalicen la conclusión de que las emisiones de plomo de los aviones que utilizan combustible como plomo no son un peligro para la salud humana. Claro que sí lo son y yo tengo muchas amistades que viven aquí alrededor de este lugar y no están informados por eso yo estoy muy preocupada y muy interesada en estar participando en este, en este, pues evento voy a decir porque para mí es eso. Y yo a través de me voy a poder pasar la voz y pues para que tengan más conciencia. Hay muchas veces que los niños de uno tienen algunos comportamientos y uno no sabe porque porque uno lo mira como normal. Pero puede ser que nuestros hijos están contagiados con plomo y nosotros no lo sabemos por eso yo insisto a EPA, a está organización que está interesada y que nos está ayudando pues que siga y siga con su trabajo. Es todo por mi parte. Muchas gracias. MS. PONCE (TRANSLATED): Okay, My name is Amalia Ponce, and I am a resident here In the eastern section of San Jose. I have been

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

**(22)** 

(23)

(24)

living in this area for over 30 years. I am the **(1) (2)** mother of 5 children and the grandmother of a 2-**(3)** year old. About a month ago, a doctor specializing **(4)** in lead came here. He talked about the study of **(5)** the airplanes using the airport that has been **(6)** operation here for many years close to where I **(7)** live. He talked about exposure to lead. Even **(8)** though it was very important to learn all of this **(9)** information, it is also concerning because we can (10)have better habits but sometimes, we forget. It is **(11)** striking to learn about all the causes resulting from lead and the defects. Therefore, I insist EPA (12)(13)to act now to protect communities to which I **(14)** belong which are marginalized due to their income levels, their skin color and our place of birth. (15)(16)Please discard the conclusion that the lead **(17)** emissions of airplanes using leaded fuel are not (18)dangerous. They certainly are and I have many **(19)** acquaintances that live here in the surrounding (20)area and who are not informed. That's why I am (21) very concerned and interested in participating in **(22)** this event. I will be able to convey the message (23)to raise awareness. Several times our children (24) behave in a certain way, and we do not know why.

**(1)** It is normal for us. But it could be that our **(2)** children have lead transmission and we are not **(3)** aware. That's why I insist for EPA, this **(4)** organization that is interested and that is helping us, to continue with its work. That's all **(5)** as far as I am concerned. Thank you very much. **(6) (7)** MS. PIGGOTT: Thank you for your **(8)** comments. **(9)** MS. PONCE: You're welcome. (10)MS. PIGGOTT: Okay. Our next **(11)** speaker, I see Veronica from a previous list is **(12)** Veronica, I am going to promote you to on. (13)panelist so you can speak. **(14)** MS. LICON: Thank you. Thank I'm sorry, I took all my kids to (15)you for that. **(16)** school in the morning, sorry about that. **(17)** MS. PIGGOTT: No problem. (18)have five minutes. (19)MS. LICON: Thank you. My name (20)is Veronica Licon and I live directly across from (21) Reid-Hillview Airport. The planes go over my **(22)** house all day as early as six in the morning and

continue to go after ten o'clock at night which makes it very difficult for me to sleep, difficult for my children to sleep, and also the noise is extremely loud when it flies over, when the plane flies over my house, shaking my house. I can't even have any kind of like service, you know, like to protect my home, like for example ADT service that comes and sets alarms everywhere in my home, well, I can't have it because the planes will trigger the alarms and the -- when I did have that service and the police were coming out to these false alarms and the police told me that if I get another false alarm again, they are So I had to get rid of that going to fine me. ADT service, and being a single mom, you know, I wanted to have it to protect my children so not only can I -- I can't protect my children from the airplanes but I can't really protect them in my home because I cannot have an alarm service. When my baby was little, she's 11 now, she was terrified of the airplanes and she would run and hide from the loud noise and I am grateful that her ear drums weren't damaged but it's quite possible when we go outside to Hillview Park which is directly across from

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

**(20)** 

**(21)** 

(22)

(23)

(24)

(25)

Reid-Hillview Airport, so you have the airport and the you have the park, and the planes fly over the park and it's extremely loud. And maybe my children aren't having any problem with their ear drums now but it's quite possible that it could affect them, you know, even five years from now, possibly ten years from now with these airplanes flying over so loud over our house and over the park and when I take my kids to the park, that's all that they hear all day is this loud airplane that flies over, that's all that we hear. And it -- sometimes it's just like we can't even enjoy our day at the park because of those planes and the loud noise that it brings.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

(22)

(23)

(24)

(25)

And my kids can't even fly kites at the park because of the airplanes. So basically, this park, this Hillview Park was designed for the airport, it was not designed for the community, it was not designed for the children because of these rules that they have of no kite flying and no trees, and this big empty grass area in the middle where the airplane to crash, which is what these planes do in this neighborhood, they just -- they crash and they crash near my kids' school at Meyer, they crash

down the street to the left on Verona which is just the next street down from my house. I mean that's all that these planes do.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

They are not doing anything that's benefitting the community, they are just poisoning us every day, poisoning the children, poisoning the elderly, making it difficult for us to have trees here or any kind of beautiful lush life here for our children like beautiful green grass, beautiful trees, we can't have it because the lead is contaminating not only us but also our trees, our grass, anything that we want to have beautiful here in this community, we cannot have because of the lead.

And these airplanes flying over are just a constant -- constant nuisance for us having to hear that extremely loud noise all day like I said, it's as early as six a.m. and all the way until ten p.m. What they do, I don't know. They are just flying over because they feel like they can.

And I don't know how they can have that feeling knowing that any moment they can crash into a home and kill children, any moment they can crash into a school and kill

**(1)** children, any moment they can crash right here in **(2)** Hillview Park and kill children. How these **(3)** pilots can do that, have no shame and they should **(4)** be embarrassed and ashamed of themselves flying over children, communities, homes and schools. **(5) (6)** And I am tired of it. I am tired of this loud **(7)** noise and I am tired of these airplanes feeling like they can do whatever they want flying over **(8) (9)** my house, everyday all day. And I want it to end (10)and I want it to stop. **(11)** MS. PIGGOTT: 30 seconds. (12)MS. LICON: My children also get (13)nosebleeds from the lead poison and there is **(14)** really nothing I can do about it until the planes (15)stop, then their nosebleeds will stop. **(16)** you. **(17)** MS. PIGGOTT: Thank you for your **(18)** comments. Okay. (19)Ladies and gentlemen, we received a note from our final morning speaker, (20)**(21)** Alfonso Mendez was having some technical (22)difficulties. Alfonso, were you able to call in? If so, please press star nine to raise your hand. (23) (24)Alfonso Mendez. Alfonso Mendez. (25)Okay, Ladies and Gentlemen, we

are now at the end of our session. We can now
move to the next slide. As a reminder copies of
written statements and comments of any length can
be submitted on regulations.gov by searching for
Docket Number EPA-HQ-OAR-2022-0389.

EPA are you ready to adjourn
this virtual hearing?

MS. SARGEANT: Yes, this is

MS. SARGEANT: Yes, this is
Kathryn Sargeant. Thank you to everyone who has
provided comments today. We are now going to
take a one-hour break and resume the hearing
promptly at one p.m. eastern time.

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

(Whereupon, a recess is taken.)

MS. PIGGOTT: Good afternoon, welcome to the United States Environmental Protection Agency's virtual public hearing on the proposed findings that lead emissions from aircraft engines that operate on leaded fuel cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare. We refer to this action here as the proposed endangerment finding regarding lead emissions from aircraft operating on leaded fuel.

My name is Jennifer Piggott from

ICF, the independent third-party contractor supporting the EPA, I will serve as your meeting facilitator for today's hearing.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

We are transcribing today's hearing and you can turn on live captioning if you would like to read the verbal dialogue. To turn on closed captions click on the CC icon at the bottom of your Zoom platform that says live transcript and then click show subtitles to view the closed captioning and hide subtitles to turn them off.

We are also interpreting today's hearing in Spanish. I will now introduce our interpreter Silvia Colla to provide instructions on how to enter the Spanish interpretation room. Silvia?

Thank you, Silvia. Again for all participants if you click on the interpretation icon either click English or Spanish depending on your desired language to listen to the hearing. Thank you.

I do want to note that this hearing is being recorded. If you do not wish to be part of this recorded hearing, please disconnect. We are now ready to begin.

**(1)** I'll turn it over to Alejandra **(2)** Nunez, the EPA Assistant Deputy Administrator for **(3)** Mobile Sources in the Office of Air and **(4)** Radiation. Alejandra? MS. NUNEZ: On behalf of the **(5) (6)** U.S. Environmental Protection Agency, and the **(7)** Office of Air and Radiation, I would like to welcome you to today's virtual public hearing. **(8)** Ι **(9)** am grateful for everyone who is taking the time (10)out of their day to testify and participate **(11)** today. (12)I am Alejandra Nunez, the Deputy (13)Assistant Administrator for Mobile Sources in the **(14)** Office of Air and Radiation. I will be the (15)presiding officer for today's hearing. **(16)** In addition, I am joined on the **(17)** panel by Kathryn Sargeant, Deputy Director of the (18)Assessment and Standards Division in the Office (19)of Transportation and Air Quality; Melina (20)Williams from EPA's Office of General Counsel; (21) Rosemary Kaban from EPA's Office of General (22)Counsel; Mike Samulski, Director of the Large Marine and Aviation Center in the Assessment and (23) (24) Standards Division; and Marion Hoyer, Director of (25)the Health Effects Benefits and Air Toxic Center

(1) in the Assessment and Standards Division.

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

EPA is also being assisted by our contractor ICF International in the running of today's virtual public hearing.

The purpose of this hearing today is to receive comments from interested parties on the proposed action titled "Proposed Finding that Lead Emissions From Aircraft Engines that Operate on Leaded Fuel Cause or Contribute to Air Pollution That May Reasonably be Anticipated to Endanger Public Health and Welfare," which was published in the Federal Register on October 17, 2022.

In this action, the administrator is proposing two findings: that lead air pollution may reasonably be anticipated to endanger the public health and welfare and that engine emissions of lead from certain aircraft cause or contribute to the lead air pollution that may reasonably be anticipated to endanger public health and welfare.

Although EPA's proposed action encompasses both proposed endangerments and proposed cause or contribute findings, for convenience we sometimes refer to this

collectively as the endangerment findings.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

**(24)** 

(25)

This hearing provides interested persons the opportunity for the oral presentation of data, views or arguments. When you are finished with your oral comments, members of this panel may ask clarifying questions. This hearing is not intended to be a discussion of the proposed action. While we might ask questions or request additional data or supporting materials, we will not respond to comments in this forum. Instead, we will provide a written response to comments as part of developing any final action related to this proposal.

that in addition to today's hearing, there is also opportunity to submit written comments. The written comment period closes on January 17, 2023 at 11:59 p.m. eastern time. Details on where to submit written comments can be found in the Federal Register notice announcing the proposal as well as on our website. The web address is also in the Federal Register notice for this proposal.

All comments on this proposed action whether provided at today's hearing or in

writing will be duly considered by EPA. Now, let me go over how we will conduct this hearing.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

**(23)** 

(24)

(25)

We are conducting this hearing under section 307(d) of the Clean Air Act to provide interested persons an opportunity for oral presentation in addition to the opportunity to make written submissions on this proposed action.

We are having this hearing recorded and a written transcript will be available for public inspection and copying in EPA's air radiation docket at Docket Number EPA-HQ-OAR-2022-0389.

The transcript will also be available electronically on EPA's website and the regulations.gov website in the same docket. The official record of this hearing will be kept open until January 17, 2023, the close of the public comment period, to provide opportunity for speakers to submit rebuttal and supplementary information. You may submit this additional testimony to the same docket for this action by using one of the methods described in the Federal Register notice announcing the proposal.

The hearing will be conducted informally and formal rules of evidence will not apply. I will be serving as a presiding officer

**(1)** of today's hearing and as such I am authorized to **(2)** apply reasonable limits on the duration of the **(3)** statements of any speaker. We ask that each **(4)** person try to limit his or her verbal testimony **(5)** to five minutes as we would like to make sure **(6)** that there is enough time for everyone who would **(7)** like to speak to have the opportunity to do so. **(8)** Finally, while the EPA **(9)** representatives speaking today will attempt to (10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

**(20)** 

(21)

(22)

(23)

(24)

(25)

representatives speaking today will attempt to ensure the accuracy of any descriptions or discussion of the proposed action they may provide, the official version of the proposal is that published in the Federal Register on October 17, 2022. If there is any conflict between what you hear today and the official version, the official version controls. Please refer to the official version of this proposed action in developing your written comments on the proposal. Thank you.

With that, I will turn it back to Jennifer Piggott from ICF International to go over some logistics for today's virtual public hearing.

MS. PIGGOTT: Thank you. Before we begin, we'd like to go over the agenda and

some logistics for today's public hearing. We heard public comments from ten a.m. until noon earlier today and took a break for lunch. We are now in the afternoon session that began at one p.m. eastern and will adjourn at three p.m.

If at any time during the hearing you are having difficulties, please use

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

hearing you are having difficulties, please use the chat feature located at the bottom of your Zoom platform to message the meeting host or you can call (734) 214-4923.

Please make note of the phone number for this hearing. The phone number is 1 (669) 254-5252, webinar ID 161 489 7387. If you experience difficulty with your internet connection at any point during the hearing, you can call this number to listen to the hearing.

Additionally individual internet connections and bandwidths vary and may impact your viewing experience. We recommend closing all apps and programs and eliminating any streaming or downloads while you are participating in today's hearing.

This meeting is being conducted using Zoom webinar which mutes all participants automatically. EPA posted the order of the

speakers for today's hearing yesterday on the website as indicated in the Federal Registered notice. We ask that you monitor the list of speakers and be prepared to present your comments when it's your turn.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

**(19)** 

(20)

**(21)** 

(22)

(23)

**(24)** 

(25)

In a moment, we will display the anticipated order of speakers, as we proceed I will place the names of the next five speakers in the chat so you can see when your turn is coming up.

If you are speaking today, you will receive a notification on your screen that you are being promoted to the role of panelist shortly prior to your speaking time.

You must accept that invitation to be able to unmute when you are called to provide your comments. This will allow you to turn on your camera which we encourage you to do. Speakers connected by phone should unmute their phones when called. Each speaker will be given five minutes to speak. Please state your name and any organization you are representing today at the beginning of your comments.

If you are not registered to speak but would like to, please contact us now

via the chat feature, again it's located at the
bottom of your Zoom platform, by sending an email
to epapublichearing@icf.com or call (734)
214-4923.

We will now begin our public
comments. The expected speaking order is

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

comments. The expected speaking order is currently displayed on the screen. We ask that each person limit their verbal comments to five minutes as we would like to make sure that there is enough time for everyone who would like to speak has the opportunity to do so.

At the end of your time, I will jump in to ask you to quickly wrap up to allow others the opportunity to public comment. If you are not able to complete your comments within the allotted time, you may still submit them in writing before the end of the public comment period which ends on January 17, 2023.

We encourage you to provide your full written statements and any additional comments of any length to regulations.gov using Docket Number EPA-HQ-OAR-2022-0389.

I will be introducing each speaker in turn. Please speak slowly and clearly so our court reporter and interpreters can record

**(1)** and accurately translate these proceedings. **(2)** apologize in advance for mispronouncing anyone's **(3)** name. **(4)** Okay. The first five speakers today are Sylvia Gallegos, Dr. Bruce Lanphear, **(5) (6)** Sydney Speizman, Alfonso Mendez and Nathan Park. **(7)** Sylvia, you are now a panelist, you can unmute and turn on your camera if you **(8) (9)** wish. (10)MS. GALLEGOS: Good afternoon, **(11)** can you see me? (12)MS. PIGGOTT: Yes, go ahead, you (13)have five minutes. **(14)** MS. GALLEGOS: Good afternoon, I (15)am Sylvia Gallegos, the Deputy County Executive **(16)** representing the County of Santa Clara, a **(17)** government agency that serves nearly two million **(18)** residents from our county seat of San Jose, (19)California. **(20)** I am here before you with Dr. **(21)** Bruce Lanphear who is one of the leading experts on the health effects of environmental toxins and (22)serves as a consultant to the county, and Sydney (23)(24)Speizman, who is a certified student attorney at (25)the Stanford University Environmental Law Clinic

(1) speaking today as our outside counsel.

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

First, many thanks to the EPA for conducting this public hearing. The proposed finding will affect millions of children and families who live proximate to over 13,000 general aviation airports across the nation. Our comments today will supplement our written submission.

As the EPA knows leaded AVGAS in general aviation is the single greatest source of lead emissions. In 2017 the air emissions inventory you reported that piston-engine aircraft accounted for 460 80 tons of emissions which was about 70 percent of lead emissions in the United States. EPA has estimated that across the nation there are 16 million people, three million of whom are children, living within one kilometer of an airport.

The county is the owner and operator of two airports, one of which Reid-Hillview Airport is directly adjacent to densely populated neighborhoods near San Jose.

In a one point five-mile radius of Reid-Hillview, there are 52,000 people, 13,000 of whom are children, living in nearby neighborhoods and there

are 21 local schools and childcare centers. 97 percent of the residents are people of color and about 80 percent speak a primary language other than English at home. More a than a quarter of residents in the zip code surrounding the airport live at or below 200 percent of the federal poverty line.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Our families in East San Jose already experience significant health disparities with data showing higher rates in mortality from cancer, stroke, diabetes and hypertension. And airborne lead compounds the harms already experienced by our community.

For decades community advocates have urged the county to study and address the issue of lead pollution coming from

Reid-Hillview. In 2018 Supervisor Cindy Chavez, the elected official who represents East San Jose sought and our elected board supported direction to county staff to study the effects of leaded AVGAS emissions. The administration hired Dr. Sammy Zahran, a leading expert in this field who has published multiple studies on airborne lead. Dr. Zahran incorporated three main tests of exposure risk and was controlled for other

sources of lead exposure. Among several main conclusions, it found that children living downwind from the airport had higher blood lead levels with increases of .40 micrograms per deciliter over children living upwind of the airport.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

(16)

**(17)** 

(18)

**(19)** 

(20)

(21)

**(22)** 

(23)

(24)

(25)

For context, lead levels during the peak of the Flint water crisis were between .35 and .45 micrograms per deciliter over the baseline. In August 2021, Dr. Zahran's study was presented to the County Board of Supervisors. Given the urgency of Dr. Zahran's findings, board unanimously and emphatically voted to stop selling AVGAS at our airport in January, first airport in the nation system to do so, and I want to speak more about this point in just a moment. But first I am very pleased to report that a version of Dr. Zahran's study will soon be published in PNAS Nexus, a journal of the National Academy of the Sciences following peer review. The county looks forward to the inclusion of Dr. Zahran and Dr. Lanphear's published study in the Integrated Science Assessment to the evaluation of air quality standards for lead.

All public agencies have a duty to our communities to protect their health and welfare. Elevated blood lead levels strongly corollate with lower IQ, underachievement, behavioral problems and adverse health outcomes the burden of which are carried by public agencies and society at large in the form of lost human potential. Indeed the study estimates a gain of \$11 to \$25 million in lifetime earnings for the cohort of children 18 and under who reside within one point five miles of our airport.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

**(12)** 

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

**(19)** 

(20)

**(21)** 

(22)

(23)

(24)

(25)

MS. PIGGOTT: 30 seconds.

MS. GALLEGOS: The county of
Santa Clara emphatically supports the proposed
endangerment finding and urges the EPA to act
swiftly to ban leaded AVGAS. In so doing the EPA
can help create market conditions that will
accelerate the adoption of unleaded AVGAS
throughout the country. This is -- there is
urgency underlying this request, as I mentioned
earlier, the county stopped the selling of leaded
AVGAS at our airports in January and despite the
fact that flight operations have continued
unabated and without mishaps, the county recently

**(1)** received a Part 16 complaint from AOPA **(2)** challenging our action to stop selling leaded **(3)** AVGAS which may ultimately compel the county to **(4)** resume the sale of leaded AVGAS. Understanding **(5)** that --**(6)** MS. PIGGOTT: That's time. Ms. **(7)** Gallegos, that's time. I need to move onto the next speaker. Thank you for your comments. **(8) (9)** MS. GALLEGOS: Thank you. (10)MS. PIGGOTT: Our next speaker is **(11)** Dr. Bruce Lanphear, I am going to promote you to (12)panelist. Dr. Lanphear, you are now a panelist, (13)you should be able to unmute and turn your camera **(14)** on if you wish. (15)DR. LANPHEAR: Thank you very **(16)** much and thank you for the opportunity to talk **(17)** today. (18)I am a physician and a scientist (19)and over the past 25 years have studied how (20)children are poisoned by lead in paint, air, **(21)** house dust and water. I have also studied how lead damages children and adults. (22)**(23)** I have been fortunate to be (24)involved in dozens of studies around the world **(25)** and I was the consultant on the Reid-Hillview

(1) Airport study.

(2)

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

that for over two centuries. Most of my research
over the past 25 years was to find out how much
lead is too much. All 12 studies that examined
the shape of the dose response relationship per
lead including one that measured lead and bone
found steeper detriments in IQ scores or academic

abilities at the lowest level of lead in

Lead is a poison. We have known

children's blood. We don't expect this to a degree of consistency in science but we would be foolish to ignore it.

The population impacts of lead exposure on brain development including IQ deficits, diminished academic abilities and elevations in ADHD are lifelong. Even when IQ deficits are subtle for an individual child, they aren't trivial and the population impact is substantial.

Aaron Rubin and his team found that children with higher blood lead concentrations were less likely to obtain the same social standing as their parents. Sheryl Magzamen found in a study in Milwaukee school children that lead exposure especially

**(1)** impacted children who already struggled with **(2)** reading abilities. **(3)** But lead doesn't only impact **(4)** children, it's an established risk factor for **(5)** preeclampsia and preterm birth, hypertension and **(6)** coronary heart disease deaths. 15 studies **(7)** conducted in Europe and the United States all found that lead was a risk factor for **(8) (9)** cardiovascular disease mortality. (10)Using the NHANES **(11)** follow-up study, we found that lead was the (12)leading risk factor for coronary heart disease (13)deaths in the United States accounting for 185 **(14)** deaths every year. (15)Airborne lead is an important (16)source of lead exposure in the United States. Α **(17)** study by EPA scientists found that children's (18)blood lead concentrations rose sharply at (19)airborne lead concentrations below .15 microgram (20)per cubic meter, the current air standard, and **(21)** then decelerated at higher concentrations.

The EPA estimated that over 450 tons of lead were emitted by piston aircraft annually, about 70 percent of all lead emissions. The EPA further estimated that 16 million

(22)

(23)

(24)

(25)

Americans including three million children live within a kilometer of a general airport. Three studies have measured the contribution of leaded aviation fuel as a source of lead exposure for children. All three showed that airport emissions lead to an increase in lead poisoning among children. I want to share some of the results of the most recent one, the Reid-Hillview Airport study.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

In the Reid-Hillview study, Dr. Sammy Zahran and his team used blood lead test of 17,000 children collected from 2011 to 2020 by the California Department of Public Health.

Sammy's team did a masterful job showing that lead emissions increased children's blood lead concentrations, they found that children's blood lead increased with air traffic but only if the children live near the airport. They also found that children's blood level levels plummeted when air traffic contracted during the pandemic.

Sammy and his team found that two percent of toddlers who live beyond a half a mile of the airport had a blood lead in excess of 3.5 micrograms per deciliter, in contrast over five percent of toddlers who live within a half mile

of the airport had a blood level greater than 3.5 microgram per deciliter and over ten percent of toddlers who lived within a half mile of the airport and were downwind had a blood lead in excess of 3.5 micrograms per deciliter during heavy traffic.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Scientists and public health agencies agree that no level of lead is safe for children. The population impact of lead exposure on brain development including IQ deficits, diminished academic abilities and ADHD are substantial and lifelong. Moreover, unlike some other risk factors that impact children's brain function, lead exposure is modifiable. What's more, if we improve the cognitive abilities of children today, it will have lifelong benefits for children and their entire communities.

I urge you to declare leaded aviation fuel as an endangerment to human health. Thank you.

MS. PIGGOTT: Thank you for your comments.

Okay. Our next speaker is Sydney Speizman. I am going to promote you to panelist. Okay, Sydney, I see that you are

unmuted. You have five minutes.

MS. SPEIZMAN: My name is Sydney Speizman and I am a certified student attorney at Stanford Environmental Law Clinic. I am speaking today as outside counsel for the County of Santa Clara in strong support of the EPA proposed endangerment finding or caused and contributing finding.

As Deputy County Executive
Sylvia Gallegos and Dr. Lanphear just explained,
leaded AVGAS has profound impacts for Santa Clara
County residents, airport adjacent communities
across the country and the public agencies that
serve them.

Last fall, the country together with a national coalition of NGOs support of diverse local and regional agencies petitioned the EPA to make these long overdue findings for leaded AVGAS under Section 231 of the Clean Air Act.

The EPA's proposed finding are an important and necessary first step to address the issues raised in the petition but as the EPA has also recognized they are not sufficient to meet the crisis. The next phase of the EPA's

(25)

(1)

(2)

(3)

(4)

(5)

(6)

**(7)** 

(8)

(9)

(10)

(11)

(12)

(13)

(14)

(15)

(16)

(17)

(18)

(19)

(20)

(21)

(22)

(23)

(24)

rule making as it sets and implements emission standards will be critical.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

As to the EPA's proposed finding, the evidence is overwhelming that lead emissions from piston-engine aircraft meet the criteria for regulations under Section 231(a) of the Clean Air Act. First as the EPA's endangerment finding documents, exposure to lead air pollution indisputably harms the public health and welfare. The EPA has known for decades that exposure to airborne lead is a public health crisis.

Dr. Lanphear discussed the enduring damage of lead exposure particularly to the vulnerable and developing brains and bodies of children.

Second, lead emissions from combustion of leaded AVGAS more than contribute to this damaging lead air pollution. Leaded AVGAS combusted by piston-engine aircraft is the source of a staggering 70 percent of lead air pollution nationwide. Studies clearly link these emissions to profound health and welfare harms.

As Deputy County Executive

Gallegos explained, a peer reviewed study found

(1) that children living near the county's
(2) Reid-Hillview Airport experienced blood lead
(3) levels of the same magnitude suffered at the
(4) height of the Flint water crisis and even double
(5) that when piston-engine aircraft traffic was at
its peak.

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

air pollution from AVGAS should be an environmental justice priority of this administration. As the EPA recognized in its proposed rulemaking, airport adjacent communities are disproportionately low income and are communities of color and many are already overburdened with other sources of lead exposure. Reid-Hillview Airport is again sadly illustrative.

airport in the country, Reid-Hillview is located in the densely populated heart of East San Jose. Like most general aviation airports, the surrounding community is majority minority. 90 percent of people living within one and a half miles of the airport identify as non-white.

Nearly 80 percent speak a primary language other than English at home and more than one in four

residents live below 200 percent of the federal poverty level.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The lack of regulation of AVGAS at the federal level undermines local public agencies' ability to fulfill their core functions to protect the public health, safety and welfare of those exposed communities. Alongside direct harm to constituents, lead exposure imposes societal costs that ripple through social safety nets, burdening health and hospital systems, school systems and special education services and policing and crime control infrastructure and diverting resources from other agency functions yet, despite the pressing concerns for local agencies, they cannot stop exposure from leaded AVGAS alone. Actions that the county has taken in its proprietary authority like eliminating sales of leaded fuels at the airports have significantly reduced exposures but the country cannot stop aircraft using leaded fuel from transiting through its airports nor can it control fuel sales at other airports.

Coordinated and bold federal action is needed to solve this problem. We thus urge the EPA to act aggressively in the next

**(1)** phase of the rule making by swiftly proposing and **(2)** finalizing emission standards that ban lead from **(3)** AVGAS. This is technologically feasible and can **(4)** be done quickly without undue cost. (5) The FAA has already certified (6) use of a fully unleaded drop in fuel for entire **(7)** piston engine fleet. (8) Swift action is further **(9)** compelled by the Biden/Harris administration and (10)the EPA's own commitment to advancing **(11)** environmental justice including EPA's new (12)strategy to reduce lead exposures in communities overburden by pollution. (13)MS. PIGGOTT: 30 seconds. **(14)** (15)MS. SPEIZMAN: And finally (16)rapidly banning rapid AVGAS is ethically **(17)** In the decades that this endangerment necessary. **(18)** finding has been pending, millions of children (19)nationwide have suffered irreversibly harm from (20)unregulated AVGAS. (21) We ask that the EPA finalize its (22)proposed finding and then quickly fulfill its (23)mandate by eliminating this pollutant. Thank (24)you.

MS. PIGGOTT: Thank you for your

(25)

comments. Our next two speakers are Alfonso Mendez and Nathan Park. I am not seeing Alfonso on the Zoom this afternoon webinar this afternoon.

Nathan Park, I am going to ask

you -- I am going to promote you to panelist so

you can unmute. Nathan Park, you have been

promoted to panelist, so you can unmute and turn

your video on if you would like.

MR. PARK: Alright, thank you for the opportunity to speak today. My name is Nathan Park and I am the legislative representative at Earthjustice, a public interest environmental law organization working to protect peoples' health and the environment through the strength of our partnerships and abroad.

I and my colleagues at Earth

Justice are glad to see EPA issue the proposed endangerment finding for leaded AVGAS gasoline and I am here to voice my support for the endangerment finding and urge EPA to act swiftly as it continues to work towards what would be a life-saving and overdue ban on leaded aviation fuels.

In 2021 community groups from

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

across the country, many of whom we have heard from today or will be hearing from later and represented by Earthjustice filed a petition calling on the Environmental Protection Agency to take the necessary steps to regulate lead pollution from aircrafts, the leading source of lead emission in the country.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

This was the third time the group has petitioned the EPA to ban leaded aviation gasoline, the first spanning back to 2006, and since then communities living near airports across the country have continued to be poisoned by lead raining down from the air.

Today we have heard scientific experts and impacted community members, numerous scientific studies have shown increased blood lead level in children living nearby airports that use leaded aviation gas and we have heard from many today about the recent study showing the leaded aviation gasoline increase blood lead levels amongst thousands of children living near the Reid-Hillview Airport in Santa Clara County.

As we also heard this morning, members of the nearby neighborhood in East San

Jose know all too well the harms lead exposures

cause to children and people of all ages, and this community is one of many across the country that continue to breathe leaded air due to aircrafts.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Over five million people including more than 360,000 children under the age of five live near at least one of the airports where piston-engine aircrafts that use leaded fuel operate. Banning leaded aviation gasoline is one of the many actions EPA to insure the health and well-being of communities across the country are protected from lead poisoning.

strategy to reduce lead emission exposures, the Biden administration has prioritized a holistic approach to protecting children and communities from lead exposure and has centered environmental justice and equity in its strategy. Lead exposure is responsible for the death of nearly half a million adults annually from cardiovascular disease and it causes irreversible damage to children's development. In the U.S. about half a million children who are four to five times more vulnerable to the impacts of lead have levels in their blood high enough to qualify

(1) as lead poisoning.

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

The impacts of lead poisoning across all paths of exposure disproportionately fall on black, Latino and low-income communities. The same holds true for lead exposure caused by aviation gasoline. Regulating aviation gasoline is necessary if the Biden/Harris administration takes seriously its commitments to protect children's health and promote environmental justice.

Finalizing this endangerment finding alone while important does not stop communities from breathing lead in the air. We are glad to see FAA approve an unleaded alternative for the entire general aviation fleet earlier this year, yet the FAA has proposed a 2030 phase out of leaded aviation fuel. The FAA and EPA must continue to work towards this end goal but we know that communities cannot wait for relief any longer.

With the historic GAMI fuel approval, we urge EPA to work with FAA to more quickly phase out the use for leaded aviation fuels. For decades the government has neglected the largest remaining single source of airborne

lead emissions. It has already been 16 years since the first petition to EPA to ban leaded aviation gasoline during which children and families continue to be exposed to lead in the air. Another eight years until a ban is potentially put in place is unconscionable. This is an environmental health crisis but one that the EPA can end.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

EPA has recognized the danger of lead exposure for decades, it's been almost 50 years since EPA started to phase out lead in motor vehicles. We know there is no safe level of lead exposure and we are continuing to learn more about the health effects of exposure to lead even at very low levels of exposure. A ban on lead in aviation fuels is long overdue and every day that passes without one, children and families are being harmed by the life alternating damages of lead poisoning.

MS. PIGGOTT: 30 seconds.

Thank you for your comments.

Our next speaker is Alfonso Mendez who I am not seeing on the Zoom webinar this afternoon.

We posted the names of the next five speakers in the chat. Miki Barnes, Cecelia

**(1)** Segal, Gary Keller, Maria Reyes and Ernesto **(2)** Barajas. Miki Barnes, I see you are on **(3) (4)** the Zoom, I am going to promote you to panelist. MR. BARNES: Hello, can you hear **(5) (6)** me? **(7)** MS. PIGGOTT: Yes, we can. Go ahead, you have five minutes. **(8) (9)** MS. BARNES: I am Miki Barnes (10)from Oregon Aviation Watch, thank you for this **(11)** opportunity to present testimony. Lead is (12)lethal. Every day of delay in banning this (13)pernicious toxin means more people will die. Α **(14)** 2018 Lancet Public Health Study found that (15)nearly 412,000 cardiovascular disease deaths in **(16)** the U.S. each year are due to lead contamination. **(17)** This mortality rate applies only to lead impacts (18)and does not include the higher rates of coronary **(19)** heart disease, stroke and death associated with (20)the noise generated by aviation activity. **(21)** Children, people of color and economically disadvantaged populations are known (22)to be disproportionately impacted by this (23) (24)pollutant as are pregnant mothers, newborns, and (25)unborn fetuses. According to the EPA,

approximately 5.2 million people live within 500 meters of an airport runway, millions more are at risk by virtue of living within a 1,000 to 1,500 meters of runways. Others are subjected to multiple daily dustings of this toxin from repetitive flight training activity.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

**(19)** 

(20)

**(21)** 

(22)

(23)

(24)

(25)

The FAA has known for decades that lead is toxic yet has done nothing substantive to address the problem. Now this agency wants to delay the banning of this fuel for years to come at least until 2030 and possibly longer.

While people die and others suffer the potentially harmful irreversible consequences of the irritates lead, the FAA continues to maintain that high octane fuel, leaded fuel is necessary to protect the safety of pilots.

So, who are the pilots the FAA so selflessly defends while putting the rest of the population at greater risk of death, miscarriages, diminished IQs, ADHD, kidney disease, reproductive problems, conduct disorders, delinquency, increased violence, and a multitude of other lifelong health, economic and

societal problems.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

**(24)** 

(25)

A review of FAA civil airman statistics for 2021 reveals there are 720,000 pilots, less than one quarter of one percent of the entire population, certified to fly piston engine aircraft in this country. 91 percent are men. The overwhelming majority of whom are Over 21 percent, 161,000 are private white. pilots who have the financial wherewithal to own or lease private airplanes or fly as recreational More than one-third, 250,000 are hobbyists. student pilots, many of whom are recruited from These are the people who are overseas. collectively responsible for emitting 470 tons or more of lead into the air every single year.

Only the most depraved of human societies would require local governments to intentionally poison their own residents by forcing airports to sell and store leaded aviation fuel despite extensive evidence that there is no safe blood lead level in children or adults. Sadly, this is the very predicament that communities across the nation are now facing.

FAA grant assurance agreements requiring airport owners and government entities

to degrade the environment while seriously compromising the health of local residents are Faustian bargains that might well cause the devil himself to blush.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The irony is that the money doled out by the FAA to GA airports is derived in large part to fees affixed to commercial airline passenger tickets. The vast majority of the people who contribute to this fund do not even use general aviation airports.

Due to the devastating and potential irrevocable adverse impacts caused by lead exposure, I urge the EPA to issue an endangerment finding on this toxic fuel as quickly as possible. In addition, I ask that the Federal Government empower local governments to protect their constituents from lead by terminating FAA grant assurance obligations and by placing stringent requirements on the FAA to expedite the process of eliminating leaded aviation fuel once and for all. The time for action is now. Thank you.

MS. PIGGOTT: Thank you for your comments. Our next speaker is Alfonso Mendez who is going to be providing comments in Spanish.

(1) MR. MENDEZ: Yes.

(2) MS. PIGGOTT: You have five

(3) | minutes.

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

(22)

**(23)** 

MR. MENDEZ: Okay, mi nombre es Alfonso Méndez. Y yo estoy hablando para darle testimonio. Tengo 30 más de 30 años viviendo en esta área en área de San José, California en el este de San José dónde está el aeropuerto Reid-Hillview.

Hemos tenido más de como unos 25 años qué estamos teniendo problemas con ese aeropuerto. Hace ese tiempo hemos tratado de que prefieren a esos aviones de pistons. Este... ellos trataron de hacernos creer que el plomo no era, no era de los aviones, sino era de las casas. Una compañía nos ayudó a pintar las casas gratis que tuvieran la pintura ya maltratada y, este, hace...en estos años volvieron a ser otro otro análisis y resulta que los niños siguen mal y las personas también. Estamos muy contaminados del plomo y pues uno entiende que ellos quieren esperar 10 años pero la comunidad no puede esperar 10 años a seguir infectándose del plomo.

Y nosotros le estamos pidiendo

al EPA que por favor traten de cerrarlo antes para

qué esperar que los niños sigan enfermándose. Yo

visto en esta comunidad personas jóvenes con

problemas para caminar y es terrible lo que

estamos sucediendo. Ah yo sé que hay más de

170000 aviones con pistones.

Yo le pido al EPA que por favor

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

**(19)** 

(20)

**(21)** 

(22)

(23)

(24)

Yo le pido al EPA que por favor retiré esos aviones, que los ponga más modernos, que usen gasolina sin plomo porque esos aeropuertos están al lado ya todos están casi en las comunidades de gente de la que estamos que no tenemos los ingresos muy altos. Somos personas de bajos ingresos y ahí es donde están estos aviones y no es justo que las personas que tengan estos aviones no vivan aquí pero si vienen a contaminarnos.

Por favor les pido hagan algo por la comunidad. No dejen que los niños se sigan enfermando hay muchas escuelas alrededor del aeropuerto. Por favor y pudiera enterrarlo antes de los 10 años para que no contaminen más a los niños. Muchas gracias por la oportunidad.

MR. MENDEZ (TRANSLATED): Okay,

my name is Alfonso Méndez. And I am speaking to offer my testimony. I have lived for more than 30 years in this area of San Jose California, in east San José where the Reid-Hillview airport is located.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

(16)

(17)

(18)

(19)

(20)

(21)

(22)

(23)

(24)

We have had problems with this airport for more than 25 years. For a while we have seen that they prefer airplanes with piston engines. They tried to make us believe that lead was not coming from the airplanes, but from the houses. A company helped us paint the houses for free if the paint was damaged and over recent years, they conducted another test and it turns out that the children continue to have poor results as well as persons in general. We are contaminated with lead, and we understand that they want to wait 10 years, but the community cannot wait. And we are asking EPA to please try to close it down rather than wait for children to continue to get sick. I have seen in this community youth with walking problems, and it is terrible what is going on. I know that there are over 170,000 airplanes with piston engines.

I ask EPA to please remove the airplanes, to use more modern ones that use gasoline

that is lead free because the airports are next
door. Almost all of them are in communities where
people do not have very high incomes. We are lowincome people and this is where the airplanes are
and it is not fair because the individuals who have
those planes do not live here but they come to
pollute us.

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

(14)

(15)

(16)

(17)

(18)

(19)

(20)

Please I ask you to do something for the community. Do not allow for our children to continue to get sick. There are many schools surrounding the airport. Please shut it down before 10 years so that they do not pollute our children anymore. Thank you very much for the opportunity.

MS. PIGGOTT: Thank you for your comments.

Our next speaker is Cecelia

Segal. Cecelia, I am going to promote you to

panelist. Cecelia, you are now a panelist, you

can unmute and turn your video on if you would

like.

(1) MS. SEGAL: Good morning. (2) MS. PIGGOTT: Go ahead. You have (3) five minutes. **(4)** MS. SEGAL: Thank you. My name **(5)** is Cecelia Segal, I am an attorney with the **(6)** Natural Resources Defense Council, or NRDC, a **(7)** not-for-profit environmental and public health group with more than three million members and **(8) (9)** online activists nationwide that work to enforce environmental laws, reduce air and water (10)(11)pollution and protect the public and our members Thank you (12)from health and environmental harm. (13)for the opportunity to provide public comment at (14)today's hearing. (15)As EPA Administrator Michael (16)Regan remarked in the Preface to EPA **(17)** Strategy to Reduce Lead Exposure and Disparities (18)in U.S. Communities which was released last week, (19)lead exposure can have devastating impacts to (20)human health and can be especially harmful to **(21)** developing children. We also know that because (22)of existing racial and social economic (23)disparities, communities that have been (24)historically marginalized and overburdened suffer (25)the most.

There is no doubt that airborne lead emissions from piston-engine aircraft contribute to this toxic lead exposure and that EPA must take urgent action to address the public health crisis facing children across the country.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

Multiple studies confirm the link between leaded aviation gasoline or AVGAS used in piston-engine aircraft and lead contamination in humans. In addition to the studies referenced by EPA in its proposal, a study released last summer by Dr. Zahran and Mountain Data Group which a few other commentors have already referenced found that the Reid-Hillview Airport in East San Jose, California is associated with elevated blood lead levels in children living nearby, independent of other lead exposure pathways, and that children living within a half mile radius of the airport and children living east of the airport, which is downwind, are particularly at risk.

In fact, the study found that it's for children living within half a mile of the airport, an increase from the minimum to maximum exposure of piston-engine airplane traffic is associated with an estimated .83

micrograms per deciliter increase in blood lead levels as compared to similarly situated children living farther from the airport, all else held equal. For comparison, children living in Flint, Michigan experienced an increase in blood lead levels about half that or .35 to .45 micrograms per deciliter at the height of the drinking water crisis there.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

It is my understanding that the Mountain Data Group Study has been accepted by the National Academy of Sciences and will be published soon. NRDC is not aware of any study contradicting the conclusion that piston-engine air traffic is correlated with an increase in the blood lead levels of children living near airports.

The health risks associated with lead exposure are dire. There is no safe level of lead exposure. Even small amounts of lead can cause serious and permanent health effects in children including learning disabilities, behavioral disorders and hypertension. Adult lead exposure can cause cardiovascular effects and kidney disease. Chronic lead exposure is also associated with delayed pregnancy and

decreased fertility. Once pregnant, mother's exposed to lead may experience increased risk of miscarriage and premature labor and may pass lead to the fetus interfering with brain development.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

These risks are precisely why leaded fuel was phased out and ultimately banned in motor vehicles decades ago. It's time for the use of AVGAS in piston aircraft to follow suit particularly since the vast majority of piston engine aircraft flight time stems from personal and recreational use according to FAA statistics. These uses come at the expense of low income communities and communities of color.

Studies show that black children and children from low-income households have persistently been found to have higher blood level levels than non-Hispanic white children, and those from higher income households. Low income communities and communities of color are also more likely to live near general aviation airports.

Communities living next to the Reid-Hillview Airport provide a stark example of this problem and the need for EPA to address it. The one and a half mile area surrounding the

**(1)** airport is densely populated. It's home to **(2)** 52,000 residents including almost 13,000 **(3)** children, and 21 schools and childcare centers. **(4)** It's also highly segregated. 61 percent of the residents identify as Hispanic or Latino and 79 **(5) (6)** percent report speaking a primary language other **(7)** than English at home. **(8)** For years this community has **(9)** been uniquely burdened by environmental and (10)socioeconomic harms including pollution, chronic **(11)** disease and economic immobility. It has borne (12)the front of the lead contamination from the (13)Reid-Hillview for far too long. **(14)** MS. PIGGOTT: 30 second. (15)MS. SEGAL: NRDC stands with the (16)community including the Cassell Neighborhood **(17)** Association in seeking to eliminate lead exposure (18)from the airport once and for all. (19)EPA's lead strategy declared the (20)Agency's commitment to protect all people from **(21)** lead with an emphasis on high-risk communities. (22)We urge EPA to adhere to that commitment and finalize the proposed endangerment finding as (23)

MS. PIGGOTT: Thank you for your

Thank you.

(24)

(25)

soon as possible.

(1) comments. (2) Our next speaker is Gary Okav. **(3)** Gary, I am going to promote you to Keller. **(4)** Gary, you have been promoted to panelist. **(5)** panelist, you should be able to unmute and turn **(6)** your video on if you would like. **(7)** Gary, we can see you and I sent **(8)** you a prompt to unmute. (9)MR. KELLER: Okay. Thank you: (10)MS. PIGGOTT: Go ahead you have (11)five minutes. (12)MR. KELLER: I am Gary Keller (13)with Citizens Against Gillespie Expansion. (14)quick correction, an earlier remark from EAGLE (15)initiative group stated that the amount of lead **(16)** emissions has decreased significant over many **(17)** years as if the GA industry had anything to do It came down because the number of GA (18)with it. (19)pilots decreased by 30 percent decreased while (20)flight hours from GA aircraft decreased over a 40 **(21)** percent over a 45-year period. And now it's (22)going up again. (23)Last week the Center For Disease Control and Prevention held their national lead (24)

poisoning prevention week. General aviation

(25)

aircraft participated that week by adding an additional 10 tons of lead into the air. The EPA tells us that piston-engine aircraft has, since 1930, emitted approximately 113,000 tons of lead into the air. You know what it really doesn't matter if a person breathes in, swallows or absorbs the lead particles, the health effects are the same, however, the body absorbs higher levels of lead when it is breathed in. are we here today? At the third try of an endangerment finding since 2006, because now we have the Reid-Hillview study, the very one that the GA industry never wanted to take place. Because similar to tactics by big tobacco and lead paint, when the polluting general aviation industry didn't like the Dr. Lynn Miranda in 2011 scientific study that first proved that children living near general aviation airports had elevated blood lead levels, they just went to a more favorable study.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The Office of Transportation and Air Quality which is part of the EPA no less provided such a study published in 2013 which took lead air samples at 17 airports across the U.S. Unlike the Miranda study a number of these

had plenty of lead emissions. It concluded that all 17 of these airports were safe as they eventually they all passed the national ambient air quality standard test.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

GA airports can now claim that there is lead at these airports but it is in such a very small safe quantity it doesn't matter. In essence the report justified their continued poisoning of children for the next eight years. That same report is looking a little weak right now, because Reid-Hillview was one of the 17 airports where air sampling took place.

The parents of the children
living around Reid-Hillview some of whom have
spoken today now know that they are definitely
not safe from those lead emissions. Other
airports on that 17-airport list such as
Centennial which every year is in the top two in
the lead emitting airports in the world are now
highly suspect.

The Reid-Hillview study has now shown the glaring weakness of the national ambient air quality standard. The endangerment finding should be obvious. The problem is crystal clear but is also becoming crystal clear is the delay

in stalling tactics that the aviation industry will employ in the replacing of the leaded fuel with unleaded.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

**(24)** 

(25)

While they would like to stop the lead when the world runs out of fossil fuel others have worked more quickly. On January 1 of this year, the owners of the two airports in California, Reid-Hillview and Santa Martin banned the use of leaded fuel. This courageous board of supervisors in Santa Clara County against the bullying of the FAA, AOPA and the entire aviation industry drew a line in the sand, they made a stand to protect the children who live around those airports from the bombardment of leaded emissions from GA aircraft. They did what the health departments and EPA have been unable to do, unwilling to do or coerced into not doing.

Since 1996, over 25 years ago, general aviation aircraft have been the largest source of lead emissions in the U.S. and why has it not been until 2019 that any health department in this country even acknowledged the existence of this source of lead.

Without Reid-Hillview this endangerment finding would not be taking place,

**(1)** it has reenergized a movement to save billions of **(2)** children and their parents from toxic lead **(3)** emissions. **(4)** The aviation industry has all **(5)** the power, the money and the major press releases **(6)** to continue to delay the process of stopping this **(7)** toxic shield. It is what they do best. Who will help us protect our children and grandchildren, **(8) (9)** they certainly won't. Will the EPA? (10)warning the parents of the children who are **(11)** living near these airports of the lead health (12)hazards there, the answer to that question is (13)that no one is. **(14)** Someone other than the County of (15)Santa Clara Board of Supervisors needs to draw **(16)** that line in the sand. We are counting on the EPA to do just that. **(17)** (18)MS. PIGGOTT: 30 seconds. (19)MR. KELLER: Our children and (20)grandchildren continue to be at stake. Thank you **(21)** for this time. (22)MS. PIGGOTT: Thank you for your (23) comments. **(24)** Okay. Our next speaker is Maria (25)Reyes. Maria, I am going to promote you to

panelist. You are now a panelist, you should be able to unmute and turn your video on if you would like.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

MS. REYES: Good morning, my name is Maria Reyes, and I am an advocate for the Cassell Community. Today I speak for all our silent minority families who have had to breathe lead contaminated air from Reid-Hillview Airport 24 hours a day seven days a week. I am speaking up for our mothers and our fathers who have children with learning difficulties, whose children are under performing in school and whose children are being labeled as troublemakers because they cannot sit still and cannot listen.

I am speaking for our seniors who are suffering from cancer, hearing loss, high blood pressure and the early onset of memory loss and concentration. I am also speaking for our pregnant mothers whose infants have been born with brain damage and no one can explain why.

We know there is lead in our air and we know where it comes from. It's not coming from the food we eat, from the paint we use, from the paint in our homes or the toys that our children play with, it is coming from the single

piston airplanes who continue flying in and out of our community with disregard of those of us that live under this cloud.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

**(12)** 

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

**(24)** 

(25)

Cassell Communities have for over 40 years lived under the guise that this airport is vital to the community but what community? It is not our 43 percent Latino community who continue struggling and suffering each and every day trying to breathe and trying to help -- trying to see what is happening with our children.

I am asking that the EPA to find the endangerment finding that we all need. I want the EPA to listen to our minority communities, we are the ones that are having to suffer, we are the ones whose children are being damaged, we are the ones that are being told, no, not yet. The power to remedy this is now in your hands.

On behalf of all minority communities living in the 95122 area code, I am asking you, please take it seriously and please listen to our communities. Thank you.

MS. PIGGOTT: Thank you for your comments.

JerseyShore Reporting, LLC

**(1)** Our next speaker is a call in user, Alfonso Mendez. And for our interpreters, **(2) (3)** Alfonso has called in so he is not in the Spanish **(4)** You may need to have him pause after a few sentences so that you can interpret. **(5) (6)** Alfonso, I am going to ask you **(7)** to unmute. **(8)** My apologies, our next speaker **(9)** is Ernesto Barajas. I am going to ask you to (10)unmute. Silvia, can you interpret that Ernesto **(11)** needs to press star six to unmute. **(12)** MR. BARAJAS: (in Spanish) Thank you, (13)can you hear me? **(14)** MS. PIGGOTT: Yes, you have five (15)minutes. MR. BARAJAS: Buenos días, queridos **(16) (17)** miembros de la asamblea. Mi nombre es Ernesto (18)Barajas. Soy miembro de la sesión de Cassel. De **(19)** antemano les agradezco está oportunidad de poder dar (20)mis experiencias que he vivido y mi familia en este **(21)** vecindario en el este de San José por más de 30 (22) años. Creo que es tiempo de que nos escuchen por (23)favor y nos ayuden a cerrar este aeropuerto. **(24)** Ustedes saben todo el daño que (25)nos está causando a nuestra salud por la gasolina

que usan todos los aviones que vuelan todos los días
 de la semana, los 7 días de la semana, 24 horas al
 día.

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

(17)

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

El plomo es más peligroso que el veneno porque no se está dañando todo nuestro cuerpo, según los doctores, y nos causa problemas en nuestros huesos, en nuestro cerebro y en la sangre. Mis hijos, nietos y toda mi familia hemos estado expuestos a este veneno que nos está matando y no es eso nomás el peligro de que en cualquier momento nos puede caer un avión en nuestra casa o en alguna escuela que tenemos. Son dos escuelas alrededor de 2 millas del aeropuerto. Estos niños, padres, maestros, estamos con el temor de que un avión puede caer y terminar con nuestras vidas, porque han caído muchos aviones alrededor en el vecindario. Cuatro casas alrededor de donde vivo cayó un avión hace años.

Los niños quedaron todos traumados porque al escuchar cualquier ruido de un avión "corrían", sus papás decían, "corrían" y se metían debajo de la cama por temor a estos que les pueda pasar alguna vez algo.

Tengo a mis nietos. Pasan tiempo

en mi casa. Quieren salir a veces a jugar a la
yarda. Pero tenemos miedo a la contaminación del
aire. Cuatro meses atrás hicieron un
estudio en la tierra y mi casa fue una de las más
altas en el estudio.

**(6)** 

**(7)** 

**(8)** 

(9)

(10)

(11)

(12)

(13)

(14)

(15)

(16)

(17)

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

Espero en cuenta todos nuestros comentarios y esperanzas a nuestra comunidad. De antemano les doy las gracias a todos y espero que tengan una decisión y que sean conscientes de lo qu e nos está pasando en nuestra comunidad por culpa del aeropuerto Reid-Hillview.

Ustedes son nuestra esperanza para el futuro de nuestra comunidad, especialmente nuestros niños que son el futuro no nomás de San José, de todo el mundo.

Pues espero que la siguiente vez tener una buena noticia de ustedes porque ustedes son los únicos que nos pueden ayudar a cerrar este aeropuerto. Gracias y que tengan un buen día. Les doy las gracias a todos.

MR. BARAJAS (TRANSLATED): Okay.

Good morning, esteemed members of this hearing. My

name is Ernesto Barajas. I am a member of the Cassel

area. At the outset, I thank you for the opportunity

to be able to share the experiences I have had together with my family in this neighborhood to the East of San Jose for over 30 years. I believe the time has come to be heard please and get your help to shut down this airport.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

(17)

(18)

**(19)** 

(20)

(21)

(22)

(23)

(24)

You are aware of all the damage that is causing to our health due to the fuel that the airplanes flying every day of the week, 7 days a week, 24 hours a day, use.

Lead is more dangerous than poison because it is damaging our bodies, according to the doctors, and it is causing problems in our bones, in our brain and blood. My children, my grandchildren, and all my family have been exposed to this poison that is killing us. Additionally, there is the danger of an airplane crashing against our homes or a school at any time. We have 2 schools in a 2-mile radius from the airport. These children, parents, teachers fear that a plane may crash and end with our lives because many planes have crashed around in the neighborhood. Within four houses of where I live, a plane crashed years ago.

The children are traumatized because when they hear the noise of a plane, they

run, according to their parents, to hide under the **(1) (2)** bed out of fear that something may happen to them. I have grandchildren. They spend **(3) (4)** time indoors my house. They want to play in the **(5)** yard. But we are afraid of air pollution. Four **(6)** months ago, a land test was conducted, and my house had some of the highest results in the study. **(7)** I hope you consider all our **(8) (9)** comments and hopes for our community. From the (10)outset, I thank you all and hope you make a decision (11)and that you are aware of what is happening in our **(12)** community because of the Reid-Hillview airport. (13)You are our hope for the future **(14)** of our community, in particular our children who (15)are the future not only of San José, but the world. (16)Then I hope that the next time you bring us good **(17)** news because you are the only ones who can help us (18)close down the airport. Thank you and have a nice **(19)** rest of the day. I thank you all.

(1)	MS. PIGGOTT: Thank you for your
(2)	comments.
(3)	MR. BARAJAS: Thank you.
(4)	MS. PIGGOTT: Okay. Ladies and
(5)	gentlemen we have posted the names of the next
(6)	five speakers in the chat, Cristina Carvajal,
<b>(7)</b>	Karina Gomez, Debi Wagner, Ellen Saunders and
(8)	Todd Larsen.
(9)	Cristina, I see that you are on
(10)	the Zoom, I am going to promote you to panelist.

Cristina, you have been promoted to panelist so you can unmute and turn your video on if you would like.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

(9)

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

**(26)** 

Cristina, you are muted, I am going to give you a prompt to help you unmute.

MS. CARVAJAL: Yes. Good
morning. Good afternoon everyone. My name is
Cristina Carvajal. I am the founder and
Executive Director of Wisconsin EcoLatinos, a
non-profit environmental conservation
organization.

I am here to ask the EPA to remove lead air pollution from small aircraft, a danger to public health and welfare. I live in Middleton, Wisconsin with my family. My youngest child attends Kromey Middle School. The City of Middleton recently approved the expansion of the City of Middleton Municipal Airport, also known as the Morey Airport. This expansion will bring significant air traffic to the area mostly small aircraft.

We are extremely concerned about the pollution this aircraft will bring to our homes and our schools especially lead pollution. Within two miles of the airport, there are two preschools, three elementary schools, a high

(1)	school and my son's middle school. The airport
(2)	is also surrounded by several kids' sports venues,
(3)	parks and neighborhoods.
(4)	Some of the reports were about
(5)	the negative effect of lead pollution on
(6)	children's health, including learning
(7)	disabilities and behavioral disorders.
(8)	According to the CDC, there is
(9)	no safe level of blood lead in children. The use
(10)	of leaded aviation fuel in Middleton Municipal
(11)	Airport threatens the health of Middleton
(12)	children, Middleton's children health. Thank you
(13)	very much.
(14)	MS. PIGGOTT: Thank you for your
(15)	comments.
(16)	Our next speaker is Karina
(17)	Gomez. I am going to promote you to panelist.
(18)	Karina, you have been promoted
(19)	to panelist so you can unmute and turn your video
(20)	on if you would like.
(21)	MS. GOMEZ: Hi, thank you.
(22)	MS. PIGGOTT: You have five
(23)	minutes.
(24)	MS. GOMEZ: My name is Karina
(25)	Gomez, and I am here as a representative for the

Centers of Environmental Health or CEH and I first want to thank the EPA for taking the opportunity to allow the public to comment on this long awaited very important step to regulate AVGAS.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

CEH is a 26 zero non-profit organization that works alongside communities, workers, companies, and allied NGOs to protect people from toxic chemical exposures in everyday life including from consumer products we use, foods that we consume, the water that we drink and the air that we breathe.

We have worked through a policy and people action to successfully eliminate lead in many children's products, jewelry and food products including candy, and there have been several parents, doctors and individuals that have reached out to CEH, many of whom I have responded to myself with their concerns and questions about how to keep themselves, their families and communities safe.

People want to go about their day not worrying about the toxic chemicals being dropped over their homes. People want to know that the agencies that are meant to protect public

and environmental health are doing just that and it's in solidarity with these families that live in close proximity to the general aviation airports and that are breathing the lead that's being dropped into the air that we ask the EPA to really expediate the phase out of leaded AVGAS.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

**(19)** 

(20)

**(21)** 

(22)

(23)

(24)

(25)

CEH took action in 2008 which required fixed based operators or FBOs at 27
California airports to post and mail out warnings about their lead exposure because people have had and have the right to know about this ongoing lead hazard. And residents right to know is really just the bare minimum.

NGO allies and the countless community lead groups that have formed to confront this problem have been petitioning and fighting for a systemic solution for well over a decade urging the EPA to reach this point.

This action to propose and finalize a public health endangerment finding is long overdue and if EPA is serious about its commitment to public health and environmental justice, the Agency must act to quickly end the use of leaded aviation gasoline and get us to the solutions.

We strongly encourage EPA to work with the FAA to issue emission standards that completely phase out, rather than simply limit lead emissions from the AVGAS.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

We all know that lead is a potent neurotoxin that can cause irreversible and lifelong health effects and they bare repeating here. They cause significant impact in cognitive development of children including lowered IQ, mental disabilities and mood disorders, premature deaths, damage to people's kidneys, hearts and lungs and increase risk of heart disease.

There is no safe level for lead exposure and while lead is dangerous to all, not everyone and not all children are equally exposed to lead, nor do they suffer the same consequences of exposure.

General aviation airports with the highest lead emissions are in communities of color. As Dr. Sylvia Gallegos mentioned and many others, high elevated blood lead levels have been found at the airport that's found in Santa Clara county and those levels are on par with those detected during the peak of the Flint water crisis. So regulating leaded aircraft gasoline

(1)	is a major step in fulfilling the Biden/Harris
(2)	administration's commitment to protecting
(3)	children's health and promoting environmental
(4)	justice.
(5)	So, thank you and I hope you
(6)	consider my and everyone's comments as you move
(7)	forward.
(8)	MS. PIGGOTT: Thank you for your
(9)	comments.
(10)	Okay. Our next speaker is Debi
(11)	Wagner. Okay. I am no longer seeing Debi Wagner
(12)	on the Zoom. We will move onto the next speaker.
(13)	Ellen Saunders. Okay, Ellen, I
(14)	am going to promote you to panelist. Apologies,
(15)	I see Debi Wagner is on under a different name
(16)	and I promoted you to panelist so that you can
(17)	unmute and turn your video on if you would like.
(18)	MS. WAGNER: Hi, can you hear
(19)	me?
(20)	MS. PIGGOTT: Yes, go ahead, you
(21)	have five minutes.
(22)	MS. WAGNER: Hi, I am Debi
(23)	Wagner. I have a long history in the community
(24)	living near several airports around SEA-Tac Airport
(25)	which is a commercial airport but also effected

by Boeing Field and other airports.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

I have moved three times in my life as an adult to get away from what I have been aware of as toxic exposure is happening for people living on the ground and adjacent to airports.

The science and data and history of this issue has been clear to EPA for several decades. The dangers of lead, air pollution have been known by EPA for decades. I do not understand why EPA has dragged their feet on this for so long. In the meanwhile, generations of children and families have been harmed unnecessarily.

This is not a lot different from commercial aviation where you have these polluters bringing the pollution directly into our homes and our neighborhoods, our schools and our playgrounds. The exposures are unnecessary. If EPA had regulated airports as sources of criteria and toxic emissions, they would not have had to rely on faulty air quality data provided by regional monitoring networks that are purposefully set up to avoid these sources.

These kind of injuries and harms

that have been happening over decades to people that are -- that as I said are unnecessary has compelled the public to spend vast amounts of money for health care, scientific investigation on their own, years of life loss, working years that have been dedicated to all of these environmental activism campaigns just to get EPA and others to do their jobs. Their job is to protect public health, your job is to protect public health and the environment.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

To be swayed by monies, special interests, lobbyists, the industry itself rather than focusing primarily on your main job to protect public health has left a lot of people and families in the dark for decades about what is happening to them and their health. As these health issues become apparent and peoples' health is deteriorating, as they lose the ability to work and sleep and live normal lives, they are also required to spend countless hours and money and resources in time and energy they no longer have to get the industry and the industry's attention and the public health agencies to do their jobs.

This is an injustice to the

people in this country. I don't think there is any greater harm that can be done then to abuse a child, a child who is helpless and innocent and is being harmed and injured by these debilitating impacts. I don't understand EPA's position and I know EPA has taken the same position on commercial airports and the toxic emissions that they bring directly into our homes. It doesn't make any sense to me at all that EPA is not informing people and letting them know of these dangers.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

**(12)** 

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

It's -- it's all about, it doesn't seem to be about public health, it seems to be all about power and clout and money, and that is not the role of the EPA.

I would also ask again that EPA not defer regulation of particulate pollution from commercial aircraft to ICAO because we would be facing the same uphill battle decades from now on getting EPA to recognize the harms that the ultrafine particles are doing from commercial aviation again brought directly into our homes and bedrooms and into our schools and public buildings and --

MS. PIGGOTT: 30 seconds.

(1)	and our homes for decades.
(2)	This is an affront to your responsibility to us,
(3)	our money that we pay to support you and our
(4)	health that we expect you to protect. Thank you.
(5)	MS. PIGGOTT: Thank you for your
(6)	comments.
(7)	Okay. Our next speaker is Ellen
(8)	Saunders. Ellen, I am going to promote you to
(9)	panelist. Ellen, you are now a panelist so that
(10)	you can unmute and turn your video on if you
(11)	would like. Ellen, are you there?
(12)	MS. SAUNDERS: I am here, yes, I
(13)	have a software download last night and
(14)	everything is different.
(15)	My name is Ellen Saunders.
(16)	MS. PIGGOTT: You have five
(17)	minutes.
(18)	MS. SAUNDERS: My name is Ellen
(19)	Saunders, I live west of Portland and west of
(20)	Hillsborough. Hillsborough has a very large
(21)	private airport that does a great deal of
(22)	training and the training that is done for pilots
(23)	is done on planes that use leaded gas.
(24)	Unfortunately, not only is there
(25)	a big pilot training program but our commercial

pilot training dynamics are so great that we also have community schools, our PCC [Portland Community College] supports these trainings and the trainings go on, training people from out of the country, many of them from China, and other places.

The training then goes from one airport at Hillsborough to one of several other local airports but they traverse the entire area of farmland between Hillsborough and these other locations including Scappoose Airport, and other airports in the area. And they fly not only low but they fly repeated circular patterns over and over and over again.

They also do -- cut their engine dynamics as part of their training, so they are silenced for a minute and then the planes restart their engines so those of us that live west of Portland and west of the Hillsborough Airport are subject to constant barrages of leaded fuel using pilot training.

We have organic orchards out here, I have an organic orchard, I have neighbors that have farms and organic farms of all kinds including for milk, and for meat and for vegetables.

(25)

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

We are very concerned. I have been involved in the aviation problem issues for some years. We finally stopped one airport expansion and a neighboring private airport, and I am very concerned that the EPA needs to stop the leaded fuels use. There are alternatives. There are plenty of alternatives.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

Now, I know that there are those who have said they are going to wait until electric airplanes that are available, but the truth of the matter is, there is actually non leaded fuel available and many of these pilot training facilities just don't want to spend the money to upgrade their equipment to use the non leaded fuel.

So, I am calling on EPA to stop the leaded fuel use. I am sure you have had many people talk to you about the damage that leaded fuel causes, and it is distributed over a community, it's our farms, our fields, our schools, our parks, anybody out doing recreation but in my case, in particular, and in the case of those of us that live in the banks manning area of Washington County, Oregon, which is just west of the Hillsborough Airport, this is our

farmland, we can't be out there even in the summertime without being bombarded by very vigorous multi tract, all at once, there will be two or three or four airplanes in the sky using leaded fuel over our organic orchards.

So, I am asking please that leaded fuel be taken away from the capacity of the aviation industry to pollute and contaminate our soils because that's not just the soil and the air that's being contaminated, it's our children and we all know very well about the very serious nature of lead pollution.

It's been taken out of transportation in cars very long ago at this point and yet we are still using it in aviation fuel. And there is just no excuse for it, we don't need it and there is no reason why we should be poisoning our entire farming area.

MS. PIGGOTT: 30 seconds.

MS. SAUNDERS: My comment is please take leaded fuel out of aviation pilot training facilities like Hillsborough Airport and other pilot training areas. Thank you for taking my comment.

MS. PIGGOTT: Thank you for your

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

**(20)** 

**(21)** 

(22)

(23)

(24)

(1) comments. (2) Okav. Our final speaker in this **(3)** first batch of speakers is Todd Larsen. Todd, I **(4)** see you on Zoom, I am going to promote you to **(5)** panelist. And then ladies and gentlemen, we have **(6)** also posted the names of the next five speakers **(7)** in the chat so you can see when your turn is to **(8)** me coming up. (9)You can unmute and turn your (10)camera on if you would like. **(11)** MR. LARSEN: Thank you. (12)MS. PIGGOTT: Thank you. Go (13)ahead you have five minutes. **(14)** MR. LARSEN: Thank you for this (15)opportunity to speak today about this important **(16)** My name is Todd Larsen. I am the issue. **(17)** Executive Codirector at Green America, a national **(18)** Non-profit organization that works to create a (19)green economy and represents over 250,000 (20)individuals and businesses internationally. **(21)** I am also a resident of College (22)Park, Maryland, the location of the world oldest (23)continually operating airport where small (24)aircraft frequently take off and land each day. (25)Green America supports the

endangerment finding for leaded aviation fuel and the petitioners request for the EPA to hold to its timeline and ensure no delays in finalizing the endangerment finding on lead and aviation fuel.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Green America is pleased that the EPA announced a proposed determination that emissions from aircraft operating on unleaded gasoline endanger public health and create air pollution.

It is beyond time that we as a nation address the risk of leaded aviation fuel. Children living near or going to school near airports where leaded fuel is used experience elevated levels of lead which as we learn today can lead to developmental delays and other issues.

In College Park where I live,
the small aircraft powered by piston engines
frequently take off and land and flying near an
elementary school and its associated playing
fields. Those children are being exposed to lead
in the air that they breathe as they go to school
or as they play outdoors so what should be
healthy activities are exposing these children to

risks that could impact them for life.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

of course, it's not only children who are at risk, as we have heard, adults who are exposed to lead can experience cardiovascular disease and other conditions as well, and lower income in black and brown communities in particular are those that are often located near airports and so they are bearing the brunt of lead poisoning in the air.

The research is completely clear. Leaded fuel poses a clear danger to communities nationwide. As we heard, leaded aviation fuel now counts for 70 percent of the airborne lead in the U.S. so it's high time that the EPA issue the endangerment finding and then issue rulemaking to phase out leaded aviation fuel.

As a nation we were able to phase out leaded gasoline for cars and we did so without impacting the ability of Americans to drive. We can certainly do the same for leaded aviation fuel. Alternatives to leaded fuel actually exist and they work and those will be scaled up and used at airports nationwide if the EPA acts.

(1)	That's why I encourage the EPA
(2)	to do so and doing so would be in line with the
(3)	Biden/Harris administration commitment to
(4)	supporting low income and communities of color
(5)	nationwide. Communities of risk shouldn't be
(6)	asked to wait any longer for the risk from leaded
(7)	fuel to be addressed.
(8)	Thank you for your time and
(9)	attention to these remarks.
(10)	MS. PIGGOTT: Thank you for your
(11)	comments.
(12)	Okay. Our next speaker is Dr.
(13)	David Bryce. I am going to promote you to
(14)	panelist.
(15)	DR. BRYCE: Thank you, this is
(16)	Dr. David Bryce. I am a medical doctor from the
(17)	Town of Middleton, Wisconsin. I am one of the
(18)	three people that have given testimony today.
(19)	I applaud and support the EPA
(20)	proposed endangerment finding for leaded aviation
(21)	gas and there are more than 500 airports in
(22)	Wisconsin where piston-engine aircraft use leaded
(23)	aviation gas.
(24)	The Town of Middleton shares a
(25)	geographic boundary with a recreational general

**(1)** aviation airport, C29 owned by the City of **(2)** Middleton that was mentioned before. This piston **(3)** engine aircraft operating out of this airport **(4)** uses leaded aviation gas and repeatedly fly below the mixing height over this densely populated **(5) (6)** area comprised of many residents, schools, play **(7)** grounds and parks as also mentioned before. **(8)** As Dr. Lanphear mentioned, the **(9)** Miranda and Zahran studies along with several (10)others have consistently found that children who **(11)** 

others have consistently found that children who have regular contact with general aviation airports like the one in our community which is a hobby airport suffer some degree of lead poisoning from the use of leaded aviation gas at these airports.

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The Zahran study found elevated blood levels in some children whose only contact with the airport was driving past it twice a day going to and from school.

There is no safe level of lead in a child and receiving a daily dusting of airborne lead from low flying airplanes most certainly endangers public health and welfare.

The U.S. EPA Integrated Risk
Information System has found it inappropriate to

specify and accept a minimum safe level for airborne lead exposure because no threshold for lead toxicity has been established. The damage as Dr. Lanphear said and emphasized, especially in children, may occur at blood levels so low as to be essentially without a threshold. The CDC has noted that there is no safe level of lead exposure and the body absorbs higher levels of lead when it is inhaled. Once a small blood amount of lead is inhaled by a child with increased respiratory rate, it is too late to prevent potential health damage. There is no effective treatment to remove inhaled lead from a child's body and it will never go away. It will leave the blood stream and not be detected there for a few weeks but it will be stored in the body's organs and bones to accumulate over a lifetime.

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

The only effective treatment for lead poisoning is not a treatment at all, it's the prevention of exposure in the first place.

In addition, as noted by the EPA in a 2013 LEAD ISA concluded that cardiovascular effects in adults were those of greatest concern for adults because the evidence indicated that

**(1)** these effects occurs at the lowest lead level. **(2)** Public health and medical expert **(3)** Dr. Lanphear acknowledged this in fact when he **(4)** testified before the U.S. House Oversight Committee as well as today. He stated that the **(5) (6)** lead is a causal risk factor for adult coronary **(7)** heart disease citing a 185,000 deaths caused by In addition, lead exposure is **(8)** lead every year. **(9)** an urgent public health problem, lead exposure is (10)preventable, lead exposure from aircraft **(11)** emissions from hobby airports is a major source (12)of lead exposure. (13)Lead is a cumulative poison and **(14)** there is no safe level of lead exposure for (15)humans. I urge you to make a final positive lead **(16)** endangerment finding in 2023 and unleaded gas as **(17)** soon as possible. This is an urgent public (18)health matter and the FAA has already approved an (19)unleaded aviation gas for use of all piston aircraft so there is no need for further delay. (20)(21) Thank you very much for allowing (22)me to testify. MS. PIGGOTT: Thank you for your (23) (24)comments. (25)Okay. Ladies and gentlemen, our

**(1)** next speaker is Brooke B. so who was on an **(2)** earlier list who has now been able to join the **(3)** Zoom webinar. Brooke, I am going to promote you **(4)** to panelist. Brooke, are you there? BROOKE: I am here. **(5)** Can you **(6)** see me? **(7)** MS. PIGGOTT: You have five **(8)** minutes. **(9)** BROOKE: Sorry, I was I (10)thought I was after the other speakers. Thank **(11)** you for the time, folks. (12)I just found out about this (13)hearing, short notice and I was very glad to see **(14)** the EPA is addressing this issue once again. So (15)thank you, EPA, and thank you for holding the public comments but this is as others speakers **(16) (17)** have noted way overdue. **(18)** A little bit about me, I am 46 (19)years old and I have three children ages eleven, eight, and four and I moved to Clearwater, Florida (20)**(21)** about a year ago, and realized shortly after (22)moving here, I didn't know this before I moved here, that I was in a mile of Clearwater Air Park (23)(24)and I realized this because there were small

planes flying over my house on an hourly basis.

(25)

And I got curious about the planes and the airport and looked into things and discovered using the airnav.com website that Clearwater Air Park is a high traffic general aviation airport owned by the City of Clearwater about, according to that airnav.com website more than 50,000 flights take place in the Clearwater Air Park every year and that that equates to about .2 tons of lead.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

Now, it seems that the minimum threshold for air quality monitoring for lead is one ton so there is no air quality monitoring of lead going on in this area but in addition to the fact that I live with my three children within a mile of the Clearwater Air Park, there are at least four schools, multiple recreational parks and Clearwater, Florida for those who might not be aware, is in Pinellas County which is the most densely populated county in the State of Florida. It's tons of people and tons of children.

Needless to say, I was shocked to discover that the fact that all of this lead was being pumped into the air around my home. I mistakenly naively would have assumed that the lead would have banned from gas in planes as well

as with cars back when I was one years old like back in the '70s. It's been 25 years that car lead has been banned and I just couldn't believe that aviation gas could have lead in it.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

So, I don't understand how that loophole didn't get closed before now, but at any rate, I can't afford to move, I don't think I even meet the criteria for middle class according to the sort of statistical measure of middle class, but I have attempted to raise consciousness about this in my community, I went to the Clearwater Air Park and said hey, the FAA has approved a lead-free aviation gas, can you substitute that for all of the aviation gas you sell, he said no, that's a big source of income for our airport and that's not happening.

I talked to the Mayor of
Clearwater, City of Clearwater owns the airport,
similar response, nobody cares, they are not
going to do anything unless somebody makes them,
unless there is a regulation coming down from the
EPA or, I don't know the Biden/Harris
administration, whoever you know, gets to say
that this needs to be banned. Whoever told the
motor vehicle industry that lead needed to be

(1) taken out needs to tell the aviation industry.

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

you.

So, I just wanted to share a little bit of the back story and I guess the main question I have as I sort of live this life with planes overhead dumping lead on my children, on my gardens, the question I have is why are private citizens expected to absorb the cost of industrial pollution, right, like why -- why are we suffering because companies made money off of and continue to make money off of selling fuel with lead in it. We didn't go dig up the lead from the middle of the earth, we didn't put it in aviation fuel, we didn't market it as whatever no NOx or the aviation industry or AVGAS is selling this fuel in marketing strategies, so why are we expected to absorb the cost in form of neurotoxins in our body, in our children, in our bodies, in our vegetables. It just makes no sense to me. It's a most vulnerable population that the EPA, the Federal Government are expecting our children, the most vulnerable in our society to absorb and it makes no sense to me and it's

(26) PIGGOTT: Thank you for your

complete unethical and morally bankrupt.

(1) comments. (2) Ladies and gentlemen, our Okav. **(3)** next few speakers are Lori Shepler, Katherine **(4)** Riley, Jamie Banks and John Bottorf. **(5)** I do see a Lori our on our Zoom **(6)** webinar today with no last name. Lori, if you **(7)** are Lori Shepler, please press star nine to raise **(8)** your hand or use the raise your hand con to make **(9)** sure I am calling on the right person. (10)Thank you. I am going to (11)promote you to panelist. Okay. Lori, you are (12)now a panelist, you should be able to unmute and (13)turn your video on if you would like. **(14)** MS. SHEPLER: My name is Lori (15)Shepler, can you hear me? (16)MS. PIGGOTT: Yes, go ahead. **(17)** You have five minutes. **(18)** MS. SHEPLER: Okay. My name is (19)Lori Shepler. I was an award-winning photo (20)journalist at the Los Angeles Times for 25 years, **(21)** and I won three team Pulitzers for my work with (22)my colleagues. I now run a welfare non-profit (23)City to Kitty to end the inhumane practice of (24)declawing. (25)Most importantly I am a mom with Two-year old twins who are going to a school that is a third of a mile downwind from the Long Beach Airport. This school also has a continuous stream of planes flying over it every three to four minutes at 260 feet that are practicing touch and go landings and spewing out lead emissions.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

**(20)** 

**(21)** 

(22)

(23)

(24)

(25)

Long Beach Airport has 20
percent more general aviation operations than in
2021 which according to my research puts them at
number one in the country over Deer Valley
Airport for lead emissions with over Long Beach
Airport has over 360,000 operations each year.

My daughter is a childhood cancer survivor and she only has one kidney and has stage one chronic kidney disease. She is more vulnerable to the air toxins and these lead emissions so this issue is extra concerning to me.

I have lived in many countries and traveled all over the world, I had a model plane collection when I grew up. I know the value and importance of the general aviation industry. I try to keep up with the issues about the environment and health. I literally found

out about this lead emission issue on August 18.

I had no idea that the small planes had lead emissions or that the Long Beach Airport had around a thousand general aviation operations and 4.5 pounds of lead emissions each day.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

I was even more shocked to find out that politicians, parents, residents and school officials had no idea about this issue despite the Long Beach Airport being number two in the country.

In the last two months I managed to get the issue on the front pages of 11 newspapers in Southern California and on a TV station and the Long Beach City Council introduced an agenda to reduce the emissions.

But why hasn't there been more awareness about it from the EPA or other officials. People who live near the airports should have been notified about this risk. I believe that this issue has been deliberately hidden from the public. The EPA lead poisoning information kit for last week's Lead Awareness Week didn't even have lead emissions from planes as a source of lead poisoning. I asked EPA about this but never received an answer.

**(1)** Many in the general aviation **(2)** industry keep bringing up the safety issue to me **(3)** if this leaded fuel is banned now. I wanted to **(4)** get the facts so I asked the experts with GAMI. Here is what they told me. Their fuel has been **(5) (6)** extensively vetted by multiple and independent **(7)** sources and no safety issues have been observed. The octane performance of GAMI adequately meets **(8) (9)** or exceeds that 100 LL at normal cruise mixtures (10)and greatly exceeds 100 LL performance at full **(11)** power and take off. All piston-engine aircraft (12)using leaded fuel can operate at full rated power

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

The FAA and EPA should be focused on the production and distribution of this unleaded fuel so all these airports get it within a year or less. The FAA date of banning this in 2030 is way too long. Since there truly is no safety issue for pilot planes to use the new unleaded fuels it's shameful that the FAA and AOPA are trying to bully and stop officials like those in Santa Clara who did the right thing and banned this leaded fuel to protect the health and well-being of residents and children near the two

on GAMI fuel and there is no portion of aircraft

that will still need to use a leaded fuel, none.

(1) airports.

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

(11)

(12)

(13)

(14)

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

(2) The excuse that leaded fuel

causes a safety risk does not hold water anymore. Banning this fuel now is the right, smart and safe thing to do and the number one mission for all the stakeholders in this issue should simply be to advocate and work for the production and orderly distribution of these unleaded fuels.

The only known safety risk that has been proven for years is to all the innocent and vulnerable children being exposed to these lead emissions and poisoned by them. History will always remember those people and organizations who literally try and keep this unleaded fuel in the air and health risk to children as long as they could despite the fact that the unleaded fuels pose no risk to pilots or planes where available.

MS. PIGGOTT: 30 seconds.

MS. SHEPLER: This is America, children and adults who live and go to school near the airports deserve to breathe air that doesn't have lead in it. I invite those who want to further delay bringing unleaded fuel to airports like this, like the FAA and AOPA, to

**(1)** come to my children's school and stand in front **(2)** of it and watch how these low flying planes are **(3)** dusting the children with lead every three **(4)** minutes or so. Any parent or decent human being **(5)** would be appalled at this and would fight to **(6)** immediately close this dark chapter in the **(7)** American aviation industry. **(8)** MS. PIGGOTT: That's time. **(9)** Thank you for your comments. (10)MS. SHEPLER: Thank you. **(11)** MS. PIGGOTT: Okay. Our next (12)speaker is Katherine Riley. I see you on Zoom. (13)I am going to promote you to panelist. **(14)** Katy, we see you. You have five (15)minutes. **(16)** MS. RILEY: Thank you for the **(17)** opportunity to speak today. My name is Katherine (18)I am an Assistant Professor Emerita from (19)the Department of Public Health and Preventative (20)Medicine at Oregon Health and Science University. **(21)** I am also President of Washington County Kids a Non-profit in Washington County, Oregon that (22)seeks to increase access to out of school time (23)(24)programs such as early childhood, after school (25)and summer programs for kids.

I also live in Hillsborough,
Oregon and our house is right in the flight path
for landings at the Hillsborough Airport and
regular practice runs for flight training. We
also live approximately one quarter of a mile
from an elementary school and one quarter of a
mile from a middle school.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

(21)

(22)

(23)

(24)

(25)

When we moved into our house about 30 years ago, the flight path was different and the school training flights didn't exist because the school was located in McMinnville, a more rural area. Since that time we are bombarded by the noise of the training flights but also I worry about what we cannot see or hear, the use of lead in AVGAS.

As a person who is knowledgeable about public health, I know that exposure to any amount of lead is harmful to everyone but especially to children. Lead was declared illegal to include in gasoline for cars over 25 years ago. Why hasn't this be done for airplanes? Why are we exposed to lead daily?

Unleaded gas is available. The Port of Portland which oversees the airport, our

Hillsborough City Council, our Washington County

(1)	Commission commissioners have all refused to
(2)	take action. This is why it is so important that
(3)	action needs to be taken at the federal level.
(4)	Please make this change to
(5)	eliminate lead in AVGAS without any further
(6)	delay. Thank you so much.
(7)	MS. PIGGOTT: Thank you for your
(8)	comments.
(9)	Our next speaker is Jamie Banks.
(10)	I am not seeing Jamie Banks on the Zoom webinar.
(11)	If you are a call-in user, raise your hand or
(12)	press star nine.
(13)	I am going to move onto the last
(14)	speaker in this bunch which is John Bottorf. I
(15)	see you on the Zoom, I am going to promote you to
(16)	panelist. Okay.
(17)	John you are now a panelist, you
(18)	can unmute and turn your video on if you would
(19)	like.
(20)	MR. BOTTORF: Thank you so much,
(21)	let me just get my screen share here real
(22)	quickly.
(23)	Okay. Thank you so much. Good
(24)	afternoon, my name is John Bottorf with
(25)	cleanearthforkids.org. We support the comments

from Ms. Gallegos, Dr. Lanphear, Oregon Aviation Watch, Gary Keller, Debi Wagner, all who are fighting for our children's future and we thank the country of Santa Clara for their leadership in stopping lead in aviation and we give special thanks to Sandra Stahl, our Get the Lead Out consultant.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Cleanearthforkids.org calls for the immediate stop of the sale and use of leaded fuel. The EPA and FAA have known this lead poisoning has been going on for decades, lead should have been banned then, the EPA cannot delay any longer.

Lead is clearly a threat to human health. You must protect public health. You must make this the top priority of the EPA. Lead in aviation fuel is an environmental, racial and social justice issue. Many general aviation airports are located in low-income communities of color. Children in these areas are constantly exposed to lead hurting their developments and minds for their entire lives. Lead poisoning disproportionately effects communities of color with black children having the highest concentration of lead in their blood. You must

(1) take action to protect communities of concern you(2) must stop the lead.

We have bad air here in San

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

(14)

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Diego County. The American Lung Association gives us an F in ozone and, particulate matter, and make it worse, aircraft dump over 5,000 pounds of lead on communities, children, schools, playgrounds, daycare, et cetera, every year. People living and working by the airports are unaware that lead is an aviation fuel, and everyone believes the EPA banned lead from all fuels decades ago. They and their children are being poisoned and they don't know, they were never told. You must notify and educate the public on this lead exposure. It is your job to protect them.

Stop the lead in our air, our water and our land. You must not delay any longer. You must take immediate action and stop the leaded fuel now. There is no safe level of lead. As you now, lead is a cumulative, neurotoxin and there is no safe level of exposure according to the World Health Organization, Center For Disease Control and American Academy of Pediatrics.

Lead is especially toxic to children and unborn babies. Damages children's brains and nervous systems, lowers IQ scores, slows their growth and development, arms and muscle coordination, speech and language, causes behavior problems and these impacts are lifelong. Our kids matter. They must be protected, they must be the priority.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

Our youth live under this cloud of lead, they matter, their lives matter. EPA must take action to get the lead out now, you must immediately stop the sale of leaded fuel. This cannot wait any longer. Ground recreational aircraft instead of poisoning our kids. Please look at who owns and fly the aircraft. The majority of privately owned by the wealthy few. It is not fair it is not justice that less than one percent of the population who fly the planes as a hobby are allowed to poison millions of people especially children. There is no justice while these hobbyists are allowed to hurt children.

This is a crisis, this is an emergency, please put people before profits, please make our kids health and future as a top

**(1)** priority and take immediate action to get **(2)** lead out of all airports. For more information **(3)** please go to the team five Get the Lead Out page **(4)** on our website. Please protect the kids of San **(5)** Diego and the nation and stop the sale of leaded **(6)** fuel. **(7)** Thank you from **(8)** cleanearthforkids.org. **(9)** MS. PIGGOTT: Thank you for your (10)comments. Okay. (11) We posted the names of the next (12)five speakers in the chat, Richard Reibstein, (13)James Lawson, Kannan Thiruvengadam, Barbara Kanter and Marcie Keever. (14)(15)Richard, I see you on the line. **(16)** I am going to promote you to panelist. Richard, you are now a panelist, you can unmute **(17)** (18)and turn your video on if you would like. **(19)** MR. REIBSTEIN: Thank you very (20)much for having me today and holding these (21) hearings. I teach environmental law and policy at Boston University. When I talk about this **(22)** (23) issue, my students are rather surprised that it (24)is something that happens. (25)We are planning a conference

with five communities later in December on this issue because the students found it important as many have said today.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Quiet Communities Executive

Director Jamie Banks couldn't be here today she apologizes.

I spent 27 years in the Massachusetts Toxics Use Reduction Program working to reduce the use of many different chemicals, and I have always chosen to focus on lead when I can because to me it is in some ways the worst toxic problem. It is more than just the chemical toxicity, it represents our own ability to be blind, our own ability to act as we should or inability to act as we should. Evidence for it's deep wide and severe harm is undeniable.

We understand how lead takes the place of calcium, it isn't dislodged in the brain and how the brain stops growing at that location, we see monkeys exposed to lead grimacing and in the corner unable to play with others, we see images of brains where growth as has stopped and they are smaller than they should be.

We know that lead was not in ancient environments that it is now, that we have

drawn it up from under the earth and spread it around, we know it doesn't breakdown but cycles through organisms causing damage again and again. We know it significantly harms all of us debilitating judgment, degrading ability to control our own behavior.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

There are not just specific victims from lead, we are all victims of lead and on top of that, most exposures are unnecessary and you are discussing a primary example today, the cost and the equities are out of balance, it's true that aircraft use has many benefits and that planes must be safe, but we should have transitioned to lead free skies long ago.

Thank you, EPA for starting this process now. We shouldn't be using lead much less in a way that disperses it. We have known about the dangers since ancient times. Leads harm cannot be invisible you must see them and you are helping make them more visible today, you are helping some of the people being harmed be seen by others and being heard so we know about their concerns for their children on whom the particles and the vapors are descending and about how — how their situation where they cannot

protect those children.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

We have heard about neighbors and workers and farmland being poisoned. It's one thing to ignore scientific data, it is another thing to turn away from actual people and refuse to see what they see and tell you about, so thank you today for these hearings, very important to have this public record.

Now, some may look at this issue and say that EPA is in the middle now between an industry who has not moved and another by saying we will do it by 2030, but people are being harmed right now.

But how we regulate industry is a question for another day. This is an endangerment finding and you really have no choice but to find what we have known since the time of Hippocrates, 400 BC, he identified the dangers of lead, to fail to find lead as a dangerous air pollutant today would I believe be arbitrary and capricious so I encourage you to move ahead with all due speed, get this step over with so we can move on to constructive solutions that have to do with transitioning as quickly as we can to lead free skies. Thank you very much.

(1) MS. PIGGOTT: Thank you for your (2) comments. (3) Our next speaker is James Okay. **(4)** I am going to promote you to panelist. Lawson. **(5)** James Lawson, you have been promoted to panelist, **(6)** you can unmute and turn your camera on if you **(7)** would like. James are you there? **(8)** MR. LAWSON: Yes, I'm here. **(9)** Thank you. (10)MS. PIGGOTT: Go ahead you have (11)five minutes. (12)MR. LAWSON: My name is James (13)I represent the Southern Maryland Fair (14)Skies Coalition. I wish to thank the EPA for (15)this hearing proposed finding that lead emission **(16)** from aircraft engines that operate on leaded fuel **(17)** cause or contribute to air pollution that may **(18)** reasonably be anticipated to endanger public health and welfare. (19)(20)The Maryland Airport is a small **(21)** airport in George County, Maryland. The Maryland (22)Airport is in a predominantly black area of (23)George County, Maryland. The airport is located (24)less than a mile from McDonough, Henderson Mills (25)School and JC Park Elementary School, both of

which have predominantly black student populations.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The airport has approximately 22,000 airplanes taking off and landing in 2020. The airport primarily serves piston-engine airplanes, the vast majority of which are fueled by aviation gas which contain lead. Small aircraft across the United States account for about 70 percent of lead released into the atmosphere. The lead from small aircraft can lead to high levels of lead in the blood of children living near the airports and research has shown that blood lead levels in children can be as high as those found in children in Flint, Michigan.

Lead is extremely dangerous neurotoxin and no safe level of lead in blood. Airborne lead can be inhaled by people near airports either from direct aircraft emissions or interacting with contaminated soil or dust from earlier aircraft emissions. The EPA said 363,000 children age five and younger live within 500 meters of an airport runway and cited two studies that reported increased blood lead level in children with increasing proximity to airports.

**(1)** There is a potential for **(2)** substantial implications for children's health **(3)** according to the EPA regulatory filing. **(4)** finally acknowledged what has been true for decades, there is no safe level of lead for the **(5) (6)** community burdened by general aviation pollution. **(7)** The Maryland Fair Skies Coalition believes eliminating lead from aviation **(8) (9)** gas is taking too long. (10)Environmentalists first petition **(11)** the Agency to make an endangerment finding 16 (12)years ago. Aircraft that use leaded fuel or (13)other sources of lead emission to air in this **(14)** country. EPA Administrator Michael Regan said in (15)a statement exposure to lead can cause **(16)** irreversible and lifelong health effects. **(17)** Leaded gasoline has been banned (18)for most use for decades, much of the nation's (19)best but aging fleet of small aircraft run on (20)fuel containing added lead which increases octane (21) and prevents problems with piston powered (22)The EPA said piston powered aircraft engines. produce 70 percent of the total lead emitted into (23) (24) the air nationwide. (25)

The aviation industry makes the

argument that they need more time to transition to unleaded fuel, just like the public safety and cost of unleaded fuel. How much more time do the The industry has two or more aviation need. decades to stop harming the people who live near airports. I asked the question to the aviation industry, why is your right to fly airplanes that destroy lives on the ground more important than the health and lives of people who live near airports. The FAA said in a statement, it's cleared the way for unleaded aviation fuel to be used throughout the nation's fleet of piston powered aircraft is a major step forward. It is said that it is pressing ahead with an initiative to develop new fuel as well as the network needed to provide and distribute them and its priority is safety.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

I believe the EPA proposed endangerment finding should be finalized and the Agency should move to issue new emission standards that will ban leaded aviation gas.

MS. PIGGOTT: 30 seconds.

MR LAWSON: EPA FAA forecasts showing that the consumption of leaded airplane fuel is expected to total 125 million gallons in

(1)	2026 and many places communities of color are
(2)	most impacted. Thank you.
(3)	MS. PIGGOTT: Thank you for your
(4)	comments.
(5)	Our next speaker is Barbara
(6)	Kanter, I am going to promote you to panelist.
(7)	MS. KANTER: Can you see me?
(8)	MS. PIGGOTT: Yes, go ahead.
(9)	You have five minutes.
(10)	MS. KANTER: Okay, great.
(11)	My name is Bebe Kanter. I am
(12)	the founder of Quiet Collier, Incorporated, a pro
(13)	bono environmental consultancy in rich Naples,
(14)	Florida. We work on whatever problem comes to
(15)	us, we assemble a pro bono team to help the
(16)	stakeholders solve the problem.
(17)	It's been a pleasure to hear and
(18)	see so many speakers who I have met on-line over
(19)	the past 16 months. It was with their assistance
(20)	that I was able to come up to speed on these
(21)	issues. Having spent most of my adult life in
(22)	rustbelt cities and very familiar with the
(23)	flaking lead paint issue, I was shocked to hear
(24)	that nobody everybody here in Naples was in
(25)	denial about the dangers of lead.

Until I -- I didn't even know
that there was lead, like everybody else here,
until I moved to Naples, I was unaware that there
was leaded AVGAS in the fuel. But because I have
been a policy analyst for the past last 50 years,
I am 69, it was easy for me to understand how and
why this travesty still exists.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

(21)

(22)

(23)

(24)

(25)

I think Katy Reilly said that the only way to handle this will be at the federal level, so that makes it easier for me to explain what is happening now here in Naples. In Naples, Florida, several generations -- people have been confined to living in the River Park neighborhood. And they have been -- let's see, they were forced to live here because -- until recently Jim Crow Laws were actively enforced in Collier County.

Eight years ago, a man named
Byron Donalds became active in charter schools
and as a member of the Mason Classical Academy
schools made a sweetheart deal to Mason Classical
Academy and a bankrupt building zoned as an
impacted area for and prohibiting educational
land use despite vocal and adamant protest from
the Collier County Public Schools and the

**(1)** community advocates, activists, the City of **(2)** Naples issued a reluctant occupancy permit for **(3)** these thousands of kids to go to school next **(4)** door. Both of our Congressional **(5) (6)** representatives, Mario Diaz Ballard and Donalds **(7)** have relied on donations from the fuel companies and the flight schools to finance their **(8) (9)** campaigns and are doing so at the very moment. (10)The only way to stop this and is to go the **(11)** federal route. (12)When the EPA adopts this finding (13)environmental justice will become an achievable **(14)** goal. After hitting a brick wall on the (15)environmental issue and others just as shocking, (16)I -- in June I filed to run for Collier County **(17)** Commissioner, and my first candidacy, all I can **(18)** say is if you can't beat them, join them. Thank **(19)** you very much. MS. PIGGOTT: Thank you for your (20)**(21)** comments. (22)Okay. Our next speaker is Marcie Keever, I see you on the Zoom, I am going to (23)promote you to panelist. (24) (25)Okay. Marcie, you are now a

panelist, you can unmute and turn your video on. **(1) (2)** MS. KEEVER: Thank you so much. **(3)** MS. PIGGOTT: Thank you. **(4)** MS. KEEVER: My name is Marcie I am a Program Director at Friends of **(5)** Keever. **(6)** the Earth. Friends of the Earth is an **(7)** environmental organization founded in 1969 with a mission to fight for a more healthy and just **(8) (9)** world. Aside our more than four million members (10)and activists, Friends of the Earth has been **(11)** advocating for this proposed endangerment finding (12)for leaded AVGAS for close to 20 years. (13)In late 2003 Friend of the Earth **(14)** wrote a letter to the U.S. EPA after reviewing (15)emissions standards for NOx with commercial **(16)** aircraft. We commented on those standards as **(17)** well as the lack of regulation of lead emissions **(18)** from general aviation and requested that the EPA (19)make an endangerment finding. That was in 2003. (20)Two years later EPA responded to **(21)** the request for an endangerment finding stating (22)there wasn't sufficient information to enable the Agency to determine that aircraft lead emissions (23) (24)endangered public health and welfare. In 2006 (25)Friends of the Earth filed our first

administrative petition again requesting the EPA make an endangerment finding.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

EPA did not respond to the petition until 2012. In response to our litigation citing an unreasonable delay, EPA responded to the petition then saying they needed until 2015 to determine whether lead emissions from aircraft endangered human health.

In 2014 Friends of the Earth joined by additional groups again petitioned EPA to regulate emissions from aircraft and EPA again partially denied the petition in 2015, this time it said it needed even more time until 2018 to issue a final determination about whether lead emission from aircraft pose a danger to human health, and of course that date came and went.

In 2021 Friends of the Earth along with a larger group of advocates including several who have testified today filed a third petition demanding EPA regulate the lead emissions from aircraft.

We are here today to thank the EPA for moving forward with this endangerment finding especially the staff at the Office of Air and Radiation that have worked for so long and to

support the proposed endangerment finding and urge the EPA to move with as much speed as possible with the rule making like this one to finalize this endangerment finding and move towards a regulation and finally get the lead out of piston-engine aircraft.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

In the meantime, EPA should work with the FAA and any other government agency to move with all deliberate speed to get unleaded AVGAS to the 20,000 airports where leaded AVGAS is used and support airports to get rid of leaded AVGAS similar to what has been done at the Reid-Hillview Airport in Santa Clara County in California.

making unleaded AVGAS available at the highest moving airports and the airports with the highest number of children, low wealth people and people of color living nearby. The EPA has stated there is no safe level of lead emissions from aircraft since at least 2010 when it issued the advanced notice of rulemaking for lead in aviation.

It must move with all speed to finalize this endangerment finding and move towards getting the lead out immediately. With

**(1)** five million people including more than 360,000 **(2)** children under the age of children five, living **(3)** within 500 meters of these airports and living **(4)** with elevated blood lead levels are the ongoing **(5)** of daily threat of elevated blood lead levels and **(6)** other illness deserve no less. It is way past **(7)** time we give them this. **(8)** Thank you so much for hearing my **(9)** testimony. (10)MS. PIGGOTT: Thank you for your **(11)** comments. (12)Okay. Ladies and gentlemen our (13)last speaker in this bunch is Kannan **(14)** Kannan, and I apologize if I am Thiruvengadam. (15)mispronouncing your name. I see you are on. Ι am going to promote you to panelist. **(16) (17)** And then Ladies and Gentlemen, **(18)** we have posted the names of our final three (19)speakers in the chat. (20)Okay, Kannan, I see you are **(21)** unmuted. (22)MR. THIRUVENGADAM: Good afternoon thank you for the opportunity to speak. (23) (24)I live very close to a large international (25)airport. My name is Kannan, I run an urban farm

in East Boston and our community is an environmental justice community, it is a climate justice community, it is also for the most part food insecure which means people with the funds they have available, they cannot afford to buy healthy food.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

**(19)** 

(20)

**(21)** 

(22)

(23)

(24)

(25)

The lands is at the mercy of whoever is able to send produce to our space to our community. There is one such farm that is right next to Hanscom which does have leaded air fuel.

I thought that this question about lead and the establishment of lead as a poison was already established and we have dealt with car fuels and we have dealt with paint, so I am really not sure why we haven't dealt with it in jet fuel and it seems like it should be a thing of the past, however it seems to continue.

It endangers the public and it seems to me the government's job is to think about the long-term interest of the public. We appear to be pinned against short term economic interest but that can't be what the government stands for, the government has to think about long term interest of the public and leaded gas,

like carbon and like various other toxins that we are fighting with may have some sort of short term economic advantage for a few people which has resulted in gross economic inequity in our country which has its own bad consequences as we hopefully learned during Covid but right now it is important to think about such deeper root causes of why we have things like lead still in -- still in the air that we breathe and it also does settle onto the soil where we grow our food and we will be absorbed by the plants that grow close to the ground and will also be breathe in by kids that may be playing in the soil.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

I think we already know that so I am at a loss as to why it hasn't been dealt with and the only explanation I keep coming back to is that there must be something that forces the government to act in a short-term economic interest. Economy is the first important and that helps everybody but the inequities that we have allowed to stand are why we have toxins to unacceptable levels continuing in very inequitable ways around our world.

Like I said, this is an

**(1)** environmental justice and climate justice **(2)** neighborhood also happens to be a food desert so **(3)** when these kind of injustices come, they appear **(4)** to come together and people have very little voice to fight the injustice that happens in **(5) (6)** these communities and I think we all understands **(7)** how that works. **(8)** We have to stop allowing that, **(9)** stop being okay with that, stop being comfortable (10)with such gross levels of injustice and it is **(11)** economic and it is also environmental. I hope (12)that we can deal with lead in ways we have dealt (13)with in car fuels and in paints, we can deal with **(14)** lead in jet fuel as well. Thank you. (15)MS. PIGGOTT: Thank you for your **(16)** comments. **(17)** Okay, ladies and gentlemen, we **(18)** posted the names of the last three speakers in (19)the chat, Karen Porter, Elizabeth Agramont-Justiniano and Robert Germann. (20)(21) Karen, I see you on Zoom. I am going to promote you to panelist. (22)**(23)** Karen, you are now a panelist, (24)you can unmute and turn your video on if you (25)would like.

**(1)** MS. PORTER: Good afternoon, **(2)** I echo the comments by other speakers thank you. **(3)** about how lead emissions present serious **(4)** environmental and social justice concerns. Ι would like to add some specifics about the **(5) (6)** general aviation airport I am most familiar with, **(7)** the Palo Alto Airport located in Silicon Valley. **(8)** Its website boasts that it is **(9)** the busiest single runway airport in California (10)with thousands of operations annually. **(11)** traffic consists primarily of single engine (12)piston aircraft. The airport sits next to (13)protected marshlands in the San Francisco Bay so **(14)** it likely presents significant albeit (15)unquantified harm to this ecosystem. **(16)** But of even greater concern, the **(17)** airport is bounded directly to the north by the (18)neighboring city of East Palo Alto. (19)taking off fly directly over East Palo Alto neighborhoods, so those neighborhoods bare the (20)(21) brunt of takeoff emissions. There is a notable disparity between the median household income of (22)

household income for Palo Alto was reported to be

\$196,000, while at East Palo Alto with less than

In 2021 the median

Palo Alto and East Palo Alto.

(23)

(24)

(25)

half that at \$84,000.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

The Palo Alto Airport among other airports was party to a legal settlement with the City -- the Center for Environmental Health in 2014, this settlement called for a reduction in lead poisoning risk yet leaded AVGAS is still sold at the Palo Alto Airport.

This airport was listed as number 19 on the Earthjustice 2021 list of the top 100 lead producing general aviation airports in the United States. Only in recent months have steps reportedly been taken to "promote the sale of unleaded AVGAS at Palo Alto Airport," but the sale of leaded fuel is not prohibited as has been done at Reid-Hillview and San Martin Airports located to the south which I applaud.

I strongly urge the EPA to finally declare leaded aviation fuel as an endangerment to human health. Perhaps this will serve as the wake-up call local governments need to seriously address this ongoing threat that disproportionate effects low-income communities that receive relatively little if any benefits from these airports.

The declaration could also

hopefully reap the reckless actions and inactions by the Federal Aviation Administration that have perpetuated this injustice for decades. In the interest of public health procrastination is no longer an option. Thank you.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

MS. PIGGOTT: Thank you for your comments.

Okay. Ladies and gentlemen, our next speaker is Elizabeth Agramont-Justiniano. I am going to promote you to panelist.

Elizabeth, you are now a panelist, you can unmute and turn your video on if you would like.

MS. AGRAMONT-JUSTINIANO: Hi, my name is Elizabeth Agramont-Justiniano, and I live in San Jose, I live in Santa Clara County, and I have heard many of the speakers kind of applaud the steps that our county has taken in terms of prohibiting the sale of leaded fuel. However, as currently stands 20 percent of the planes in operation at Reid-Hillview Airport still use leaded fuel, and as many of the speakers mentioned before there is no safe level of lead exposure in our bodies and lead is a toxic, lead is poisonous and there really is not a process

for clean and cleansing the body of lead and it persists in the body for decades and augments folks risk for and especially children's risk for cancers, Alzheimer's, problems with the bones, problems with the heart and so it's not just a matter of banning leaded fuel but really making sure that there is no lead exposure of our community.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

(16)

**(17)** 

(18)

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

And for decades the community has been demanding Santa Clara County to ban, to close Reid-Hillview, because we have a situation of even though leaded fuel is banned, it's still being used and folks are still being exposed to toxicity and to lead poisoning.

And I door knocked in a one point five-mile radius of Reid-Hillview Airport and the majority of that folks in that area did not know about the dangerous of lead exposure via single piston-engine planes.

And so as many of the folks kind of mentioned before, this area close to Reid-Hillview, 97 percent are communities of color, 60 percent represent the Latinx ethnic group and around three percent are Asian and many of the people in the area are immigrants

and so I am calling on the EPA to take action because local government tend to focus on residents who have the ability to vote and they look at it in a sense of like okay, power, who is going to get me in office, and so often times communities of color especially immigrant communities are sidelined and not taken as seriously and this is what we -- we have seen happening in Santa Clara County and only because the community coming together pushing and demanding have we seen some progress but we are not there yet and it's not good enough to still have lead exposure and still have people and families and pregnant women who are being exposed to this lead on a daily basis.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

(12)

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

I want to call out the EPA
because Congresswoman Lofgren on July 28
in the congressional hearing lead by Congressman
Ro Khanna called on EPA representatives to be
there and testify and you all were not there and
that's unacceptable because you are supposed to
-- in your title, it's Environmental Protection
Agency, you are supposed to protect our
communities. And you were nowhere to be found.
So, I am happy with the steps you

(1)	are taking now to elevate, elevate this issue but
(2)	we really need you to to make a stand and
(3)	really declare that this is a public health
(4)	health crisis that we are experiencing now.
(5)	Thank you.
(6)	MS. PIGGOTT: Thank you for your
(7)	comments.
(8)	Our next and final registered
(9)	speaker is Robert Germann or maybe Germann. I
(10)	see you on Zoom. I am going to promote you to
(11)	panelist.
(12)	You are now a panelist. You can
(13)	unmute and turn your camera on if you like.
(14)	MR. GERMANN: Can you hear me
(15)	now?
(16)	MS. PIGGOTT: Yes, go ahead.
(17)	You have five minutes.
(18)	MR. GERMANN: This is a last
(19)	minute deal. I had prior commitments.
(20)	My name is Robert Germann. I am
(21)	in San Diego County. I am the President of
(22)	Citizens Against Gillespie Expansion, Low Flying
(23)	Aircraft.
(24)	I have been watching for awhile
(25)	since I just got in. I wasn't going to speak but

**(1)** there are a couple of things that need to be **(2)** mentioned at this time. Whether they are timely **(3)** or appropriate, you guys can figure it out. **(4)** I am a retired Teamster, truck **(5)** driver, have 30 years in, I delivered fuel to **(6)** airports and to gas stations and it's amazing to **(7)** me that we are -- still have lead in AVGAS. **(8)** A couple of things, and **(9)** obviously our group supports the banning of leaded AVGAS, and I know this is the first step (10)**(11)** so obviously we support the endangerment finding (12)and in the interim, small general aviation aircraft should not be allowed to do touch and (13)**(14)** goes which is called pattern work in airports (15)that are located inside the city limits flying **(16)** over our kids. They can do their flight **(17)** (18)training out in the boonies and so that's my recommendation there. **(19)** (20)I also would like to say that **(21)** most of the lead that is spread in our inner **(22)** cities is from commercial intent flight schools (23) which has come about in the last ten years.

important that they are not allowed to do their

The other thing and why it's so

(24)

(25)

touch and go is to cool their engines during flight training, they run full rich, in other words, they are cooling their engines with leaded AVGAS. And by running full rich, they are giving their engines more fuel than it can burn.

**(1)** 

**(2)** 

**(3)** 

**(4)** 

**(5)** 

**(6)** 

**(7)** 

**(8)** 

**(9)** 

(10)

**(11)** 

**(12)** 

(13)

**(14)** 

(15)

**(16)** 

**(17)** 

**(18)** 

(19)

(20)

**(21)** 

(22)

(23)

(24)

(25)

Now, the FAA, the manufacturers recommend this and so that's what the flight training schools do and if they are going to do that, then they need to do it where they won't harm our families, our neighborhoods and everything along that thing.

The EPA has tremendous power over these general aviation airports because it is federal grant money that allows these small general aviation airports to basically exist otherwise they wouldn't survive.

And if anybody needs anymore information, we have a great environmental director called Gary Keller, named Gary Keller, and he already spoke so you are more than welcome to go to our website, you know, we always encourage that and you will get a lot more information than you heard today. And that's it.

And thank you again for letting

me be the last speaker on such an important

**(1)** issue, I will cherish this quite frankly. **(2)** tell my kids about it. **(3)** So I want to thank you and good **(4)** job so far. You have to understand, the FAA is **(5)** general aviation's big brothers, in other words, **(6)** their motto is commerce before safety and health **(7)** of the people. So you got to keep that in the back of your mind. **(8) (9)** Anyway, thank you again, and (10)goodnight all. Love your show. **(11)** MS. PIGGOTT: Thank you for your (12)comments. (13)Alright, ladies and gentlemen at **(14)** this time we have no one else scheduled to speak, (15) but if there is anyone who did not register to **(16)** speak and has not spoken in the morning session **(17)** or afternoon session that would like to speak, (18)please send us a message via the Zoom chat, an (19)email to epapublichearing@icf.com or call (734) (20)214-4923. (21) I'll now pause to see if anyone else would like to make a statement. (22)**(23)** Okay. Not seeing any messages (24)hand raised or notifications. We are now at the (25)end of our afternoon and final session.

(1)	to remind everyone how to submit written
(2)	comments.
(3)	Copies of written statements and
(4)	additional comments of any length can be
(5)	submitted on regulations.gov by searching for
(6)	Docket Number, EPA-HQ-OAR-2022-0389.
(7)	EPA, are you ready to adjourn
(8)	the hearing?
(9)	MS. SARGEANT: Yes, I wanted to
(10)	thank all of the speakers for making time to make
(11)	comments and participate in this hearing on EPA's
(12)	proposed endangerment finding regarding lead
(13)	emissions from aircraft engines operating on
(14)	leaded fuel.
(15)	We also encourage you and all
(16)	interested persons to provide written comments by
(17)	the method we describe in the Federal Register
(18)	notice for this action. This hearing is now
(19)	adjourned. Thank you.
(20)	(Whereupon, the meeting is
(21)	adjourned at 3:33 p.m.)

## **(1)** CERTIFICATE OF OFFICER (2) **(3)** I CERTIFY that the foregoing is **(4)** a true and accurate transcript of the testimony **(5)** and proceedings as reported stenographically by **(6)** me at the time, place and on the date as hereinbefore set forth. **(7) (8)** I DO FURTHER CERTIFY that I am **(9)** neither a relative nor employee nor attorney nor (10)counsel of any of the parties to this action, **(11)** that I am neither a relative nor employee of such (12)attorney or counsel, and that I am not (13)financially interested in the action. (14)(15)(16)(17)(18)(19)(20)(21)**(22)** STEPHANIE LYN RAHN License No. 975352 (23)Notary Public of the State of New Jersey (24)My Commission Expires April 18, 2027 (25)

		<u> </u>	1	1	1
<u>A</u>	75:20	116:23	adamant (1)	102:22	141:21
<b>a.m (5)</b> 1:9	100:11	149:14,15	157:24	adjacent (8)	advance (2)
9:21,23	146:24	164:19	add (2) 47:2	14:21 15:8	13:19 72:2
60:18 69:2	157:20,22	action (41)	166:5	40:12 48:3	advanced (1)
Aaron (1)	accelerate (	3:8 5:18,25	added (2)	73:21 82:12	161:21
78:20	76:19	6:8,19,23	44:18	84:11 119:5	advancing
abilities (5)	accept (4)	7:9,18 8:7	154:20	adjourn (4)	86:10
78:9,15	11:10 44:11	8:25 9:6	adding (1)	9:24 62:6	advantage
79:2 81:11	70:15 131:1	62:21 65:7	104:1	69:5 175:7	164:3
81:15	accepted (1)	65:14,22	addition (15)	adjourned	advantages
ability (10)	100:10	66:8,12,25	5:3 7:1,16	175:19,21	48:1
17:17 37:16	access (3)	67:7,20	15:6 20:3	administra	adverse (3)
41:5 85:5	9:14 12:17	68:11,17	21:10 26:22	18:11 19:14	43:21 76:5
120:18	142:23	77:2 85:24	64:16 66:15	74:21 84:10	95:12
128:20	accomplish	86:8 95:22	67:6 95:15	86:9 89:15	Advocacy (1)
149:13,14	19:21	99:4 110:19	99:9 131:22	90:7 129:3	23:5
150:5 170:3	account (1)	115:14	132:8	135:23	advocate (2)
able (20)	153:8	116:7,19	134:13	168:2	108:5 141:7
11:10 12:8	accounted	144:2,3	additional	administra	advocates (3)
22:17 30:11	73:13	146:1,19	6:20 8:6	118:2	74:14 158:1
32:11 33:24	accounting	147:11	12:13 44:25	administra	160:18
44:11 45:8	79:13	148:1 170:1	56:11 66:9	160:1	advocating
49:2 61:22	accounts (1)	175:18	67:19 71:20	administra	159:11
70:16 71:15	41:8	176:10,13	104:2	4:15,25 6:1	aerial (1)
77:13 103:5	accumulate	actions (3)	160:10	64:2,13	25:2
108:2	131:17	85:16 89:10	175:4	65:15 98:15	Affairs (1)
128:18	accuracy (2)	168:1	Additionall	154:14	23:5
133:2	8:24 68:10	active (1)	10:13 13:16	adopted (1)	affixed (1)
137:12	accurate (1)	157:19	28:25 29:10	15:12	95:7
156:20	176:4	actively (1)	44:23 69:17	adoption (1)	afford (3)
163:8	accurately	157:16	address (10)	76:19	29:23 135:7
abroad (1)	13:15 72:1	activism (1)	7:7 53:5	adopts (1)	163:5
87:16	accustome	120:7	66:21 74:15	158:12	affordable
absorb (3)	54:11	activists (3)	82:22 93:9	<b>ADT (2)</b> 58:8	15:7
136:7,16,22	achievable	98:9 158:1	99:4 101:24	58:15	affront (1)
absorbed (2)	158:13	159:10	127:12	adult (4)	122:2
16:19	achieve (1)	activities (3)	167:21	100:22	afraid (2)
164:11	19:18	22:2 25:1	addressed (	119:3 132:6	111:25
absorbs (3)	achieveme	127:25	129:7	156:21	112:1
104:7,8	41:6	activity (4)	addressing	adulthood	afternoon (
131:8	acknowled	38:8,10	48:19	42:21 44:1	62:14 69:4
abuse (1)	106:22	92:20 93:6	133:14	adults (12)	72:10,14
121:2	132:3 154:4	acts (1)	adequately	16:22 28:21	87:3,4
academic (4)	act (12) 7:14	128:25	140:8	31:13,16	91:23 113:7
41:5 78:8	48:20 67:4	actual (1)	ADHD (3)	77:22 89:20	144:24
78:15 81:11	76:16 82:20	151:5	78:16 81:11	94:22 96:19	162:23
academy (5)	83:7 85:25	Ada (1)	93:22	128:3	166:1
	87:21	26:15	adhere (1)	131:24,25	174:17,25
	<u> </u>	I	<u> </u>	<u> </u>	1

					170
Afton (1)	125:14	67:10 73:11	79:19 83:11	152:16	18:21 21:22
21:12	133:21	75:24 77:20	90:25 99:1	153:8,10,19	28:24 29:17
age (6) 40:17	143:9,21	79:20 80:17	128:14	153:0,10,15	29:24 30:25
41:21 43:24	146:12	80:20 82:19	130:22	154:12,19	31:5,7,25
89:7 153:22	150:12	83:7,9,19	131:2	154:22	32:10,14,17
162:2	154:12	83:21 84:8	153:18	155:13	36:6,8,9,23
agencies (10)	157:18	88:13 89:3	aircraft (97)	159:16,23	37:14 38:8
51:5,6 76:1	Agramont	90:13 91:5	1:6 3:5,10	160:8,11,15	38:18 40:13
76:7 81:8	165:20	94:15 98:10	5:20 6:5	160:21	42:4 45:20
82:13,17	168:9,14,15	100:14	14:23 15:3	161:6,20	46:15 47:13
85:15	agree (1)	104:2,5,22	15:18 16:2	166:12	57:24 59:1
115:25	81:8	104:24	16:4,6,10	171:23	59:1,18
120:23	agreements	105:4,12,23	16:11,16	172:13	73:18,21
agencies' (1)	94:24	108:8,21	17:7,11	175:13	74:5 75:3,6
85:5	ahead (22)	112:1	18:15,19	aircrafts (4)	75:14,15
agency (17)	9:15 12:18	113:12,19	19:1 20:7	33:13 88:6	76:12 78:1
4:18 43:13	12:20 14:5	115:12,15	22:2 23:5,9	89:4,8	80:2,5,9,18
50:21,22	22:22 28:2	116:5 119:9	23:16 26:6	airline (4)	80:23 81:1
52:23 54:16	30:12 36:3	119:22	26:16,20	47:25 51:11	81:4 82:12
64:6 72:17	45:11 57:6	125:10	41:7,17	51:13 95:8	84:2,11,15
85:13 88:4	72:12 92:8	127:9,23	45:24 47:19	airman (1)	84:18,23
93:10	98:2 103:10	128:9	47:20 48:13	94:2	88:22 93:2
116:23	118:20	133:23	53:7 62:18	airnav.com	94:25 96:7
154:11	126:13	134:3,7,11	62:23 65:8	134:3,6	96:8 97:15
155:20	137:16	134:12,15	65:19 73:13	airplane (6)	99:14,18,19
159:23	151:22	134:23	79:23 83:5	38:4 59:11	99:23 100:3
161:8	152:10	135:12	83:20 84:5	59:22 99:24	101:23
170:23	155:14	138:17	85:20 94:6	111:19	102:1,18
agency's (4)	156:8	141:15,22	96:9,12	155:24	105:17
3:3 23:1	171:16	146:3,17	97:3,5 99:2	airplanes (	108:8 109:6
62:16	ailments (1)	151:20	99:8 101:8	26:17 27:15	110:25
102:20	37:6	152:17	101:10	38:4,16	111:13
agenda (3)	aim (1) 51:2	154:13,24	103:20	39:10 49:18	112:9,14
9:19 68:25	air (93) 3:6	160:24	104:1,3	50:2 58:18	113:17,18
139:15	4:16,19 5:1	163:11	106:15,19	58:21 59:8	113:24
ages (2) 89:1	5:6,12,21	164:9	113:12,20	59:16 60:15	114:1,11
133:19	6:2,6 7:22	airborne (33)	113:22	61:7 94:10	117:22
aggressivel	14:15 15:4	15:3,17	117:25	97:5,9,10	118:24,25
85:25	16:13,13	16:1,3,6,8,9	121:18	109:1 111:2	122:21
aging (1)	17:12 18:16	16:15,18	126:24	124:10	123:7,10,18
154:19	18:18 23:14	17:2,13	127:8,19	125:4	124:3,4,25
ago (16)	24:21 43:20	32:18,23	129:22	130:22	125:22
20:23 36:19	46:4,8	33:3 41:9	130:3	143:22	126:23
52:23,24	47:17 54:18	41:23 43:23	132:10,20	153:4,6	130:1,3,13
101:7	62:19 64:3	52:25 53:13	140:11,13	155:7	130:18
106:18	64:7,14,19	53:23 54:3	146:6	airport (128)	134:2,4
111:17	64:25 65:10	54:5 74:12	147:14,15	14:19,20	135:16,18
112:1	65:16,19	74:23 79:15	150:12	15:8,14	138:3,8,12
	I	I	ı	ı	

	1				119
138:13	146:9 148:2	allow (10)	14:15	22:9 79:24	appears (1)
139:3,9	153:12,19	11:12 12:7	America (6)	89:20	57:3
143:3,24	153:25	13:18 14:1	30:17 51:22	166:10	applaud (3)
152:20,21	155:6,10	19:21 44:13	126:17,25	answer (2)	129:19
152:22,23	161:10,11	54:23 70:17	127:6	107:12	167:16
153:3,5,23	161:17,17	71:13 115:3	141:20	139:25	168:17
161:13	162:3 167:3	allowed (5)	American (7)	anticipated	applicable
162:25	167:10,15	147:19,21	18:20,22	3:7 5:22 6:3	20:8
166:6,7,9	167:24	164:21	26:9 37:22	6:6 11:3	applies (1)
166:12,17	172:6,14	172:13,25	142:7 146:4	62:20 65:10	92:17
167:2,7,8	173:13,15	allowing (3)	146:24	65:16,20	apply (4)
167:13	airstrips (2)	33:12	American's	70:7 152:18	8:12,15
168:21	24:19 40:15	132:21	50:25	antisocial (1)	67:25 68:2
169:16	airworthin	165:8	Americans	43:1	approach (1)
airports (78)	20:9,13	allows (1)	50:3 80:1	anybody (3)	89:16
22:1 24:18	alarm (2)	173:14	128:20	55:23	appropriat
24:19 27:3	58:13,19	alongside (2)	Ameritat (1)	124:21	19:10 172:3
41:1 42:14	alarming (2)	85:7 115:7	142:18	173:17	approval (1)
42:15 48:3	37:10 46:13	Alright (4)	amidst (1)	anymore (2)	90:22
73:6,20	alarms (3)	12:18 45:13	53:13	141:3	approve (1)
76:23 84:20	58:8,10,12	87:10	amount (5)	173:17	90:14
85:18,21,22	albeit (1)	174:13	26:7,8	anyone's (2)	approved (4)
88:12,17	166:14	alternating	103:15	13:20 72:2	17:5 113:16
89:8 94:19	Alejandra	91:18	131:10	Anyway (1)	132:18
95:6,10	4:14,16,24	alternative	143:18	174:9	135:13
97:6 100:16	64:1,4,12	90:15	amounts (4)	<b>AOPA (7)</b>	approxima
101:21	Alfonso (23)	alternative	15:17 36:4	23:6 25:14	9:21,22
104:18,24	33:20 34:5	124:6,7	100:19	26:20 77:1	28:6 93:1
105:2,5,6	34:5,8	128:22	120:3	106:11	104:4 143:5
105:12,17	35:15 52:12	altitude (1)	analyst (1)	140:22	153:3
105:19	52:13 55:5	15:2	157:5	141:25	apps (2)
106:7,14	55:7,8	Alto (10)	ancient (2)	apologies (2)	10:16 69:20
107:11	61:21,22,24	166:7,18,19	149:25	110:8	April (1)
116:4,9	61:24 72:6	166:23,23	150:18	118:14	176:24
117:18	87:1,2	166:24,25	Angeles (1)	apologize (6)	arbitrary (1)
118:24	91:22 95:24	167:2,7,13	137:20	13:10,19	151:21
119:1,6,20	96:3 110:2	Alzheimer'	Ann (1)	34:15,20	area (22)
121:7 123:8	110:3,6	169:4	79:10	72:2 162:14	14:24 15:21
123:11	alike (1)	Amalia (7)	announced	apologizes	45:16 59:22
127:14	31:13	33:20 34:22	127:7	149:6	96:5,5
128:8,24	allied (1)	34:24 35:1	announcin	appalled (1)	101:25
129:21	115:8	35:15 57:1	7:6 8:8	142:5	109:21
130:12,15	allies (1)	57:3	66:20 67:22	apparent (1)	111:12
132:11	116:14	amazing (1)	annoying (1)	120:17	113:19
139:18	allocated (1)	172:6	29:16	appear (3)	123:8,11
140:17	25:11	ambien (2)	annual (1)	47:25	124:23
141:1,22,25	allotted (2)	105:3,22	41:8	163:22	125:18
145:19	12:9 71:16	ambient (1)	annually (4)	165:3	130:6
l	l				

					100
134:13	5:14 65:2	authority (2)	161:10,10	114:10	112:7 119:4
143:12	associated	54:16 85:17	161:12,16	116:3,24	134:18
152:22	43:8 47:24	authorizati	167:6,13	117:18	awareness
157:23	50:1 92:19	20:4,14,18	172:7,10	119:16	36:20
169:17,21	99:15,25	21:1,16	173:4	121:22	139:17,22
169:25	100:17,25	24:8 26:13	aviation (1	124:2 125:8	awhile (1)
areas (6)	127:21	26:24	5:10 14:12	125:15,21	171:24
16:11 22:6	Associatio	authorized	15:16,18	127:1,4,12	1/1.27
30:20 40:20	18:14,15,16	8:15 24:5	16:2,7 17:5	128:13,16	B
125:23	18:17,19,20	27:10 68:1	17:10,11,14	128:13,10	babies (1)
145:20	18:21,22	automatica	17:15 18:8	129:20,23	147:2
	19:25 23:6	10:21 69:25	18:11,12,14	130:1,4,11	baby (5) 37:8
argument (1) 155:1			· · · · · · · · · · · · · · · · · · ·	130:1,4,11	37:8,10,13
	23:13,14,15	automotive 26:9	18:17,20		58:20
arguments	23:16,17		19:1,4,7,12	132:19	back (13) 9:9
6:15 66:4	102:17	available (	19:14,25	134:4 135:4	12:18 13:1
arms (1)	146:4	7:21,24	20:11,24	135:13,14	13:7 38:23
147:4	association	20:4 21:9	21:3,19,20	136:1,13,14	52:1 68:20
ashamed (1)	18:12	21:20,21	21:20,23	138:9,23	88:10 135:1
61:4	assumed (1)	23:24 67:9	22:25 23:2	139:4 140:1	135:2 136:3
<b>Asian (2)</b>	134:24	67:13	23:7,12,13	142:7 145:1	164:17
37:22	assurance (2)	124:10,12	23:14,19	145:5,17,18	174:8
169:24	94:24 95:18	141:18	24:3,6,9,20	146:10	
Aside (1)	atmospher	143:23	24:24 25:5	153:7 154:6	<b>backyards</b> 47:6
159:9	153:10	161:16	25:6,14,19	154:8,25	
asked (4)	attempt (2)	163:5	26:5,11,14	155:4,6,11	<b>bad (3)</b> 96:14 146:3 164:5
129:6	8:23 68:9	aversion (1)	26:16 30:23	155:21	
139:24	attempted	43:2	31:10 33:4	159:18	Baker (1)
140:4 155:6	135:10	AVGAS (47)	33:12 41:1	160:25	25:15
asking (6)	attendance	19:8 20:20	42:15 43:5	161:22	balance (1)
96:23 97:4	46:19,24	20:25 25:24	45:20 46:2	166:6	150:11
97:12	attending (2)	26:7,25	46:4,11	167:10,18	Ballard (1)
109:12,22	46:14,20	47:9,11,16	47:9 48:1	168:2	158:6
125:6	attends (1)	73:9 74:21	51:9 54:9	172:12	ban (10) 47:9
assemble (1)	113:15	75:14 76:17	73:6,10	173:13,15	76:17 86:2
156:15	attention (3)	76:19,23	80:4 81:19	aviation's (1)	87:23 88:9
assessment	41:5 120:23	77:3,4	84:20 87:23	174:5	91:2,5,15
5:5,10,13	129:9	82:11,19	88:10,18,20	Aviations (1)	155:21
64:18,23	attorney (6)	83:18,20	89:9 90:6,6	64:23	169:10
65:1 75:24	37:12 72:24	84:8 85:3	90:15,17,23	avoid (1)	band (1)
assist (1)	82:3 98:5	85:16 86:3	91:3,16	119:24	17:15
49:3	176:9,12	86:16,20	92:10,20	awaited (1)	bandwidth
assistance (1)	attribute (1)	87:19 99:7	94:20 95:10	115:4	10:14 69:18
156:19	37:5	101:8 115:5	95:21 99:7	award (1)	bankrupt (2)
Assistant (5)	augments (1)	116:6 117:4	101:20	137:19	136:23
4:15,25	169:2	136:14	103:25	aware (7)	157:22
64:2,13	August (3)	143:15	104:15,18	28:8 46:6	banks (5)
142:18	30:25 75:10	144:5 157:4	106:1,11,19	100:12	124:23
assisted (2)	139:1	159:12	107:4	110:25	137:4 144:9
	l	l	l	I	

					101
144:10	21:13	behavioral	135:15	130:17	108:19
149:5	basis (5)	43:1,23	174:5	131:5,9,15	borne (1)
banned (17)	29:12 49:19	76:5 100:22	billion (2)	145:25	102:11
32:9 50:15	111:3	114:7	22:9 24:10	153:11,13	Boston (2)
50:19 53:7	133:25	believe (7)	billions (1)	153:17,24	148:22
53:25 54:6	170:15	27:7 38:2	107:1	162:4,5	163:1
101:6 106:8	batch (1)	96:11 135:3	birds (1) 53:1	blush (1)	bottom (7)
134:25	126:3	139:20	Birrueta (3)	95:4	3:20 4:4
135:3,24	battle (2)	151:20	33:20 34:10	board (7)	10:5 44:20
140:3,24	24:16	155:18	34:11	14:8 31:1	63:8 69:8
145:12	121:19	believed (2)	<b>birth (1)</b> 79:5	74:19 75:11	71:2
146:11	Bay (2) 45:16	53:24 54:5	bit (2) 133:18	75:13 106:9	Bottorf (4)
154:17	166:13	believes (2)	136:3	107:15	137:4
169:12	BC (1)	146:11	black (6)	boarder (1)	144:14,20
banning (8)	151:18	154:8	90:4 101:14	14:19	144:24
86:16 89:9	Beach (6)	Belmar (1)	128:6	boasts (1)	Boulevard
92:12 93:10	138:2,8,12	1:22	145:24	166:8	1:22
140:18	139:3,9,14	Brook (3)	152:22	bodies (4)	boundary (1)
141:4 169:6	Beacon (1)	133:1,5,9	153:1	83:15 111:5	129:25
172:9	40:11	benefit (3)	blind (1)	136:18	bounded (1)
Barajas (6)	bear (1)	29:14 51:10	149:14	168:24	166:17
92:2 110:9	112:5	55:1	BLL (1)	body (7)	brain (11)
110:12,16	bearing (1)	benefits (7)	41:24	28:17 104:8	16:25 49:24
110:12,10	128:8	5:12 38:1	block (1)	131:8,14	50:6 78:14
112:18	beat (1)	38:15 64:25	54:13	136:17	81:10,13
Barbara (2)	158:18	81:16	blocks (1)	169:1,2	101:4
148:13	beautiful (4)	150:12	36:8	body's (1)	108:20
156:5	60:8,9,10	167:23	blood (49)	131:16	111:7
bare (3)	60:13	benefitting	15:22 31:3	Boeing (2)	149:18,19
116:13	Bebe (1)	60:5	31:8 38:25	40:13 119:1	brains (3)
117:7	156:11	best (3) 29:21	41:1,4,25	bold (1)	83:15 147:3
166:20	becoming (2)	107:7	42:4,7	85:23	149:22
bargains (1)	42:1 105:25	154:19	43:17,19	bombarde	break (5)
95:3	bedrooms (1)	bestowed (1)	75:3 76:3	125:2	9:23,25
Barnes (5)	121:23	51:22	78:10,21	143:13	56:22 62:11
91:25 92:3	began (2)	beyond (3)	79:18 80:11	bombardm	69:3
92:5,9,9	52:25 69:4	42:22 80:22	80:15,16,19	106:14	breakdown
barrages (1)	begging (2)	127:11	80:23 81:1	bone (1) 78:7	150:2
123:19	53:22 54:4	Biden (1)	81:4 84:2	bones (2)	breathable
based (3)	beginning (	89:15	88:16,20	131:17	16:15
39:4,18	11:19 52:24	Biden/Har	89:25 94:21	169:4	breathe (10)
116:8	70:23	86:9 90:7	99:15 100:1	bono (2)	15:5 16:22
baseline (1)	behalf (4)	118:1 129:3	100:5,15	156:13,15	89:3 108:7
75:10	4:17 23:11	135:22	101:16	boonies (1)	109:9
basically (2)	64:5 109:20	big (7) 54:11	104:19	172:18	115:12
59:17	behavior (4)	54:22 59:21	108:17	border (1)	127:23
173:15	28:16 43:25	104:14	111:7 114:9	46:4	141:22
Basil (1)	147:6 150:6	122:25	117:21	born (1)	164:9,12
			l	- (-)	,

					102
breathed (1)	bullying (1)	10:11 11:22	20:1,19	Cassell (4)	64:23,25
104:9	106:11	34:6,24	21:13 25:12	102:16	103:23
breathes (1)	bunch (2)	39:24 44:22	candy (1)	108:6 109:4	146:24
104:6	144:14	52:4,5,12	115:16	110:18	167:4
breathing (2)	162:13	55:8,16	cap (1) 3:21	caters (1)	centered (1)
90:13 116:4	burden (1)	56:2,8	capacity (1)	38:19	89:17
brick (1)	76:6	61:22 69:10	125:7	Catherine (	centers (4)
158:14	burdened (2)	69:16 71:3	capricious	5:4	40:16 74:1
bring (3)	102:9 154:6	110:1	151:21	causal (1)	102:3 115:1
113:19,22	burdening	144:11	captioning	132:6	central (1)
121:8	85:10	167:20	3:17,21	cause (17)	43:9
bringing (3)	burn (1)	170:16	63:5,10	3:6 5:21 6:5	centuries (1)
119:17	173:5	174:19	captions (2)	6:10 31:15	78:3
140:2	burned (1)	called (13)	3:18 63:7	41:2 50:11	certain (2)
141:24	26:9	11:11,14	captured (2)	62:19 65:19	6:5 65:18
brings (1)	burning (1)	20:11 42:9	51:7,9	89:1 95:3	certainly (3)
59:14	16:7	44:12,16	car (4) 50:17	100:20,23	107:9
broad (1)	busiest (1)	70:16,20	135:2	117:6,8	128:21
25:18	166:9	110:3 167:5	163:15	152:17	130:23
Brooke (3)	business (4)	170:19	165:13	154:15	certificate (
133:1,3,4	18:20 23:14	172:14	carbon (1)	caused (4)	20:6 26:18
brothers (2)	43:8 54:9	173:19	164:1	82:7 90:5	176:1
36:11 174:5	businesses	calling (4)	carcinogen	95:12 132:7	certificatio
brought (1)	24:21	88:4 124:16	49:23	causes (7)	27:1
121:22	126:20	137:9 170:1	cardiovasc	17:11 50:5	certified (4)
brown (1)	busy (2)	calls (1)	31:19 79:9	89:21	72:24 82:3
128:6	40:25 45:23	145:8	89:21 92:15	124:19	86:5 94:5
Bruce (3)	buy (1) 163:5	camera (10)	100:23	141:3 147:5	CERTIFY
72:5,21	Byron (1)	11:12 Ì4:Í	128:4	164:8	176:3,8
77:11	157:19	44:14 49:6	131:23	causing (3)	cetera (1)
brunt (2)		70:18 72:8	care (3) 74:1	49:23 111:7	146:8
128:8	<u> </u>	77:13	102:3 120:4	150:3	chains (1)
166:21	C-Tac (1)	126:10	carelessly (1)	<b>CC (2)</b> 3:19	53:1
Bryce (3)	118:24	152:6	47:20	63:7	<b>chair (1)</b> 14:8
129:13,15	<b>C29 (5)</b> 14:18	171:13	cares (1)	CDC (2)	challenging
129:16	14:23 16:6	campaign (1)	135:19	114:8 131:6	77:2
Buchanan	16:12 130:1	36:20	carried (1)	Cecelia (5)	change (1)
45:21,23	calcium (1)	campaigns	76:6	91:25 97:21	144:4
47:10	149:18	120:7 158:9	cars (5) 50:19	97:22,23	changes (1)
Buchanan'	California	cancer (3)	125:14	98:5	20:7
46:22	45:22 46:16	74:11	128:19	cede (1) 44:2	chapter (1)
<b>build (1)</b> 15:7	72:19 80:13	108:16	135:1	<b>CEH (4)</b>	142:6
building (2)	96:6 99:15	138:15	143:20	115:1,6,18	charter (1)
1:21 157:22	106:8 116:9	cancers (1)	Carvajal (3)	116:7	157:19
buildings (1)	139:13	169:4	112:21	Centennial	chat (26)
121:24	161:14	candidacy	113:6,8	105:18	10:4 11:5
bully (1)	166:9	158:17	case (2)	Center (7)	11:21 12:21
140:22	<b>call (23)</b> 10:6	candidate (4)	124:22,22	5:10,12	12:25 33:19
L	I	<u> </u>	I	I	I

					103
35:17,19	31:13,15	125:11	74:17	106:10	close (14) 8:3
40:1 44:20	32:17 33:6	127:13,22	circles (3)	107:15	21:5 29:22
45:3 52:7	39:2,6	127:25	28:23 29:2	117:22	67:16 97:6
55:15,25	40:16 41:21	128:2	38:22	140:23	110:25
56:7,19	42:7,13,14	130:10,17	circular (1)	145:4	112:14
69:8 70:9	43:18 46:14	131:5	123:12	161:13	116:3 142:6
71:1 91:25	47:5 48:8	133:19	cited (2)	168:16	159:12
112:21	48:11 50:4	134:14,20	41:22	169:10	162:24
126:7	58:3,16,17	136:5,17,21	153:23	170:9	164:12
148:12	59:4,20	140:25	cities (2)	clarifying (2)	169:11,21
162:19	60:6,9,24	141:11,16	156:22	6:17 66:6	closed (6)
165:19	61:1,2,5,12	141:21	172:22	class (2)	3:18,21
174:18	73:4,17,25	142:3	citing (2)	135:8,10	29:24 63:7
Chavez (1)	75:2,5	143:19	132:7 160:5	classical (2)	63:10 135:6
74:17	76:10 77:20	145:20,24	citizen (1)	157:20,21	closely (1)
check (2)	77:22 78:21	146:7,12	45:15	<b>clean (6)</b> 7:14	46:6
42:9 49:5	78:25 79:1	147:2,20,22	citizens (5)	51:23 67:4	closer (2)
chemical (3)	79:4 80:1,5	150:23	49:15 53:9	82:19 83:7	21:4 31:7
21:12 115:9	80:7,12,18	151:1	103:13	169:1	closes (2) 7:3
149:12	81:9,16,17	153:12,13	136:7	cleanearthf	66:17
chemicals (2)	83:16 84:1	153:14,22	171:22	144:25	closing (2)
115:23	86:18 88:17	153:25	city (16)	145:8 148:8	10:15 69:19
149:9	88:21 89:1	161:18	14:21 15:6	cleansing (1)	cloud (2)
cherish (1)	89:6,16,23	162:2,2	15:12 38:6	169:1	109:3 147:9
174:1	91:3,17	children's (	113:15,17	clear (7) 31:6	clout (1)
Cheryl (1)	92:21 94:21	17:16 48:17	130:1 134:5	46:7 105:24	121:14
78:23	96:18,24	78:10 79:17	135:18	105:25	coalition (6)
child (10)	97:14 98:21	80:15,16,19	137:23	119:8	18:10 25:18
17:3 28:7	99:5,16,17	81:13 89:22	139:14	128:11,11	40:8 82:16
74:1 78:17	99:19,22	90:9 114:6	143:25	cleared (1)	152:14
102:3	100:2,4,15	115:15	158:1	155:11	154:8
113:15	100:21	118:3 142:1	166:18	clearly (4)	<b>code (2)</b> 74:5
121:3,3	101:14,15	145:3 147:2	167:4	13:14 71:24	109:21
130:21	101:17	154:2 169:3	172:15	83:22	codes (1)
131:10	102:3	China (1)	civic (1)	145:14	40:14
child's (2)	104:17	123:5	30:19	Clearwater	Codirector
43:20	105:9,13	<b>choice (2)</b> 4:9	civil (1) 94:2	133:20,23	126:17
131:14	106:13	151:17	claim (1)	134:3,5,7	coerced (1)
childhood (	107:2,8,10	chosen (1)	105:5	134:15,17	106:17
41:24 50:8	107:19	149:10	claims (1)	135:12,18	cofounder
138:14	108:11,12	Christian (4)	43:15	135:18	49:11,13
142:24	108:13,25	35:22 40:3	Clara (21)	click (6) 3:19	cognitive (2)
children (1	109:11,16	40:3,7	29:21 31:2	3:20 63:7,9	81:15 117:8
15:20,21	111:8,14,18	chronic (4)	31:20 32:9	63:18,19	cohesions (1)
16:21 17:1	112:10	50:6 100:24	36:7 47:11	climate (2)	42:24
28:12,13,21	114:9,12,12	102:10	48:15 72:16	163:2 165:1	cohort (1)
29:3,10,16	117:9,15	138:16	76:15 82:6	Clinic (2)	76:10
30:1 31:4,6	119:13	Cindy (1)	82:11 88:22	72:25 82:4	Cola (2) 3:25
		l	l	l	I

					104
63:14	156:20	48:23 52:3	26:19	117:19	100:4
Colfax (1)	165:3,4	55:4,23	commercia	128:6,12	compel (1)
1:21	172:23	56:12,14,15	23:25	129:4,5	77:3
collateral (1)	comes (3)	56:17,22	Commissio	145:19,23	compelled
51:14	58:8 108:22	57:11 61:18	144:1	146:1,7	86:9 120:3
colleagues	156:14	62:3,10	176:24	149:1,4	complaint (
87:17	comfortabl	65:6 66:5	commissio	156:1 165:6	77:1
137:22	165:9	66:10,12,16	36:7 158:17	167:22	complete (4)
collected (1)	coming (11)	66:19,24	commissio	169:22	12:8 27:1
80:12	11:6 58:11	68:18 69:2	144:1	170:6,7,24	71:15
collection (1)	70:9 74:16	70:4,17,23	commitme	community	136:23
138:22	96:11	71:6,8,15	86:10	16:17 28:13	completed
collective (1)	108:22,25	71:21 73:7	102:20,22	29:4,9,17	48:4,14
25:5	126:8	77:8 81:22	116:22	29:25 32:3	completely
collectively	135:21	87:1 91:21	118:2 129:3	37:14,19,20	50:15 117:3
6:12 66:1	164:17	95:24,25	commitme	37:21,25	128:10
94:14	170:10	97:20 103:1	90:8 171:19	40:8,15	completing
college (3)	Commenci	107:23	committed	46:9 47:2,7	21:6
47:2 126:21	1:9	109:25	19:15	47:21,22	comply (1)
127:18	comment (	112:6,17	committee	48:13 49:16	20:8
Collier (4)	7:3 8:3	114:15	132:5	59:19 60:5	compound
156:12	11:15 12:7	118:6,9	commonly	60:13 74:13	74:12
157:17,25	12:10 22:10	122:6 126:1	25:20	74:14 84:21	comprised
158:16	34:21 44:16	129:11	communiti	87:25 88:15	14:24 19:17
color (14)	55:24 56:6	132:24	30:18,24	89:2 96:21	130:6
37:22 74:2	66:17 67:17	133:16	31:22 32:21	97:1 102:8	compromis
84:13 92:21	71:14,17	137:1 142:9	33:3,11	102:16	19:2 95:2
101:13,19	98:13 115:3	144:8,25	39:7,17	108:6 109:2	<b>con (1)</b> 137:8
117:20	125:20,24	148:10	42:12,22	109:6,7,8	concentrat
129:4	commente	152:2 156:4	43:12 46:3	112:6,8,10	53:9
145:20,23	159:16	158:21	46:5 51:17	116:15	concentrati
156:1	commentor	162:11	61:5 76:2	118:23	41:23
161:19	99:12	165:16	81:17 82:12	123:2	108:18
169:23	comments	166:2 168:7	84:12,13	124:20	145:25
170:6	5:17 6:16	171:7	85:7 86:12	130:12	concentrati
coma (1)	6:21,23 7:2	174:12	88:11 89:11	135:11	78:22 79:18
50:10	7:5,9 9:7,21	175:2,4,11	89:16 90:4	154:6 158:1	79:19,21
combined (1)	10:25 11:11	175:16	90:13,19	163:1,2,3,9	80:16 112:3
42:21	11:19,25	commerce	94:23 97:7	169:8,9	concern (4)
combusted	12:2,8,13	174:6	97:8,13	170:10	53:19
83:20	13:8 17:21	commercia	98:18,23	companies	131:24
combustio	22:14 27:5	95:7 118:25	101:13,13	24:22 115:8	146:1
83:18	27:19 30:3	119:16	101:19,19	136:9 158:7	166:16
come (9)	30:4,6 33:9	121:7,18,21	101:22	company (1)	concerned
38:22 93:11	33:16 34:3	122:25	102:21	96:13	28:10 33:2
97:11	34:14 35:11	159:15	109:4,15,21	compared (	45:15
101:12	39:20 44:5	172:22	109:23	41:12 100:2	113:21
142:1	44:13,24,25	commercia	115:7,21	compariso	124:1,5
	I		I	I	

concerning	170:18	85:8 95:17	109:1,8	6:11 65:25	136:7,16
138:18	Congressm	constructiv	136:10	convenient	150:11
concerns (4)	170:18	151:23	163:18	29:19	155:3
85:14	Congressw	consultanc	continued (	convey (1)	Costa (2)
115:19	170:17	156:13	76:24 88:12	22:24	45:20 48:14
150:23	connected	consultant	105:8	<b>cool (1)</b> 173:1	costs (1) 85:9
166:4	11:13 44:15	72:23 77:25	continues (3)	cooling (1)	Council (2)
concluded	53:24 54:5	145:7	15:6 87:22	173:3	139:14
105:1	70:19	Consultant	93:16	Coon (11)	143:25
131:23	connecting	16:8	continuing	12:23 22:15	counsel (10)
conclusion	52:17	consume (1)	32:17 91:13	22:16,17,19	5:7,9 18:18
100:13	connection	115:11	96:22	22:22,23	64:20,22
conclusions	10:10 37:2	consumer (1)	164:23	23:4 27:6	73:1 82:5
75:2	69:15	115:10	continuous	27:21 47:24	98:6 176:10
Concord (1)	connection	consumpti	47:17 138:3	cooperatio	176:12
45:21	10:14 69:18	155:24	Contra (2)	19:13	count (2)
condition (1)	consciousn	contact (4)	45:20 48:14	coordinate	47:3,8
96:14	135:11	11:21 70:25	contracted	25:22 85:23	counties (1)
conditions	consensus (1)	130:11,17	80:20	coordinati	15:25
76:18 128:5	42:11	contain (1)	contractor	147:5	counting (1)
conduct (6)	consequen	153:7	3:13 5:15	Coordinat	107:16
7:13 15:23	93:15	containing	63:1 65:3	18:8 25:25	countless (2)
25:1 26:21	117:16	154:20	contradicti	copetitione	116:14
67:2 93:23	164:5	contaminat	100:13	14:10	120:20
conducted	conservatio	125:8	contrast (2)	copies (2)	countries (2)
8:10 10:19	113:10	contaminat	47:15 80:24	62:2 175:3	38:22
16:12 46:12	consider (2)	47:14 108:8	contribute	copying (2)	138:20
67:23 69:23	39:3 118:6	125:10	3:6 5:21 6:5	7:21 67:10	country (23)
79:7 96:17	considerati	153:20	6:10 62:19	core (1) 85:5	24:1,13,20
conducting	33:9 50:17	contaminat	65:9,19,24	corner (1)	76:20 82:13
7:13 33:10	considered	60:11	83:18 95:9	149:21	82:15 84:18
67:3 73:3	7:11 67:1	contaminat	99:3 152:17		85:19 88:1
conference	considerin	47:15 92:16	contributes	50:25	88:7,12
148:25	51:16	99:9 102:12	22:8	corollate (1)	89:2,12
confined (1)	consistency	context (2)	contributin	76:4	94:6 99:5
157:13	78:11	26:6 75:7	82:7	coronary (4)	106:22
confirm (1)	consistentl	continually	contributio	79:6,12	121:1 123:4
99:6	42:6 130:10	28:23	80:3	92:18 132:6	138:11
confirmed	consisting (	126:23	control (5)	corporate (1)	139:10
16:15	18:11	continue (20)	85:12,22	51:8	145:4
conflict (2)	consists (1)	20:8 32:13	103:24	correction	154:14
9:3 68:14	166:11	32:15,22	146:24	103:14	164:5
confront (1)	constant (3)	33:11 50:2	150:6	correlated	counts (1)
116:16	60:16,16	51:12,17	controlled	100:14	128:13
Congress (1)	123:19	58:1 89:3	74:25	cost (10)	county (56)
25:11	constantly	90:18 91:4	controls (2)	19:11 25:1	15:25 29:14
congressio	145:20	96:25 97:14	9:5 68:16	43:17 65:9	29:16,21
158:5	constituent	107:6,20	convenienc	65:24 86:4	31:1,2,21
i e	1	•		•	

	ı	T			100
32:9 36:7	60:25 61:1	35:5,6	damaged (2)	9:24 26:10	decades (22)
38:6 40:12	111:11,15	cumulative	58:23	48:7 54:23	36:16 74:14
45:21 47:11	111:17	14:16 54:24	109:17	57:25 59:10	83:11 86:17
48:15,15	crashed (1)	132:13	damages (3)	59:13 60:17	90:24 91:10
49:15 72:15	111:16	146:21	77:22 91:19	61:9 64:10	93:7 101:7
72:16,18,23	crashing (1)	curious (1)	147:2	108:9 111:3	119:9,10
73:19 74:15	29:7	134:1	damaging (	112:15	120:1,15
74:20 75:11	create (4)	current (7)	31:10,12	115:23	121:19
75:21 76:14	42:22 76:18	14:14 23:24	32:4 83:19	126:24	122:1
76:22,25	126:18	27:15 28:11	danger (6)	130:18	145:11
77:3 82:5,9	127:9	29:13,17	29:6 46:7	139:5	146:12
82:12 83:24	created (2)	79:20	91:9 113:13	151:15	154:5,18
85:16 88:22	48:15 51:4	currently (5)	128:11	daycare (1)	155:5 168:3
106:10	crime (3)	11:25 20:16	160:15	146:8	169:2,9
107:14	54:1,7	26:23 71:7	dangerous	days (2)	decelerated
117:23	85:12	168:20	16:19,21	108:9 111:3	79:21
124:24	crimes (1)	customers	29:9 111:4	deal (5)	December
134:18,19	50:9	24:23	111:10	122:21	149:1
142:21,22	crisis (15)	cut (1)	117:14	157:21	decent (1)
143:25	17:14 41:12	123:14	151:20	165:12,13	142:4
146:4	47:14 48:19	cycles (1)	153:16	171:19	deciliter (7)
152:21,23	53:21 75:8	150:2	169:18	dealt (5)	75:5,9
157:17,25	82:25 83:12	Cynthia (5)	dangers (6)	163:14,15	80:24 81:2
158:16	84:4 91:7	12:22 13:22	50:1 119:9	163:16	81:5 100:1
161:13	99:5 100:8	13:22,24	121:11	164:16	100:7
168:16,18	117:25	14:8	150:18	165:12	decision (1)
169:10	147:23		151:19	dear (1)	112:7
170:9	171:4	<u>D</u>	156:25	110:17	declaration
171:21	Cristina (5)	daily (10)	dark (2)	death (5)	167:25
county's (1)	112:21,24	15:3 29:11	120:15	50:1,10	declare (3)
84:1	113:1,4,8	47:17 49:19	142:6	89:19 92:19	81:18
couple (3)	criteria (3)	93:5 111:2	data (12)	93:21	167:18
36:19 172:1	83:6 119:21	130:21	6:15,20	deaths (6)	171:3
172:8	135:8	143:22	15:23 20:13	79:6,13,14	declared (2)
courageous	critical (5)	162:5	66:4,9	92:15	102:19
106:9	21:18 24:13	170:15	74:10 99:12	117:11	143:19
course (2)	42:10 53:19	damage (17)	100:10	132:7	declawing (
128:2	83:2	28:11,18	119:7,22	Debbie (1)	137:24
160:16	Crow (1)	29:25 42:17	151:4	118:22	decreased (6)
court (2)	157:16	49:24,25	date (3)	<b>Debi</b> (5)	43:2 101:1
13:14 71:25	cruise (1)	50:6 51:14	140:18	112:22	103:16,19
cousins (1)	140:9	83:14 89:22	160:16	118:10,11	103:19,20
36:12	crystal (2)	108:20	176:6	118:15	dedicated (1)
Covid (2)	105:24,25	111:1	daughter (1)	145:2	120:6
24:16 164:6	cubic (1)	117:11	138:14	debilitatin	deep (1)
crash (10)	79:20	124:18	David (2)	121:4 150:5	149:16
59:23,24,25	Cubides (4)	131:3,12	129:13,16	decade (1)	deeper (1)
59:25 60:24	33:21 35:3	150:3	day (19) 4:22	116:18	164:7
	l				

	<u> </u>	I			167
deeply (1)	160:20	165:2	26:14	136:11	66:7 68:11
33:2	169:10	deserve (2)	developing	diminished	disease (15)
Deer (1)	170:11	141:22	6:23 9:7	78:15 81:11	79:6,9,12
138:11	demonstrat	162:6	16:25 33:7	93:22	89:21 92:15
defends (1)	43:24	designed (4)	66:12 68:18	dinosaur (1)	92:19 93:23
93:20	demonstrat	25:21 59:18	83:15 98:21	53:17	100:24
Defense (1)	26:21 27:9	59:18,19	developme	dire (1)	102:11
98:6	denial (1)	designs (1)	17:16 19:23	100:18	103:23
defer (1)	156:25	20:7	20:18 31:15	direct (2)	117:12
121:17	denied (1)	desired (1)	78:14 81:10	85:7 153:19	128:5 132:7
deficits (3)	160:12	63:20	89:22 101:4	direction (1)	138:16
78:15,17	densely (8)	despite (7)	117:9 147:4	74:19	146:24
81:10	14:24 16:11	50:1 76:23	developme	directly (9)	diseases (1)
definitely (1)	40:20 73:22	85:14 94:20	127:16	42:23 57:23	31:19
105:15	84:19 102:1	139:9	developme	58:25 73:21	dislodged (1)
degrade (1)	130:5	141:16	145:21	119:17	149:18
95:1	134:19	157:24	devil (1) 95:4	121:8,22	disorders (4)
degrading	deny (1)	destroy (1)	diabetes (1)	166:17,19	93:24
150:5	49:22	155:8	74:11	director (11)	100:22
degree (2)	departmen	Details (2)	Diablo (1)	5:4,9,11	114:7
78:11	38:12 80:13	7:4 66:18	46:18	30:16 64:17	117:10
130:13	106:21	detectable	dialogue (2)	64:22,24	disparities
delay (11)	142:19	50:11	3:18 63:6	113:9 149:5	74:9 98:17
48:19 92:12	departmen	detected (3)	Diaz (1)	159:5	98:23
93:10	106:16	42:13	158:6	173:19	disparity (1)
105:25	depending	117:24	die (3) 53:17	disabilities	166:22
107:6	63:20	131:15	92:13 93:13	49:25	dispersal (1)
132:20	depraved (1)	detecting (1)	Diego (3)	100:21	41:23
141:24	94:16	25:3	146:4 148:5	114:7	disperses (1)
144:6	Deputy (9)	deteriorati	171:21	117:10	150:17
145:13	4:15,24 5:4	120:18	different (8)	disadvanta	display (2)
146:18	64:2,12,17	determinat	20:20 37:6	92:22	11:2 70:6
160:5	72:15 82:9	127:7	37:13	disasters (1)	displayed (2)
delayed (1)	83:24	160:14	118:15	24:14	12:1 71:7
100:25	derived (1)	determine	119:15	disconnect	disproporti
delays (2)	95:6	159:23	122:14	4:13 63:25	167:22
127:3,16	descending	160:7	143:9 149:9	discontinu	disproporti
deliberate (	150:24	determined	difficult (3)	54:17	84:12 90:3
161:9	describe (1)	42:5	58:2,3 60:7	discover (1)	92:23
deliberatel	175:17	detriments	difficulties	134:22	145:23
139:20	described (3)	78:8	10:4 13:6	discovered	disregard (1)
delinquenc	8:7 38:11	devastatin	13:10 44:18	134:2	109:2
93:24	67:21	16:25 95:11	61:22 69:7	discussed (1)	disrespect (
deliver (2)	describing	98:19	108:11	83:13	34:19
43:10 47:20	38:7	develop (2)	difficulty (3)	discussing	distances (1)
delivered (1)	description	31:18	10:10 69:14	150:10	42:5
172:5	8:24 68:10	155:15	97:1	discussion	distribute (1)
demanding	desert (1)	developed (	dig (1)	6:18 8:25	155:16

distributed	dolled (1)	53:13	15:3 93:5	163:1	131:13,19
23:25 32:4	95:6	draw (1)	duty (2)	166:18,19	effects (25)
53:15 54:18	domestic (1)	107:15	51:21 76:1	166:23,25	5:12 16:25
124:19	42:18	drawn (1)	Duwamish	eastern (6)	28:14 32:2
distributio	Donalds (2)	150:1	40:7,9	7:4 30:24	32:5 41:3
140:16	157:19	drew (1)	dynamics (2)	56:24 62:12	41:20 42:20
141:8	158:6	106:12	123:1,15	66:18 69:5	43:22 48:7
District (1)	donations (1)	drink (1)	123.1,13	easy (2)	49:18,24
46:18	158:7	115:11	E	25:16 157:6	64:25 72:22
disturbing	door (5)	drinking (2)	e-mail (1)	eat (1)	74:20 91:14
29:15	36:21,22	47:15 100:7	11:22	108:23	100:20,23
diverse (3)	45:22 158:4	drive (1)	<b>EAGLE (10)</b>	echo (1)	104:7 117:7
22:2 40:19	169:15	128:21	18:9,10,24	166:2	131:24
82:17	Dorinne (3)	driver (1)	19:5,15,17	EcoLatinos	132:1
diverting (1)	52:11,13,14	172:5	25:20,20	113:9	145:23
85:13	dose (2)	driving (1)	26:1 103:14	economic (	154:16
Division (6)	16:23 78:6	130:18	ear (2) 58:23	19:3 22:9	167:22
5:5,11,13	double (1)	drop (1) 86:6	59:5	24:10 42:19	efficient (2)
64:18,24	84:4	dropped (2)	earlier (8)	42:23 48:1	19:2 24:25
65:1	doubt (1)	115:24	27:11 32:19	93:25 98:22	efficiently (1)
docket (15)	99:1	116:5	69:3 76:22	102:11	16:20
7:22,22,25	download (1)	drops (1)	90:16	163:22	efforts (1)
8:6 12:14	122:13	53:12	103:14	164:3,4,19	48:4
45:1 56:16	downloads	drums (2)	133:2	165:11	egregious (1)
56:19 62:5	10:17 69:21	58:23 59:5	153:21	economical	54:14
67:11,11,14	downwind	due (8) 14:22	early (5)	92:22	eight (4) 91:5
67:20 71:22	15:9 75:3	15:1 48:18	28:15 57:25	economy (2)	105:9
175:6	81:4 99:20	56:17 89:3	60:18	126:19	133:20
doctor (1)	138:2	92:16 95:11	108:17	164:19	157:18
129:16	dozens (1)	151:22	142:24	ecosystem (	either (3) 4:5
doctors (2)	77:24	duly (2) 7:11	earnings (1)	166:15	63:19
111:6	<b>Dr (25)</b> 72:5	67:1	76:9	educate (1)	153:19
115:17	72:20 74:21	dump (1)	earth (14)	146:14	Elaine (5)
document (	74:24 75:10	146:6	14:10 87:13	educated (1)	35:22 48:25
38:14	75:12,18,22	dumping (1)	87:17 88:3	54:25	48:25 49:1
documents	75:22 77:11	136:5	136:12	education (2)	49:10
38:6 83:8	77:12,15	duration (2)	150:1 159:6	30:20 85:11	elderly (1)
doing (11)	80:10 82:10	8:16 68:2	159:6,10,13	educationa	60:7
37:24 39:16	83:13 99:11	dust (3)	159:25	157:23	elected (2)
45:25 60:4	104:16	47:18 77:21	160:9,17	effect (6)	74:18,19
76:17	117:20	153:20	167:9	28:16 41:5	electric (1)
106:17	129:12,15	dusted (1)	easier (2)	43:19 59:6	124:10
116:1	129:16	15:16	38:20	73:4 114:5	electronica
121:21	130:8 131:4	dusting (3)	157:10	effected (3)	7:24 67:13
124:21	132:3 145:1	47:21	east (12) 15:8	33:12 42:23	elementary
129:2 158:9	dragged (2)	130:21	74:8,18	118:25	46:20,25
dollars (2)	48:6 119:11	142:3	84:19 88:24	effective (4)	113:25
50:23 55:1	dragging (1)	dustings (2)	99:14,19	17:2 25:1	127:21
	l				

143:6	88:7 89:14	34:17	90:11 95:14	83:5,20	87:15 95:1
152:25	117:2 139:1	emphasis (1)	102:23	84:5 86:7	120:10
elevate (2)	152:15	102:21	104:11	89:8 94:6	138:25
171:1,1	154:13	emphasize	105:23	99:2,8,24	environme
elevated (12)	155:20	131:4	106:25	100:13	3:2 4:18
41:1 42:6	159:17	emphatical	109:13	101:10	32:22 40:22
46:13 50:7	160:15	75:13 76:15	116:20	104:3	43:10,11
76:3 99:15	emissions (	employ (1)	127:1,4	123:14	49:17 52:22
104:19	1:6 3:4,10	106:2	128:15	129:22	53:3 62:15
117:21	5:19 6:4	employee (2)	129:20	130:3	64:6 72:22
127:15	16:1,12	176:9,11	132:16	140:11	72:25 82:4
130:16	17:10 19:8	empower (1)	151:16	153:5 161:6	84:9 86:11
162:4,5	23:2 25:19	95:16	154:11	166:11	87:14 88:4
elevations (1)	31:25 41:9	empty (1)	155:19	169:19	89:17 90:9
78:16	43:24 51:19	59:21	159:11,19	engines (13)	91:7 98:7
eleven (2)	62:17,23	enable (1)	159:21	3:5 5:20	98:10,12
9:23 133:19	65:8,18	159:22	160:2,23	26:17 62:18	102:9
eliminate (5)	73:11,11,13	encompass	161:1,4,24	65:8 123:17	113:10
18:8 25:19	73:14 74:21	6:9 65:23	164:14	127:19	115:1 116:1
102:17	79:24 80:6	encourage	167:19	152:16	116:22
115:14	80:15 83:5	11:13 12:11	172:11	154:22	118:3 120:7
144:5	83:17,23	44:14 70:18	175:12	173:1,3,5	145:17
eliminating	91:1 99:2	71:19 117:1	endangerm	175:13	148:21
69:20 84:7	103:16	129:1	65:23	English (6)	156:13
85:17 86:23	105:1,16	151:21	endangers	4:6,8 63:19	158:13,15
95:20 154:8	106:15,20	173:22	17:12	74:4 84:25	159:7 163:2
Elizabeth (4)	107:3 117:4	175:15	130:23	102:7	165:1,11
165:19	117:19	endanger (	163:19	enjoy (1)	166:4 167:4
168:9,11,15	119:21	3:7 5:22 6:3	ended (1)	59:13	170:22
Ellen (9)	121:7 127:8	6:7 47:22	51:7	ensure (6)	173:18
112:22	132:11	62:20 65:11	ends (2)	8:24 25:21	Environme
118:13,13	138:7,12,18	65:17,21	12:11 71:18	31:23 51:22	154:10
122:7,8,9	139:3,5,15	127:9	enduring (1)	68:10 127:3	environme
122:11,15	139:23	152:18	83:14	<b>enter (2)</b> 4:1	149:25
122:18	141:12	endangere	energy (1)	63:15	<b>EPA (142)</b>
email (6)	153:19,21	159:24	120:21	entire (9)	3:14 5:14
44:21 55:16	159:15,23	160:8	enforce (1)	26:5 81:17	7:11 8:22
56:1,7 71:2	160:7,11,21	endangerm	98:9	86:6 90:15	10:21 15:14
174:19	161:20	1:5 3:9 6:9	enforced (1)	94:5 106:11	19:10 31:12
embarrasse	166:3,21	6:12 14:12	157:16	123:8	37:23 41:2
61:4	175:13	17:9 23:1	enforceme	125:18	43:3 45:1
emergency	emitted (3)	33:10 43:4	22:4	145:22	46:9 48:11
22:5 38:7	79:23 104:4	46:10 47:7	engine (30)	entities (1)	50:15 52:24
39:11	154:23	48:20 62:22	6:4 16:6	94:25	53:5,22
147:24	emitting (3)	66:1 76:16	17:7 20:7	environme	54:3,12,15
emission (13)	84:17 94:14	81:19 82:7	41:7,17	20:16 24:25	54:21 56:21
18:9 43:9	105:19	83:8 86:17	42:8 54:25	30:21 46:5	62:6 63:2
83:1 86:2	emoji (1)	87:19,21	65:18 73:12	47:16 51:24	64:2 65:2
	I			I	I

67:1 68:8	151:10	equipment	evaluate (1)	149:4	10:9,15
69:25 73:2	152:14	124:14	25:12	Executives	69:14,19
73:9,15	153:21	equities (1)	evaluation	18:21	74:9 101:2
76:16,17	154:3,3,14	150:11	20:1 21:6	exempted (1)	110:21,22
79:17,22,25	154:22	equity (1)	75:24	53:15	127:14
82:6,18,23	155:18,23	89:18	event (1)	exercise (1)	128:4
83:10 84:10	158:12	Ernesto (4)	41:14	54:16	experience
85:25 86:21	159:14,18	92:1 110:9	eventually	exhaust (1)	74:13 84:2
87:18,21	159:20	110:10,18	105:3	28:22	100:5
88:9 89:10	160:1,3,5	error (1)	evert (1)	exist (3)	experienci
90:18,22	160:10,11	54:14	47:21	128:23	13:5 171:4
91:2,8,9,11	160:20,23	especially (	everybody	143:10	Experimen
92:25 95:13	161:2,7,15	28:12 33:6	4:3 13:4	173:15	18:19 23:15
96:23 97:4	161:19	50:4 78:25	49:21	existence (1)	expert (2)
98:15,16	167:17	98:20	156:24	106:22	74:22 132:2
99:4,10	170:1,16,19	113:23	157:2	existing (1)	experts (3)
101:24	173:12	131:4	164:20	98:22	72:21 88:15
102:22	175:7	143:19	everyday (8)	exists (1)	140:4
104:2,22	EPA's (25)	147:1,20	28:20 32:18	157:7	Expires (1)
106:16	4:14 5:7,8	160:24	60:6 61:9	exited (1)	176:24
107:9,17	6:8 7:22,24	169:3 170:6	91:17 92:12	55:8	explain (3)
109:12,14	14:11,13	essence (1)	109:9 115:9	expansion (	31:9 108:20
113:11	43:9 53:12	105:8	everyone's	15:13	157:11
115:2 116:5	64:20,21	essential (1)	118:6	103:13	explained (2)
116:18,21	65:22 67:10	24:20	evidence (6)	113:16,18	82:10 83:25
117:1 119:8	67:13 82:21	essentially	8:11 67:24	124:4	explanatio
119:10,11	82:25 83:3	131:6	83:4 94:20	171:22	164:17
119:20	83:7 86:10	established	131:25	expect (3)	exposed (24)
120:7 121:6	86:11 89:13	54:12 79:4	149:15	21:14 78:10	16:23 31:17
121:9,15,16	102:19	131:3	examined (1)	122:4	31:22 32:18
121:20	121:5	163:14	78:5	expectancy	32:23 33:3
124:5,16	175:11	establishm	example (4)	53:20	36:16,25
127:2,7	EPA-HQ	163:13	51:8 58:7	expected (4)	51:18 53:14
128:15,25	7:23 56:16	estimated (6)	101:23	71:6 136:7	85:7 91:4
129:1,19	62:5 67:11	24:10 46:19	150:10	136:16	96:22 101:2
130:24	71:22 175:6	73:15 79:22	examples (1)	155:25	111:9
131:22	EPA-HQ	79:25 99:25	38:13	expecting (1)	117:15
133:14,15	12:15 45:2	estimates (1)	exceeds (2)	136:20	127:22
135:22	epapublich	76:8	140:9,10	expediate (1)	128:4
136:19	11:22 44:22	et (1) 146:8	excess (2)	116:6	141:11
139:17,21	55:16 56:8	ethically (1)	80:23 81:5	expedite (3)	143:22
139:24	71:3 174:19	86:16	excuse (2)	27:8 43:4	145:21
140:15	equal (1)	ethnic (1)	125:16	95:20	149:20
145:10,12	100:4	169:24	141:2	expeditious	169:13
145:16	equally (1)	Europe (1)	Executive (6)	17:15	170:14
146:11	117:15	79:7	30:16 72:15	expense (1)	exposing (2)
147:11	equates (1)	European (1)	82:9 83:24	101:12	29:24
150:15	134:8	38:20	126:17	experience	127:25
	<u> </u>	<u> </u>	I	1	ı

exposure (	53:17	125:22	110:22	68:13 70:2	126:2
14:16 16:18	extra (1)	facing (3)	111:8	74:6 85:1,4	132:15
29:6 31:12	138:18	94:23 99:5	113:14	85:23 95:16	160:14
32:8 36:15	extremely (6)	121:19	far (2) 102:13	136:20	162:18
36:18 37:6	50:9 58:4	fact (8) 26:12	174:4	144:3	171:8
43:23 50:8	59:3 60:17	38:10 76:24	farm (2)	157:10	174:25
74:25 75:1	113:21	99:21 132:3	162:25	158:11	finalization
78:14,25	153:16	134:14,22	163:9	168:2	48:12
79:16 80:4		141:16	farming (1)	173:14	finalize (8)
81:9,14	F	factor (4)	125:18	175:17	43:4 46:10
83:8,11,14	<b>F</b> (1) 146:5	79:4,8,12	farmland (3)	<b>feel (1)</b> 60:21	48:20 86:21
84:14 85:8	<b>FA (1)</b> 20:4	132:6	123:9 125:1	feeling (2)	102:23
85:15 89:17	FAA (47)	factors (2)	151:3	60:23 61:7	116:20
89:19 90:3	17:4 20:14	42:21 81:13	farms (3)	fees (1) 95:7	161:4,24
90:5 91:10	20:18,23	facts (2)	123:23,23	feet (3) 24:7	finalized (3)
91:13,14,15	21:1,15	49:20 140:4	124:20	119:11	47:7 89:13
95:13 98:17	24:5,7 25:9	fail (1)	farther (1)	138:5	155:19
98:19 99:3	25:18 26:12	151:19	100:3	<b>felt (1)</b> 37:3	finalizing (3)
99:17,24	26:24 27:1	failing (1)	faster (1)	fertility (2)	86:2 90:11
100:18,19	27:7,9	51:10	16:22	49:25 101:1	127:3
100:23,24	50:21,22	fair (4) 97:10	fathers (1)	<b>fetu (1)</b> 101:4	finally (10)
102:17	51:8 86:5	147:17	108:10	fetuses (1)	6:25 8:22
116:10	90:14,16,17	152:13	faulty (1)	92:25	43:10 66:14
117:14,17	90:22 93:7	154:7	119:22	field (5)	68:8 86:15
119:4 131:2	93:15,19	fall (4) 53:24	favorable (1)	16:13 40:13	124:3 154:4
131:8,21	94:2,24	54:6 82:15	104:20	45:21 74:22	161:5
132:8,9,10	95:6,18,19	90:4	Fax (1) 1:23	119:1	167:18
132:12,14	101:11	false (2)	FBOs (1)	fields (3) 46:4	finance (1)
143:17	106:11	58:12,13	116:8	124:20	158:8
146:15,22	117:2	familiar (2)	fear (1)	127:22	financed (1)
154:15	132:18	156:22	111:21	fight (3)	54:25
168:24	135:12	166:6	fearful (1)	142:5 159:8	financial (1)
169:7,18	140:15,18	families (17)	111:14	165:5	94:9
170:13	140:21	32:7 37:4	feasible (1)	fighting (4)	financially
exposures (9)	141:25	40:21 42:22	86:3	22:3 116:17	176:13
28:14 84:7	145:10	47:5 48:6	feature (5)	145:3 164:2	<b>find (6)</b> 15:4
85:19 86:12	155:10,23	73:5 74:8	10:4 11:21	figure (1)	78:4 109:12
88:25 89:14	161:8,15	91:4,18	44:20 69:8	172:3	139:6
115:9	173:6 174:4	108:7	71:1	<b>filed (4)</b> 88:3	151:17,19
119:19	FAA' (1)	115:21	February (1)	158:16	finding (53)
150:9	51:13	116:2	18:24	159:25	1:5 3:4,9
express (1)	facilitate (1)	119:13	federal (27)	160:19	5:19 6:12
28:4	18:25	120:15	5:24 7:6,8	filing (1)	14:12 17:10
extensive (1)	facilitator (2)	170:14	8:8 9:2	154:3	23:1 33:10
94:20	3:15 63:3	173:10	10:23 18:11	final (12)	43:4 46:10
extensively	facilities (3)	family (6)	19:14,24	6:23 17:9	47:7 48:20
140:6	21:24	28:12 36:11	65:12 66:20	48:12 52:4	62:22 73:4
extinction (	124:13	36:15	66:22 67:21	61:20 66:12	76:16 82:7
	1	<u> </u>	· · · · · · · · · · · · · · · · · · ·	1	1

82:8,21	88:10 91:2	fix (1) 13:7	94:10	foolish (1)	117:22,22
83:4,8	104:17	fixed (1)	123:11,12	78:12	130:10,16
86:18,22	115:2 126:3	116:8	130:4	<b>foot (1)</b> 53:12	130:25
87:19,21	131:21	flaking (1)	147:15,18	forced (1)	133:12
90:12 95:14	154:10	156:23	155:7	157:15	138:25
102:23	158:17	fleet (12)	166:19	forces (1)	149:2
104:11	159:25	19:3 20:14	flying (21)	164:18	153:14
105:23	164:20	21:3,15,19	28:23 29:2	forcing (1)	170:24
106:25	172:10	22:1 26:5	38:4 39:10	94:19	founded (1)
109:13	<b>five (64)</b> 8:18	27:15 86:7	39:11 49:18	forecasts (1)	159:7
116:20	9:22,25	90:15	59:8,21	155:23	founder (2)
127:1,4	11:4,16	154:19	60:15,20	foregoing (1)	113:8
128:15	12:2,21,22	155:12	61:4,8 97:9	176:3	156:12
129:20	14:6 18:4	flies (3) 58:4	109:1	form (1) 76:7	four (13)
132:16	22:22 28:2	58:5 59:11	127:20	formal (2)	19:17 20:17
151:16	30:13 31:5	flight (18)	130:22	8:11 67:24	26:10 40:13
152:15	31:24 33:18	15:2 22:4	133:25	formed (2)	84:25 89:23
154:11	33:19 35:14	29:1 38:18	138:4 142:2	18:24	111:16
155:19	35:20 36:4	42:8 45:19	171:22	116:15	112:1 125:4
158:12	36:8 45:12	76:24 93:6	172:15	forms (2)	133:20
159:11,19	52:18 57:7	101:10	focus (3)	53:6 136:16	134:16
159:21	57:21 59:6	103:20	19:25	formulas (1)	138:5 159:9
160:2,24	68:5 70:8	143:2,4,9	149:10	20:20	fousty (1)
161:1,4,24	70:21 71:8	158:8	170:2	forth (1)	95:3
172:11	72:4,13	172:17,22	focused (5)	176:7	Francisco (2)
175:12	73:23 76:11	173:2,7	19:20,22	fortunate (2)	45:16
findings (9)	80:24 82:1	flights (4)	20:12 25:22	33:1 77:23	166:13
6:1,10	89:5,7,24	41:17 134:7	140:16	forum (2)	frankly (1)
62:17 65:8	91:25 92:8	143:10,13	focusing (1)	6:21 66:10	174:1
65:15,24	96:2 98:3	Flint (7)	120:13	forward (6)	free (13)
66:1 75:12	103:11	41:12 47:13	folks (5)	12:19 17:17	18:25 19:12
82:18	110:14	75:8 84:4	133:11	75:21 118:7	19:18 20:16
fine (1) 58:14	112:21	100:4	169:3,13,17	155:13	20:19 25:23
finished (2)	114:22	117:24	169:20	160:23	26:11 51:1
6:16 66:5	118:21	153:14	follow (2)	fossil (4) 53:4	96:13 97:6
fire (2) 22:3	122:16	flooding (1)	48:8 101:8	53:6,15	135:13
53:2	126:6,13	24:15	follow-up (1)	106:5	150:14
fires (1)	133:7	Florida (5)	79:11	<b>found (31)</b>	151:25
24:15	137:17	133:20	following (1)	7:5 46:13	frequently
<b>firm (1)</b> 25:5	142:14	134:17,19	75:20	46:17 47:12	41:22
first (25)	148:3,12	156:14	<b>food</b> (7) 53:1	66:19 75:2	126:24
12:21,21	149:1	157:12	108:23	78:8,20,24	127:20
13:21 16:11	152:11	flown (2)	115:15	79:8,11,17	Friend (1)
19:19 20:5	153:22	41:17 43:16	163:4,6	80:16,18,21	159:13
21:1 30:2	156:9 162:1	fly (15) 27:16	164:10	83:25 92:14	Friends (6)
72:4 73:2	162:2	38:22 39:15	165:2	96:17 99:13	159:5,6,10
75:15,17	169:16	41:18 59:2	foods (1)	99:21	159:25
			. 11511	1 1 1 1 1 (	160.0 17
82:22 83:7	171:17	59:15 94:5	115:11	101:16	160:9,17

	7		<b>.</b>	<b>.</b>	193
front (3)	140:3,5,12	140:10,12	GAMI (6)	21:2,19,23	132:25
102:12	140:13,14	173:2,4	20:25 26:15	22:25 23:12	137:2
139:12	140:17,24	fully (2)	90:21 140:4	23:12,19	162:12,17
142:1	141:2,4,15	27:12 86:6	140:8,13	24:2,6,9,20	165:17
fuel (128) 1:7	141:24	fumes (2)	GAMI's (2)	24:24 25:5	168:8
3:5,11 5:20	145:10,17	28:24,24	17:5 26:22	26:5,14,16	174:13
18:13 20:19	146:10,20	function (1)	gardens (1)	40:25 42:13	geographic
21:2,7,9,20	147:12	81:14	136:6	42:15 43:14	129:25
23:25 24:4	148:6	functions (2)	Gary (9) 92:1	45:20 46:4	George (2)
24:6 26:4,9	152:16	85:5,13	103:2,3,4,7	48:1 64:20	152:21,23
26:14,19,22	154:12,20	<b>fund (1)</b> 95:9	103:12	64:21 73:6	Georgetow
26:23 27:3	155:2,3,11	funds (1)	145:2	73:10 80:2	40:11
27:10,16	155:15,25	163:4	173:19,19	84:20 90:15	Germann (6)
28:9 30:23	157:4 158:7	further (8)	gas (29)	95:10	165:20
31:10 32:9	163:11,17	28:18 30:1	14:12 15:16	101:20	171:9,9,14
32:10,13,20	165:14	79:25 86:8	15:18 16:2	103:25	171:18,20
33:4,13	167:14,18	132:20	16:7 17:5	104:15,18	getting (2)
39:4,18	168:19,22	141:24	17:11,14,15	106:19	121:20
46:2 47:9	169:6,12	144:5 176:8	28:24 47:23	116:3	161:25
48:14 50:2	172:5 173:5	future (8)	88:18	117:18	gifts (1)
51:18,18	175:14	19:12 21:4	122:23	129:25	51:21
53:4,7,7,16	fueled (1)	23:21 25:24	129:21,23	130:11	Gillespie (2)
62:18,24	153:6	112:10,11	130:4,14	134:4 138:9	103:13
65:9 80:4	<b>fuels (30)</b>	145:3	132:16,19	138:23	171:22
81:19 85:20	19:1,21	147:25	134:25	139:4 140:1	give (5) 4:6
85:22 86:6	20:1,11,17		135:4,13,14	145:18	13:6 113:5
89:9 90:17	21:5,8,11	<u>G</u>	143:23	154:6	145:5 162:7
90:21 93:10	21:14,21	G100UL (3)	153:7 154:9	159:18	given (5)
93:16,17	23:24 24:7	17:6 20:25	155:21	166:6	11:16 27:7
94:20 95:14	25:12,14	26:22	163:25	167:10	70:20 75:12
95:21 97:6	43:5 53:6	GA (8) 24:17	172:6	172:12	129:18
101:6 106:2	53:25 54:6	95:6 103:17	gasoline (20)	173:13,15	gives (1)
106:5,9	54:10 85:18	103:18,20	18:9 23:2	174:5	146:5
111:2	87:24 90:24	104:13 105:5	25:6,19	generated (1) 92:20	giving (1)
114:10	91:16 124:6	105.5	46:11 50:15		173:4
123:19	140:21	gain (1) 76:9	87:19 88:10	generating	glad (3)
124:12,15 124:17,19	141:8,17 146:12	gain (1) 70.5 gains (1)	88:20 89:10	20:13	87:18 90:14 133:13
•		42:24	90:6,6 91:3	generation	
125:5,7,16	163:15 165:13	Gallegos (11)	99:7 116:24	39:2 119:12	glaring (1)
125:21 127:1,5,12	fulfill (3)	72:5,10,14	117:25 127:9	157:12 <b>gentlemen</b>	105:22 <b>Gloria (3)</b>
	` ′	72:15 76:14		_	` ′
127:14 128:11,13	43:9 85:5 86:22	77:7,9	128:19 143:20	13:12 33:17 35:12 44:5	33:19,22,24 go (46) 7:12
128:17,13	fulfilling (1)	82:10 83:25	154:17	52:9 55:10	9:10,15,18
128:22	118:1	117:20	general (61)	56:3,10	12:18,20
128.22	full (9) 12:12	145:1	5:7,8 17:10	61:19,25	14:5 18:3
136:10,13	19:13 21:15	gallons (2)	18:17 19:4	112:20	22:11,22
136:15	44:25 71:20	26:8 155:25	19:7 20:24	126:5	28:2 30:12
150.15	11.25 / 1.20		15.7 20.2T	120.5	20.2 30.12

					194
36:3 38:23	87:5,6 92:4	166:1	166:16	guise (1)	37:11,11
45:11 49:12	95:25 97:22	170:12	greatest (2)	109:5	148:24
57:6,24	103:3,22	174:3	73:10	gun (1) 42:18	165:2,5
58:1,24	107:25	goodnight	131:24	guys (1)	happy (1)
67:2 68:21	110:6,9	174:10	greatly (1)	172:3	170:25
68:25 72:12	112:25	governmen	140:10		hard (1)
92:7 98:2	113:5	18:10 20:11	green (5)	H	52:17
103:10	114:17	23:5 38:14	60:9 126:17	Hagen (1)	harm (16)
111:24	118:14	50:22,23	126:19,25	1:14	30:23 37:24
115:22	122:8 124:9	51:21 72:17	127:6	half (17)	37:25 39:16
118:20	126:4	90:24 94:25	grew (2)	17:11 19:8	42:22 49:17
123:3	127:13	95:16	36:13	41:8 46:15	50:6,11
126:12	129:13	136:20	138:22	46:21 53:4	85:8 86:19
127:23	130:19	161:8	grimacing	80:22,25	98:12 121:2
131:14	133:3	163:23,24	149:20	81:3 84:22	149:16
136:11	134:13	164:18	gross (2)	89:20,23	150:19
137:16	135:20	170:2	164:4	99:18,22	166:15
138:6	137:10	governmen	165:10	100:6	173:10
141:21	138:1	163:20	ground (5)	101:25	harm's (1)
148:3	142:13	governmen	16:15 119:5	167:1	46:5
152:10	144:13,15	50:21	147:13	hand (11)	harmed (6)
156:8 158:3	145:11	governmen	155:8	34:7 35:16	29:11 91:18
158:10	148:16	33:2 94:17	164:12	39:25,25	119:13
171:16	152:4 156:6	95:16	grounds (1)	55:25 56:7	121:4
173:1,21	158:23	167:20	130:7	61:23 137:8	150:21
<b>goal (6)</b> 19:6	162:16	graduation	group (9)	137:8	151:13
19:16 21:7	165:22	42:19	49:15 88:9	144:11	harmful (4)
25:7 90:19	168:10	grandchild	98:8 99:12	174:24	47:18 93:14
158:14	170:5	107:8,20	100:10	handle (1)	98:20
goals (1) 53:5	171:10,25	111:8,23	103:15	157:9	143:18
goes (2)	173:8	grant (3)	160:18	hands (2)	harming (3)
123:6	Gomez (5)	94:24 95:18	169:24	56:11	48:6 111:5
172:14	112:22	173:14	172:9	109:19	155:5
<b>going (69)</b>	114:17,21	grass (3)	groups (3)	Haneswort	harms (8)
9:15 13:22	114:24,25	59:22 60:10	87:25	79:10	74:12 83:9
17:17,23	<b>good (23)</b> 3:1	60:12	116:15	Hansom (1)	83:23 88:25
22:16 27:23	9:12 18:6	grateful (4)	160:10	163:10	102:10
28:4 30:8	22:23 30:14	4:21 58:23	grow (2)	happen (1)	119:25
33:23 34:10	35:5 36:5	64:9 97:17	164:10,11	111:22	121:20
34:16 35:4	47:4 48:10	great (4)	growing (1)	happening	150:4
35:13,25	62:14 72:10	122:21	149:19	41:14 97:2	hazard (1)
36:23 39:1	72:14 98:1	123:1	grown (1)	109:10	116:12
39:7 40:2,3	108:4	156:10	53:8	112:8 119:4	hazardous
45:6 49:1	110:16	173:18	growth (2)	120:1,16	42:14
49:21 51:17	112:12	greater (6)	147:4	135:16	hazards (1)
52:14 57:15	113:6,7	15:16 16:23	149:22	157:11	107:12
58:14 62:10	144:23	81:1 93:21	guess (1)	170:9	health (114)
77:11 81:24	162:22	121:2	136:3	happens (5)	3:8 5:12,23
L	I	<u> </u>	<u> </u>	I	I

					193
6:3,7 16:4	142:19,20	7:19 8:2,10	103:24	113:25	119:7
17:13,14,16	143:17	8:14 9:11	Helicopter	117:21	141:12
28:11 29:25	145:15,15	9:18,20	18:21 23:16	128:14	hitting (1)
30:21 31:10	146:23	10:3,7,11	heliports (1)	134:4	158:14
31:18 32:2	147:25	10:12,18,19	24:19	153:11,14	hobby (3)
37:6 41:3	152:19	10:22 13:8	Hello (3) 14:3	higher (14)	130:13
43:6,22	154:2,16	48:3 56:5	45:10 92:5	24:4 27:16	132:11
46:12 48:2	155:9	56:23 62:7	help (12)	31:7 47:12	147:19
48:14,18,19	159:24	62:11,16	33:5,6 38:4	47:13 74:10	hobbyists (2)
49:18,24	160:8,16	63:3,5,13	76:18 96:13	75:3 78:21	94:11
50:3 51:2	167:5,19	63:21,23,24	107:8	79:21 92:18	147:21
53:2 62:21	168:4 171:3	64:8,15	109:10	101:16,18	hold (3)
64:25 65:11	171:4 174:6	65:4,5 66:2	110:24	104:8 131:8	22:20 127:2
65:17,21	healthy (4)	66:6,15,25	112:6,14	highest (8)	141:3
72:22 74:9	51:23	67:2,3,8,15	113:5	16:1 54:19	holding (2)
76:2,5	127:25	67:23 68:1	156:15	84:17 112:3	133:15
80:13 81:7	159:8 163:6	68:23 69:1	helping (3)	117:19	148:20
81:19 83:10	hear (24) 9:4	69:7,12,15	38:5 150:20	145:24	holds (1)
83:12,23	9:20 13:2	69:16,22	150:21	161:16,17	90:5
85:6,10	14:4 19:5	70:1 73:3	helpless (1)	highly (3)	hole (1)
87:15 89:11	22:21 27:25	88:2 98:14	121:3	49:23 102:4	135:6
90:9 91:7	30:11 36:2	108:16	helps (1)	105:20	holistic (1)
91:14 92:14	52:17 57:4	110:17	164:20	highs (1)	89:15
93:25 95:2	59:10,12	133:13	Henderson	53:16	home (12)
98:7,12,20	60:17 68:15	152:15	152:24	highways (1)	38:21,23
99:5 100:17	92:5 110:13	162:8	hereinbefo	26:10	58:7,9,19
100:20	111:19	170:18	176:7	Hill (3) 40:11	60:24 74:4
104:7	118:18	175:8,11,18	hey (1)	45:16,22	84:25 102:1
106:16,21	137:15	hearings (2)	135:12	Hillsborou	102:7
107:11	143:15	148:21	<b>Hi (5)</b> 30:10	122:20,20	111:24
111:1	156:17,23	151:7	114:21	123:7,9,18	134:23
113:13	171:14	heart (8)	118:18,22	124:25	homes (10)
114:6,11,12	heard (13)	51:16 79:6	168:14	125:22	47:21 61:5
115:1 116:1	25:24 32:19	79:12 84:19	hid (1)	143:1,3,25	96:12
116:20,22	69:2 88:1	92:19	111:21	Hillview (3)	108:24
117:7 118:3	88:14,18,23	117:12	hidden (2)	58:25 59:17	113:23
120:4,9,10	128:3,12	132:7 169:5	46:3 139:21	61:2	115:24
120:14,16	150:22	heartbreak	hide (3) 3:22	hired (2)	119:18
120:17,17	151:2	36:14	58:22 63:10	16:8 74:21	121:8,22
120:23	168:17	hearts (1)	high (19)	Hispanic (2)	122:1
121:13	173:23	117:11	17:5 20:17	101:17	hope (11)
122:4 127:9	hearing (79)	heavy (2)	20:20 21:1	102:5	30:3 37:23
130:23	1:3 3:3,15	54:19 81:6	21:10 37:10	historic (1)	39:3,17
131:12	3:16,23 4:9	height (3)	46:21 47:1	90:21	48:4 112:5
132:2,9,18	4:11,12,20	84:4 100:7	50:9 89:25	historically	112:7,9,12
138:25	5:2,16,17	130:5	93:16	43:12 98:24	118:5
140:24	6:13,17 7:1	held (3)	102:21	history (3)	165:11
141:15	7:10,13,14	48:18 100:3	108:16	118:23	hopefully (2)
	l		l		

164:6 168:1	99:9 132:15	148:1	important	75:22	individuals
hopes (1)	hurricanes	immediatel	26:2 49:9	income (16)	55:2 115:17
27:1	24:14	15:8 29:22	50:14 79:15	37:20 40:20	126:20
hospital (1)	hurt (1)	39:4,18	82:22 90:12	84:12 90:4	industrial (1)
85:10	147:21	142:6	115:4	97:8 101:12	136:8
host (3) 10:6	hypertensi	147:12	126:15	101:15,18	industries (1)
35:17 69:9	74:11 79:5	161:25	144:2 149:2	101:19	51:13
hour (1)	100:22	immense (1)	151:8 155:8	128:6 129:4	industry (40)
62:11	Hypocrates	50:5	164:7,20	135:15	18:10 19:4
hourly (1)	151:18	immigrant	172:25	145:19	19:14,18,19
133:25		37:21 170:6	173:25	166:22,24	20:10 21:3
hours (6)	<u>I</u>	immigrant	importantl	167:22	22:7,25
26:10 41:16	ICAL (1)	30:20	137:25	incorporat	23:12,20
103:20	121:18	169:25	imposes (1)	26:15 74:24	24:3,9 25:8
108:9 111:3	<b>ICF (6)</b> 3:13	imminent (1)	85:8	156:12	25:17 27:7
120:20	5:15 9:10	29:6	improve (1)	increase (10)	47:25 48:4
house (13)	63:1 65:3	immobility	81:15	54:9 80:6	50:18 51:9
57:25 58:5	68:21	102:11	inability (1)	88:20 99:23	103:17
58:5 59:8	icon (6) 3:19	impact (9)	149:15	100:1,5,14	104:13,16
60:2 61:9	4:4,7 39:25	10:14 22:9	inactions (1)	101:2	106:1,12
77:21	63:7,19	69:18 78:18	168:1	117:12	107:4
111:11	<b>ID (2)</b> 10:9	79:3 81:9	inappropri	142:23	120:12,22
112:2 132:4	69:13	81:13 117:8	130:25	increased (	125:8
133:25	idea (3)	128:1	incessant (1)	42:17,25	135:25
143:2,8	36:25 139:2	impacted (8)	29:12	43:1 53:18	136:1,14
household	139:8	37:4,5 39:8	include (4)	53:19 54:8	138:24
28:8 166:22	identified (1)	79:1 88:15	17:1 40:15	80:15,17	140:2 142:7
166:24	151:18	92:23 156:2	92:18	88:16 93:24	151:11,14
households	identify (3)	157:23	143:20	131:11	154:25
101:15,18	34:25 84:23	impacting	includes (2)	153:24	155:4,7
houses (2)	102:5	128:20	20:17 21:24	increases (2)	industry's (
96:13	identifying	impacts (12)	including (	75:4 154:20	25:5 120:22
111:16	19:20 26:4	43:22 53:3	18:13 21:25	increasing	inequitable
housing (2)	ignore (2)	54:24 78:13	23:12 42:17	53:19	164:23
15:7 30:20	78:12 151:4	82:11 89:24	78:7,14	153:25	inequities (1)
<b>Hoyer (3)</b> 2:7	illegal (1)	90:2 92:17	80:1 81:10	independe	164:21
5:11 64:24	143:20	95:12 98:19	86:11 89:6	3:13 63:1	inequity (1)
hugely (1)	illness (3)	121:5 147:6	100:21	99:16 140:6	164:4
53:18	50:7 53:21	imperative	102:2,10,16	Indiana (1)	infants (1)
human (11)	162:6	51:20	114:6	26:23	108:19
53:1,20	illustrative	implement	115:10,16	indicated (3)	info@flyea
76:8 81:19	84:16	83:1	117:9	10:23 70:2	22:11
94:16 98:20	images (1)	implication	123:10,24	131:25	informally
142:4	149:22	154:2	160:18	indisputabl	8:11 67:24
145:15	immediate	Implore (1)	162:1	83:9	informatio
160:8,15	15:14 54:17	54:21	inclusion (1)	individual	8:5 16:5
167:19	145:9	importance		10:13 51:3	22:11 32:1
humans (2)	146:19	138:23		69:17 78:17	32:4,6 37:2
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	ı

					197
67:19	inside (1)	internal (1)	28:16 41:5	148:23	62:25 68:21
130:25	172:15	28:18	50:7 54:8	149:2 151:9	Jersey (2)
139:22	inspection	internation	76:4 78:8	155:20	1:22 176:23
148:2	7:21 67:10	5:15 9:10	78:14,16	156:23	JerseyShor
159:22	inspire (1)	18:18,22	81:10 117:9	158:15	1:20
173:18,23	30:1	23:17 40:13	147:3	160:14	jet (2) 163:17
informing (	Institute (1)	65:3 68:21	<b>IQs (2)</b> 42:19	171:1 174:1	165:14
36:22	18:23	162:24	93:22	issued (4)	jewelry (1)
121:10	instruction	internation	irony (2)	20:24 26:12	115:15
infrastruct	4:1 63:14	126:20	53:12 95:5	158:2	Jim (4) 12:23
85:12	insure (1)	internet (4)	irrefutably	161:21	22:15 23:3
inhaled (5)	89:10	10:10,13	31:9	issues (11)	157:16
17:3 131:9	insures (1)	69:14,17	irregulariti	15:10 16:4	Jimenez (4)
131:10,13	20:6	interpret (2)	31:16	31:18 40:23	12:23 27:23
153:18	integrated	110:5,10	irreversible	82:23	27:25 28:3
inhumane	75:23	interpretat	41:3 42:17	120:17	job (7) 80:14
137:23	130:24	4:2,4 63:15	89:21 93:14	124:2	120:8,9,13
initial (1)	intelligence	63:19	117:6	127:17	146:15
53:5	43:20	interpreter	154:16	138:24	163:20
initiated (2)	intended (4)	3:25 13:18	irreversibl	140:7	174:4
19:10 36:19	6:18 34:19	63:14	86:19	156:21	jobs (3)
initiative (6)	51:5 66:7	interpreter	irrevocable		24:11 120:8
18:9 20:12	intent (1)	71:25 110:2	95:12	<u>J</u>	120:24
25:14,20	172:22	interpretin	irritates (1)	James (5)	John (4)
103:15	intentional	3:23 13:17	93:15	148:13	137:4
155:14	94:18	63:12	irritation (1)	152:3,5,7	144:14,17
injured (1)	interacting	introduce (2)	29:4	152:12	144:24
121:4	153:20	3:24 63:13	Island (1)	Jamie (4)	join (2) 133:2
injuries (1)	interest (8)	introduced	49:14	137:4 144:9	158:18
119:25	42:1 43:9	139:15	Islander (1)	144:10	joined (5) 5:3
injuring (1)	87:13	introducin	37:23	149:5	25:17 52:12
53:1	163:21,23	13:13 71:23	issue (35)	January (11)	64:16
injustice (6)	163:25	inventory (1)	9:15 12:17	7:3 8:2	160:10
32:23 51:1	164:19	73:12	20:14 25:22	12:11 46:17	Jose (13)
120:25	168:4	investigati	36:22 41:11	56:17 66:17	30:24 46:16
165:5,10	interested (8)	120:4	48:6 49:9	67:16 71:18	72:18 73:22
168:3	5:18 6:13	invisible (2)	74:16 87:18	75:14 76:23	74:8,18
injustices (1)	7:15 65:6	53:3 150:19	95:13 117:2	106:6	84:19 88:25
165:3	66:2 67:5	invitation (3)	119:8	<b>Japanese (1)</b> 38:19	96:5,6
inner (1)	175:16	11:10 44:11	126:16	Jasmine (3)	99:14
172:21	176:13	70:15	128:15,16	12:23 27:23	112:11
innocent (2)	interests (3)	invite (1)	133:14	27:23	168:16
121:3	23:8 51:8	141:23	138:18		journal (1)
141:10	120:12	involved (2)	139:1,8,12	jaw (1) 53:12	75:19
innovation	interfering	77:24 124:2	139:20	JC (1) 152:25 Jennifer (6)	journalist (1)
19:23	101:4	involving (1)	140:2,20	3:12 9:10	137:20
insecure (1)	interim (1)	21:12	141:6	9:14 12:17	judgment (1)
163:4	172:12	<b>IQ (12)</b> 17:1	145:18	7.1 <del>7</del> 14.1/	150:5
L	•	•	-	•	-

	1	1	1	T	198
July (1)	137:3	172:16	121:10	labor (1)	21:2 36:10
170:17	142:12,17	174:2	124:8	101:3	47:2 53:3
jump (2)	Kathryn (4)	kill (4) 60:24	125:11	lack (2) 85:3	64:22 76:7
12:6 71:13	2:3 56:20	60:25 61:2	133:22	159:17	95:7 122:20
June (1)	62:9 64:17	111:15	135:22,23	ladies (19)	162:24
158:16	Katy (2)	killing (2)	138:22	13:12 33:17	largely (1)
justice (23)	142:14	53:1 111:9	143:17	35:12 44:5	54:25
14:10 15:10	157:8	kilometer (2)	146:13	52:9 55:10	larger (3)
40:23 43:11	KCIA (3)	73:18 80:2	149:24	56:3,10	29:14 42:24
84:9 86:11	41:1,9	kind (6) 58:6	150:2,4,22	61:19,25	160:18
87:13,18	42:14	60:8 119:25	157:1	112:19	largest (3)
88:3 89:18	keep (8)	165:3	164:15	126:5	23:7 90:25
90:10	12:18 33:5	168:17	169:18	132:25	106:19
116:23	115:20	169:20	172:10	137:2	Larsen (5)
118:4	138:24	kinds (1)	173:21	162:12,17	112:23
145:18	140:2	123:23	knowing (1)	165:17	126:3,11,14
147:17,20	141:14	King (1)	60:23	168:8	126:16
158:13	164:17	40:12	knowingly	174:13	late (3) 19:9
163:2,3	174:7	kit (1) 139:22	48:18	LADISA (1)	131:11
165:1,1	Keever (5)	kite (1) 59:21	knowledge	131:23	159:13
166:4 167:9	148:14	kites (1)	143:16	land (5)	Latin-Ex (1)
justified (1)	158:23	59:15	known (15)	112:2	169:23
105:8	159:2,4,5	Kitty (1)	26:15 28:17	126:24	Latino (5)
justify (1)	Keller (9)	137:23	53:23 54:2	127:20	30:18 37:22
39:16	92:1 103:3	knocked (1)	54:4,19	146:18	90:4 102:5
	103:9,12,12	169:15	78:2 83:10	157:24	109:7
<u>K</u>	107:19	knocks (2)	92:22	landing (3)	Latinos (1)
Kaban (3)	145:2	136:14	113:18	21:24 47:22	30:16
2:5 5:8	173:19,19	159:15	119:10	153:4	Laughgrin
64:21	Kenaz (1)	know (53)	141:9	landings (2)	170:17
Kannan (5)	75:19	15:24 26:3	145:10	138:6 143:3	launch (1)
148:13	kept (2) 8:2	29:3,4,4	150:17	lands (1)	29:13
162:13,14	67:15	31:11 32:25	151:17	163:7	law (5) 22:4
162:20,25	key (1) 17:4	35:18 36:24	knows (1)	language (6)	72:25 82:4
Kanter (5)	kidney (4)	37:5 39:9	73:9	4:8 63:20	87:14
148:14	93:22	46:12 47:4	Kong (3)	74:3 84:24	148:21
156:6,7,10	100:24	49:4,6	9:12,13	102:6 147:5	laws (4) 51:2
156:11	138:15,16	50:16 58:7	13:3	Lanphear (	51:4 98:10
<b>Kara (2)</b> 9:13	kidneys (1)	58:15 59:6	Kromp (1)	72:5,21	157:16
13:1	117:11	60:20,22	113:15	77:11,12,15	Lawson (7)
Karen (3)	kids (15)	88:25 90:19		82:10 83:13	148:13
165:19,21	57:18 59:9	91:12 97:2	L	130:8 131:4	152:4,5,8
165:23	59:15,25	98:21 104:5	L-I-C-O-N	132:3 145:1	152:12,13
Karina (4)	114:2	105:15	52:5,8	Lanphear's	155:23
112:22	142:21,25	108:21,22	labeled (1)	75:22	lead (411)
114:16,18	147:7,14,25	115:24	108:13	Lansit (1)	1:6 3:4,10
114:24	148:4 158:3	116:11,12	labeling (1)	92:14	5:19 6:2,4,5
Katherine	164:13	117:5 121:6	53:18	large (10) 5:9	14:14,16

			1		199
15:4,17,20	77:22 78:2	111:3	149:20,24	53:14 62:18	173:3
15:22 16:1	78:5,7,7,9	113:12,23	150:8,8,14	62:23 65:9	175:14
16:3,6,8,10	78:13,21,25	114:5,9	150:16	73:9 74:20	leaders (1)
16:12,15,18	79:3,8,11	115:14	151:19,19	76:17,22	32:3
16:24 17:3	79:15,16,18	116:4,10,12	151:25	77:2,4 80:3	leadership
17:10,13	79:19,23,24	116:15	152:15	81:18 82:11	145:4
18:9,25	80:4,6,6,11	117:4,5,13	153:7,9,10	82:19 83:18	leading (4)
19:12,18	80:15,15,17	117:14,16	153:11,11	83:19 85:15	72:21 74:22
20:16,19	80:23 81:4	117:19,21	153:13,16	85:18,20	79:12 88:6
21:19,20	81:8,9,14	119:9	153:17,18	87:19,23	Leads (1)
23:2 25:6	83:4,8,11	125:12	153:24	88:9,18,20	150:18
25:19,23	83:14,17,19	127:4,15,16	154:5,8,13	89:3,9,9	leaks (1) 25:3
26:11 27:16	83:21 84:2	127:22	154:15,20	90:17,23	learn (3)
28:9,11,14	84:7,14,17	128:4,9,14	154:23	91:2 93:17	36:17 91:13
28:15,17,22	85:8 86:2	130:13,20	156:23,25	94:19 95:20	127:15
29:4,6	86:12 88:5	130:22	157:2	99:7 101:6	learned (4)
30:23 31:3	88:7,13,17	131:2,3,7,9	159:23	106:2,9,14	36:14,18
31:8,10,12	88:20,25	131:10,13	160:7,14,20	114:10	37:1 164:6
31:14,17,22	89:12,14,17	131:20	161:5,20,22	116:6,24	learning (7)
32:1,5,5,18	89:18,24	132:1,6,8,8	161:25	117:25	28:16 37:9
32:23 33:3	90:1,2,5,13	132:9,10,12	162:4,5	122:23	39:15 49:24
36:15,18,22	91:1,4,10	132:13,14	163:13,13	123:19	100:21
36:25 37:6	91:11,13,14	132:15	164:8,14	124:6,12,15	108:11
37:10 38:24	91:16,19	134:9,11,13	165:12,14	124:17,18	114:6
39:4,18	92:11,16,17	134:22,25	166:3 167:6	125:5,7,21	lease (1)
41:2,4,9,10	93:8,15	135:3,4,13	167:10	127:1,12,14	94:10
41:13,20,24	94:15,21	135:25	168:23,24	128:11,12	leave (3)
41:25 42:2	95:13,17	136:5,11,11	168:24	128:16,19	37:18 51:14
42:4,7	96:11,15,19	138:6,12,17	169:1,7,14	128:21,22	131:15
43:13,18,18	96:22 97:5	139:1,2,5	169:18	129:6,20,22	Lechuga (7)
43:20,21,22	98:17,19	139:21,22	170:13,15	130:4,14	33:20,25
43:24 46:13	99:2,3,8,15	139:23,24	170:18	140:3,12,14	35:21 36:2
47:4,12,13	99:17 100:1	141:12,23	172:7,21	140:24	36:5,6
47:16,18,20	100:5,15,18	142:3	175:12	141:2 145:9	39:14
48:7,10,13	100:19,19	143:15,18	leaded (125)	146:20	left (3) 32:7
49:22 50:5	100:23,24	143:19,22	1:7 3:5,10	147:12	60:1 120:14
50:7,9,10	101:2,3	144:5 145:5	5:20 14:12	148:5	legal (1)
50:12 52:24	102:12,17	145:6,10,11	15:18 16:2	152:16	167:3
53:5 54:9	102:19,21	145:14,17	16:7 17:11	154:12,17	legislative (1)
54:25 60:11	103:15,24	145:21,22	17:13,15	155:21,24	87:12
60:14 61:13	104:2,4,7,9	145:25	19:8 32:9	157:4	length (4)
62:17,23	104:15,19	146:2,7,10	32:10,13,19	159:12,17	12:13 62:3
65:8,16,18	104:24	146:11,15	33:4,12	161:10,11	71:21 175:4
65:19 73:11	105:1,6,16	146:17,21 146:21	43:5 46:2	163:10,25	<b>let's (3)</b> 49:20 49:21
73:14 74:12	105:19	146:21	46:10 47:9 47:23 50:2	167:6,14,18 168:19,22	49:21 157:14
74:16,24	106:5,20,23 107:2,11	147:1,10,11	50:15 51:18	168:19,22	
75:1,3,7,25 76:3 77:20	ŕ	148:2,3 149:10,17	51:18 53:7	172:10	lethal (1) 92:12
/0.5 //:20	108:8,21	147.10,1/	31.10 33:/	1/2.10	74.14
			1		

					200
letter (1)	162:4,5	21:13	106:13	105:14	long (26)
159:14	164:22	lingered (1)	109:3	107:11	39:9 43:11
letting (2)	165:10	46:7	111:17	109:21	49:14 82:18
121:10	libraries (1)	link (2) 83:22	113:13	118:24	91:16 96:8
173:24	40:21	99:7	116:2	119:5	102:13
level (34)	license (3)	linked (3)	120:19	127:13	115:4
14:16 16:16	38:21,23	28:15 40:25	122:19	146:9	116:21
28:17 31:3	176:22	50:8	123:17	153:12	118:23
31:14 43:18	Licon (6)	links (1)	124:23	157:13	119:12
50:12 78:9	35:21 52:5	24:22	127:18	161:19	125:14
80:19 81:1	52:8 57:17	list (9) 10:24	134:14	162:2,3	138:2,8,12
81:8 85:2,4	57:22,23	44:19 52:10	136:4	<b>LLC (1)</b> 1:20	139:3,9,14
88:17 91:12	life (16) 25:2	55:6 57:14	139:18	loads (1)	140:19
94:21	28:15 29:15	70:3 105:17	141:21	54:19	141:16
100:18	51:1,3	133:2 167:9	143:1,5	lobbyists (1)	150:14
101:17	53:20 60:9	listed (2)	147:9	120:12	154:9,16
114:9	87:23 91:18	46:24 167:8	153:22	local (14)	160:25
117:13	115:10	listen (8)	155:5,9	33:1 41:10	163:21,25
130:20	119:3 120:5	10:12 46:6	157:15	45:20 46:17	long-lastin
131:1,7	128:1 136:4	63:21 69:16	162:24	74:1 82:17	16:24
132:1,14	154:16	108:14	168:15,16	85:4,14	longer (9)
144:3	156:21	109:14,23	lived (7) 28:5	94:17 95:2	90:20 93:12
146:20,22	lifeline (1)	110:24	45:15,19	95:16 123:8	118:11
153:17,24	24:12	Listening (1)	47:16 81:3	167:20	120:21
154:5	lifelong (7)	47:23	109:5	170:2	129:6
157:10	41:3 78:16	literally (3)	138:20	locally (1)	145:13
161:20	81:12,16	38:14	lives (8) 36:8	41:19	146:19
168:23	93:25 117:7	138:25	39:1 48:9	located (17)	147:13
levels (44)	147:6	141:14	120:19	10:5 26:23	168:5
28:14 31:7	lifetime (3)	litigation (1)	145:22	29:1 32:16	look (5)
37:10 38:24	76:9 131:17	160:5	147:10	44:20 49:14	34:16,19
41:2,4,25	131:18	little (7)	155:8,9	69:8 71:1	147:15
42:4,7,9,12	<b>limit (5)</b> 8:17	43:13 58:20	living (43)	84:18 96:7	151:9 170:4
43:18 46:13	12:2 68:4	105:10	29:5,7 31:4	128:7	looked (1)
47:12 50:9	71:8 117:3	133:18	31:6,24	143:11	134:2
50:10 54:10	limited (1)	136:3 165:4	40:25 42:5	145:19	looking (1)
75:4,7 76:3	27:3	167:23	42:13,15	152:23	105:10
80:19 84:3	limiting (1)	live (46) 3:17	46:14 48:2	166:7	looks (1)
88:21 89:25	10:16	3:19 15:25	73:17,25	167:16	75:21
91:15 99:16	limits (3)	35:8 37:17	75:2,5 84:1	172:15	loop (1)
100:2,6,15	8:15 68:2	38:25 50:25	84:22 88:11	location (3)	135:6
101:17	172:15	53:11 57:23	88:17,21	42:8 126:22	Lori (7)
104:9,19	line (5) 74:7	63:5,8 73:5	93:3 96:4	149:19	137:3,5,6,7
117:21,23	106:12	74:6 80:1	99:16,18,19	locations (1)	137:11,14
127:15	107:16	80:18,22,25	99:22 100:3	123:10	137:19
130:17	129:2	85:1 89:7	100:4,15	logistics (4)	Los (1)
131:5,8	148:15	93:1 97:11	101:22	9:11,19	137:20
153:11,13	Linedel (1)	101:20	104:18	68:22 69:1	lose (1)
L	l	l	l	l	l

120:18	146:4	128:16	25:15	30:8,15	88:15,24
loss (5) 17:1	lungs (3)	161:3,16,22	market (3)	mean (3)	98:8,11
108:16,17	16:20 38:24	169:6	19:22 76:18	37:15 45:23	110:17
120:5	117:12	175:10	136:13	60:2	159:9
164:15	lush (1) 60:8	man (1)	marketing	means (8)	memory (2)
lost (1) 76:7	Lyn (3) 1:14	157:18	136:15	23:23 32:21	28:16
lot (3) 119:15	104:16	managed (3)	marketplac	37:12,15,18	108:17
120:14	176:22	19:19,24	21:9	46:12 92:13	men (1) 94:7
173:22		139:11	marshland	163:4	Mende (1)
loud (8) 58:4	<u> </u>	manageme	166:13	measurabl	33:20
58:22 59:3	Macadoo (1)	22:5	Martin (2)	42:23	Mendez (19)
59:8,11,14	152:24	mandate (2)	106:8	measure (2)	34:5,5,8
60:17 61:6	magnitude	54:17 86:23	167:15	43:11 135:9	35:15 52:12
Love (1)	84:3	manner (1)	Maryland (	measured (2)	52:13 55:6
174:10	Magsomen	43:6	126:22	78:7 80:3	55:7,8
low (25) 15:1	78:24	manning (1)	152:13,20	meat (1)	61:21,24,24
21:19,20	mail (1)	124:23	152:21,21	123:24	72:6 87:2
27:16 28:14	116:9	Manufactu	152:23	media (1)	91:22 95:24
37:20 41:4	main (5)	23:13	154:7	32:12	96:1,3
43:18 49:18	23:19 74:24	manufactu	mason (2)	median (2)	110:2
84:12 90:4	75:1 120:13	18:13,17	157:20,21	166:22,23	mental (2)
91:15 97:8	136:3	26:20 173:6	mass (1)	medical (3)	53:21
101:12,15	maintain (2)	mapping (1)	41:13	42:12	117:10
101:18	21:19 93:16	25:2	Massachus	129:16	mentally (1)
123:12	maintainin	Marci (3)	149:8	132:2	29:11
129:4	20:21	158:22,25	massive (1)	Medicine (1)	mentioned
130:22	maintenan	159:4	53:15	142:20	23:3 27:11
131:5 142:2	51:23	Marcie (1)	master (1)	meet (3)	76:21
145:19	major (5)	148:14	15:12	82:25 83:5	117:20
161:18	20:15 107:5	marginaliz	masterful (1)	135:8	130:2,7,8
167:22	118:1	98:24	80:14	meeting (7)	168:23
171:22	132:11	margins (1)	materials (2)	3:14 10:6	169:21
lower (4)	155:13	51:11	6:20 66:9	13:17 63:2	172:2
29:5 50:10	majority (15)	Maria (4)	matter (9)	69:9,23	mercy (1)
76:4 128:5	15:21 36:24	92:1 107:24	104:6 105:7	175:20	163:7
lowered (3)	37:17,19,20	107:25	124:11	meets (1)	merging (1)
42:19 50:7	38:16 39:10	108:5	132:18	140:8	24:22
117:9	41:16 84:21	Maricela (4)	146:5 147:7	megafires (1)	message (10)
lowers (1)	94:7 95:8	35:21,24	147:10,10	53:21	10:5 35:17
147:3	101:9	36:1,6	169:6	Melina (3)	40:1 44:19
lowest (3)	147:16	Marine (2)	matters (1)	2:4 5:6	52:7 55:15
40:19 78:9	153:6	5:10 64:23	15:11	64:19	56:1,7 69:9
132:1	169:17	Mario (1)	maximum	member (2)	174:18
LUNA (1)	makers (1)	158:6	99:24	110:18	messages (1)
30:16	108:13	Marion (3)	Mayor (1)	157:20	174:23
lunch (2)	making (10)	2:7 5:11	135:17	members (	met (3) 37:8
38:13 69:3	60:7 83:1	64:24	Mayra (4)	6:16 40:19	115:25
Lung (1)	84:11 86:1	Mark (1)	12:23 30:7	43:7 66:5	156:18
	I .	I	I	I	1

metal (1)	129:17,24	86:18 93:2	152:11	4:7 11:2	174:16
54:19	130:2	147:19	156:9	12:16,24	morning's
meter (1)	Middleton'	Mills (1)	171:17	13:7 45:4	56:12
79:20	114:12	152:24	Miranda (4)	60:23,25	mortality (4)
meters (4)	Migdalia (3)	Milwaukee	15:23	61:1 70:6	50:7 74:10
93:2,4	33:21 35:3	78:24	104:16,25	75:17 158:9	79:9 92:17
153:23	35:6	mind (2)	130:9	money (10)	mother's (1)
162:3	Mike (3) 2:6	112:5 174:8	miscarriag	95:5 107:5	101:1
method (1)	5:9 64:22	minds (2)	101:3	120:4,20	mothers (3)
175:17	Miki (3)	51:16	miscarriag	121:14	92:24
methods (2)	91:25 92:3	145:22	93:22	122:3	108:10,19
8:7 67:21	92:9	mines (1)	mishaps (1)	124:14	motor (3)
Mexican (1)	mile (20)	54:20	76:25	136:9,10	91:12 101:7
37:22	28:6 31:5	minimal (1)	mispronou	173:14	135:25
Meyer (1)	31:24 42:6	38:9	13:20 72:2	monies (1)	motto (1)
59:25	46:15,21	minimum (4)	162:15	120:11	174:6
Michael (2)	73:23 80:22	99:23	mission (2)	monitor (2)	Mount (1)
98:15	80:25 81:3	116:13	141:5 159:8	10:24 70:3	46:17
154:14	99:18,22	131:1	mistakenly	monitoring	Mountain (
Michigan (2)	101:25	134:10	134:24	119:23	99:12
100:5	133:23	minority (4)	mixing (1)	134:11,12	100:10
153:15	134:15	84:21 108:7	130:5	monkeys (1)	move (18)
Michigan's	138:2 143:5	109:14,20	mixtures (1)	149:20	26:19 37:16
47:13	143:7	minute (4)	140:9	months (5)	40:2 44:6
Mickminvi	152:24	9:22,25	Mobile (4)	20:23 112:1	62:2 77:7
143:11	169:16	123:16	4:15,25	139:11	118:6,12
microgram	miles (5)	171:19	64:3,13	156:19	135:7
79:19 81:2	40:14 76:11	minutes (34)	mobilized (1)	167:11	144:13
microgram	84:23	8:18 11:17	36:21	mood (1)	151:22,23
75:4,9	111:13	12:2 14:6	model (1)	117:10	155:20
80:24 81:5	113:24	18:5 22:22	138:21	morally (1)	161:2,4,9
100:1,6	milk (1)	28:2 30:13	modeled (1)	136:23	161:23,24
microwave	123:24	45:12 52:19	16:11	Morey (1)	moved (7)
38:12	Miller (4)	57:7,21	modeling (1)	113:18	37:12 119:2
middle (10)	35:22 48:25	68:5 70:21	16:14	Morgan (1)	133:20,22
46:21,25	49:4,11	71:9 72:13	modern (1)	145:1	143:8
59:22	million (18)	82:1 92:8	97:5	morning (20)	151:11
113:15	22:8 24:11	96:3 98:3	modifiable	3:1 9:12	157:3
114:1 135:8	25:12 26:8	103:11	81:14	13:6,11	movement
135:9	72:17 73:16	110:15	modificatio	18:7 22:23	107:1
136:12	73:17 76:9	114:23	20:24 26:15	30:14 35:5	moves (1)
143:7	79:25 80:1	118:21	mom (4)	36:5 55:20	21:3
151:10	89:5,20,23	122:17	37:11,11	56:4 57:19	moving (6)
Middleton	93:1 98:8	126:13	58:15	57:25 61:20	12:19 24:7
14:9,21,23	155:25	133:8	137:25	88:23 98:1	45:5 133:22
113:14,16	159:9 162:1	137:17	mom's (1)	108:4	160:23
113:17	millions (5)	138:5 142:4	36:12	110:17	161:17
114:10,11	53:14 73:4	142:15	moment (12)	113:7	multi (1)

					203
125:3	159:4	126:17	88:5 90:7	111:16	newborn (1)
multi-famil	162:15,25	national's (1)	93:17	157:14	37:8
15:7	168:15	41:8	need (20) 4:5	165:2	newborns (1)
multiple (6)	171:20	nationally (	4:7 13:17	neighborh	92:24
32:12 74:23	named (2)	41:19	23:23 27:19	40:10,18	news (1)
93:5 99:6	157:18	nationwide	47:6 48:11	49:16 73:22	112:12
134:16	173:19	83:22 86:19	77:7 101:24	73:25 114:3	newspaper
140:6	names (13)	98:9 128:12	109:13	119:18	139:13
multitude (1)	12:21,22	128:24	110:4	166:20,20	Nexus (1)
93:25	13:20 33:18	129:5	125:17	173:10	75:19
Municipal	35:14,19	154:24	132:20	neighborin	NGO (1)
113:17	70:8 91:24	natural (2)	140:14	124:4	116:Ì4
114:10	112:20	24:14 98:6	155:1,4	166:18	NGOs (2)
municipali	126:6	nature (2)	167:20	neighbors (4)	82:16 115:8
14:21	148:11	51:22	171:2 172:1	36:15,22	nice (1)
muscle (1)	162:18	125:12	173:9	123:22	112:15
147:5	165:18	near (29)	needed (9)	151:2	<b>night (2)</b> 58:1
muted (1)	Naples (6)	40:25 42:15	9:23 10:1	neither (2)	122:13
113:4	156:13,24	47:12,12	15:23 27:8	176:9,11	nine (10)
mutes (2)	157:3,11,12	53:16 59:25	85:24	nerve (1)	28:25 34:7
10:20 69:24	158:2	73:22 80:18	135:25	49:25	34:25 35:17
	narrow (1)	84:1 88:11	155:15	nervous (1)	39:24 52:6
N	51:7	88:21 89:7	160:6,13	147:3	55:9 61:23
naively (1)	Nassau (1)	97:15	Needless (1)	nets (1) 85:10	137:7
134:24	49:14	100:15	134:21	network (1)	144:12
name (40)	Nathan (5)	101:20	needs (13)	155:15	noise (8)
3:12 9:13	72:6 87:2,5	104:18	27:13 31:21	networks (1)	29:12 58:4
11:4,17	87:7,12	107:11	32:20 43:7	119:23	58:22 59:14
18:7 22:6	nation (8)	118:24	46:9 48:13	neurologic	60:17 61:7
23:3 30:15	51:2 73:6	127:13,13	107:15	43:22	92:20
36:6 40:6	73:16 75:15	127:20	110:11	neurotoxin	143:13
45:13 49:10	94:23	128:7	124:5	53:24 54:5	non (11)
52:7 57:22	127:12	139:18	135:24	54:18 117:6	30:17 32:19
62:25 70:21	128:18	140:25	136:1 144:3	146:22	84:23
72:3 82:2	148:5	141:22	173:17	153:17	101:17
87:11 98:4	nation's (3)	153:12,18	negative (1)	neurotoxin	113:9 115:6
108:5	24:16	155:5,9	114:5	136:17	124:11,14
110:17	154:18	nearby (5)	negatively	never (4)	126:18
113:7	155:12	73:25 88:17	43:19	104:13	137:22
114:24	national (14)	88:24 99:16	neglected (1)	131:14	142:22
118:15	14:14 18:13	161:19	90:24	139:25	noon (2) 9:21
122:15,18	18:16,19	nearly (6)	neighborh	146:14	69:2
126:16	21:22 23:13	16:20 41:10	28:5 36:13	new (8) 1:22	normal (2)
137:6,14,18	23:14 75:20	72:17 84:24	36:21 37:13	15:4 30:16	120:19
142:17	82:16	89:19 92:15	37:18 38:3	86:11	140:9
144:24	100:11	necessary (7)	59:24 88:24	140:21	north (1)
152:12	103:24	20:13,21	102:16	155:15,20	166:17
156:11	105:3,22	82:22 86:17	110:19,23	176:23	Northwest
	<u> </u>	I	I	I	I

					204
nosebleeds	138:11	27:16 93:16	81:25 103:2	112:13	66:16 67:5
61:13,15	139:9 141:5	140:8	103:9	ongoing (4)	67:6,17
not-for-pro	161:18	154:20	107:24	41:13	68:7 71:11
98:7	167:9 175:6	October (4)	110:16	116:11	71:14 77:16
notable (1)	numbers (1)	5:24 9:2	112:19	162:4	87:11 92:11
166:21	46:25	65:12 68:13	118:10,11	167:21	97:18 98:13
Notary (1)	numerous (	offered (1)	118:13	online (1)	110:21
176:23	41:22 42:1	19:22	122:7 126:2	98:9	115:3
<b>note (6)</b> 4:10	88:15	Offerman (5)	129:12	onset (1)	126:15
10:7 45:1	Nunez (6)	35:21 39:22	132:25	108:17	142:17
61:20 63:22	4:14,17,24	45:10,13,14	137:2,11,18	open (2) 8:2	162:23
69:11	64:2,5,12	office (15)	142:11	67:15	oppression
noted (3)		4:16,19 5:1	144:16,23	operate (8)	51:1
131:7,22	0	5:6,7,8 64:3	148:10,16	3:5 5:20	option (1)
133:17	o'clock (1)	64:7,14,18	152:3	32:14 62:18	168:5
notice (11)	58:1	64:20,21	156:10	65:9 89:9	options (1)
7:6,8 8:8	objectives (	104:21	158:22,25	140:12	24:21
10:23 66:20	20:2	160:24	162:12,20	152:16	oral (6) 6:14
66:22 67:22	obligations	170:5	165:9,17	operates (1)	6:16 7:16
70:3 133:13	95:18	officer (5) 5:2	168:8 170:4	45:21	66:3,5 67:5
161:22	observed (1)	8:14 64:15	174:23	operating (8)	orchard (1)
175:18	140:7	67:25 176:1	Oklahoma	1:7 3:10	123:22
notificatio	obtain (3)	official (13)	26:16	28:9 62:23	orchards (2)
11:7 44:8	16:5 32:5	8:1 9:1,4,5	<b>old (5)</b> 28:8	126:23	123:21
70:12	78:22	9:6 38:6,14	40:17	127:8 130:3	125:5
notificatio	obtaining (1)	67:15 68:12	133:19	175:13	order (7)
174:24	20:15	68:15,16,17	135:1 138:1	operation (3)	10:21 11:3
notified (1)	obvious (1)	74:18	oldest (1)	19:3 96:10	11:25 16:5
139:19	105:24	officials (4)	126:22	168:21	69:25 70:7
notify (1)	obviously (3)	18:14 139:8	Olislager (1)	operations	71:6
146:14	50:18 172:9	139:18	47:24	16:16 45:24	orderly (4)
November	172:11	140:22	Olislagers (6)	76:24 138:9	19:11 23:21
1:8	occupancy	<b>oh (1)</b> 49:11	12:23 17:23	138:13	25:23 141:8
NRDC (2)	158:2	oil (2) 54:11	18:1,6,7	139:4	Oregon (5)
98:6 100:12	occur (2)	54:23	25:25	166:10	92:10
nuisance (1)	16:12 131:5	okay (60)	on-line (2)	operator (1)	124:24
60:16	occurred (2)	13:12 17:22	46:19	73:20	142:20,22
number (25)	34:17,20	22:19,20,20	156:18	operators (1)	143:2
7:22 10:7,8	occurring (1)	27:6,21,22	once (7) 17:2	116:8	organic (4)
10:12 12:14	145:21	33:17 34:4	95:21 101:1	opportunit	123:21,22
27:3 45:1	occurs (1)	34:9 35:2,2	102:18	8:4	123:23
46:19 47:3	132:1	35:12 39:21	125:3 131:9	opportunit	125:5
56:16,19	octane (15)	44:5 48:24	133:14	6:14 7:2,15	organisms
62:5 67:11	17:5 20:17	49:4 52:4,9	one-third (1)	7:16 8:21	150:3
69:12,12,16	20:20 21:1	55:10 56:10	94:11	12:5,7	organizatio
71:22	21:7,8,10	57:8,13	ones (4)	17:18 22:10	11:18 23:7
103:18	24:4 26:13	61:18,25	109:15,16	22:24 28:4	30:17 70:22
104:25	26:25 27:2	72:4 81:23	109:17	52:21 66:3	87:14
	I	l	l	l	1

					205
113:10	overseas (1)	108:23,24	165:22,23	10:20 63:18	91:17
115:7	94:13	156:23	168:10,12	69:24	paste (1)
126:18	oversees (1)	163:15	171:11,12	participate	12:20
146:23	143:24	paints (1)	PANELIS	4:22 64:10	path (2)
159:7	oversight (1)	165:13	2:1	175:11	143:2,9
organizatio	132:4	Palo (10)	par (2) 53:17	participate	paths (3)
25:18	overwhelm	166:7,18,19	117:23	104:1	15:2 45:19
141:14	83:4 94:7	166:23,23	parent (1)	participati	90:3
organs (2)	Overwhel	166:24,25	142:4	10:17 69:22	pathway (1)
28:19	43:15	167:2,7,13	parents (9)	participati	26:18
131:17	owned (4)	pandemic (1)	78:23	30:19	pathways (1)
origins (1)	14:20 130:1	80:20	105:13	participato	99:17
52:22	134:5	panel (4) 5:4	107:2,10	54:22	patience (2)
outcomes (1)	147:16	6:17 64:17	111:14,20	particles (5)	13:5,9
76:5	owner (1)	66:6	111:20	17:3 28:22	pattern (2)
outcry (3)	73:19	panelist (61)	115:17	104:7	29:1 172:14
50:17 52:23	owners (5)	11:8 13:23	139:7	121:21	patterns (1)
53:13	18:15 23:6	13:25 17:24	park (26)	150:24	123:12
outdoors (1)	23:9 94:25	22:16 30:9	40:11 58:25	particular	pause (3)
127:24	106:7	33:23 34:10	59:2,3,9,10	37:7,15	55:18 110:4
outlets (1)	owns (2)	35:4,25	59:13,16,17	38:3 124:22	174:21
32:12	135:18	40:4 44:10	59:17 61:2	128:7	pay (2) 41:5
outline (1)	147:15	45:7 49:1	72:6 87:2,5	particularl	122:3
23:18	ozone (1)	52:15 57:2	87:7,10,12	16:19 28:13	PCC (1)
output (1)	146:5	57:16 70:13	126:22	30:24 83:14	123:2
24:11		72:7 77:12	127:18	99:20 101:9	peak (3) 75:8
outrage (1)	<u>P</u>	77:12 81:25	133:23	112:10	84:6 117:24
36:17	P-O-N-C-E	87:6,8 92:4	134:4,7,15	particulate	Pediatrics (
outset (1)	34:24 35:1	97:23,23	135:12	121:17	146:25
110:20	<b>p.m (11)</b> 7:4	103:4,5	152:25	146:5	peer (2)
outside (4)	9:24,25	108:1,1	157:13	parties (3)	75:20 83:25
54:20 58:24	10:1 56:23	112:25	parks (6)	5:18 65:7	Pelagio (5)
73:1 82:5	60:19 62:12	113:1	14:25 40:15	176:10	12:24 30:8
outweigh (2)	66:18 69:5	114:17,19	114:3	partnered (	30:10,14,15
38:15 48:2	69:5 175:21	118:14,16	124:21	31:23	pending (2)
outweighs	Pacific (2)	122:9,9	130:7	partners (1)	4:8 86:18
37:25	37:22 53:11	126:5	134:16	19:5	people (65)
overburde	PAFI (3)	129:14	part (11)	partnershi	36:24 37:5
86:13	20:12 21:11	133:4	4:12 6:23	87:16	37:21 41:18
overburde	25:13	137:11,12	28:5 46:3	party (1)	48:2 49:15
84:14 98:24	page (1)	142:13	63:24 66:12	167:3	50:23,24
overdue (5)	148:3	144:16,17	77:1 95:7	pass (2) 39:1	51:6,10,12
82:18 87:23	pages (1)	148:16,17	104:22	101:3	51:24 55:22
91:16	139:12	152:4,5	123:15	passed (1)	73:16,24
116:21	paint (9)	156:6	163:3	105:3	74:2 84:22
133:17	77:20 96:13	158:24	partially (1)	passenger (1)	89:1,5
overhead (1)	96:14,15	159:1	160:12	95:8	92:13,21
136:5	104:15	162:16	participant	passes (1)	93:1,13
	I	l	<u> </u>	<u> </u>	

					200
94:13 95:9	153:9	14:10 82:23	29:11	133:7	piston (41)
97:1,7,8,10	154:23	88:3 91:2	physician (1)	136:25	16:6 17:6
102:20	168:20	154:10	77:18	137:16	19:1 20:11
115:9,14,22	169:22,23	160:1,4,6	picked (1)	141:19	25:13 26:6
115:24	169:24	160:12,20	54:9	142:8,11	26:16 27:14
116:10	percentage	petitioned	PIGGOTT (	· · · · · · · · · · · · · · · · · · ·	41:7,17
119:5 120:1	29:14	82:17 88:9	3:1 13:1,4	152:10	54:24 73:12
120:14	performan	160:10	14:5 17:20	155:22	79:23 83:5
121:1,10	20:21 140:8	petitioners	18:4 22:13	156:3,8	83:20 84:5
123:4	140:10	127:2	22:21 27:4	158:20	86:7 89:8
124:18	performing	petitioning	27:18,22	159:3	94:5 96:9
129:18	108:12	116:16	28:1 30:5	162:10	97:3 99:2,8
134:20	period (7)	Petroleum	30:12 33:15	165:15	99:24
139:18	7:3 8:3	18:23	34:2,13	168:6 171:6	100:13
141:13	12:10 66:17	ph (17) 3:25	35:10 36:3	171:16	101:8,9
146:9	67:17 71:18	21:13 74:22	39:13,19	174:11	104:3 109:1
147:20,24	103:21	75:19 78:24	44:4 45:11	Piggott (2)	127:19
150:21	periods (1)	79:10 92:14	48:22 52:2	3:12 9:10	129:22
151:5,12	31:17	98:16	52:18 55:3	pillars (3)	130:2
153:18	permanent	102:16	57:1,6,10	19:18,19,24	132:19
155:5,9	17:1 42:16	113:15	57:13,20	pilot (11)	140:11
157:12	100:20	123:10	61:11,17	24:1 29:20	153:5
161:18,18	permit (1)	143:12	62:14 68:24	38:21,23	154:21,22
162:1 163:4	158:2	145:6	72:12 76:13	122:25	155:12
164:3 165:4	pernicious	163:10	77:6,10	123:1,20	161:6
169:25	92:13	169:23	81:21 86:14	124:12	166:12
170:13	perpetuate	170:17,19	86:25 92:7	125:21,23	169:19
174:7	168:3	phase (10)	95:23 96:2	140:20	place (11)
peoples (1)	persist (1)	39:9 82:25	97:19 98:2	pilots (21)	11:4 54:14
117:11	42:20	86:1 90:17	102:25	18:15 23:6	70:8 91:6
peoples' (2)	persistentl	90:23 91:11	103:10	23:9 29:1,8	104:13
87:15	101:16	116:6 117:3	148:9	29:8 32:11	105:12
120:17	persists (1)	128:16,19	Piggott (42)	38:5,19,20	106:25
percent (31)	169:2	phased (1)	62:25 68:21	39:15 43:8	131:21
14:22 16:20	person (7)	101:6	91:20	61:3 93:18	134:7
73:14 74:2	8:17 12:1	Phillips (1)	102:14	93:19 94:4	149:18
74:3,6	68:4 71:8	21:12	107:18,22	94:9,12	176:6
79:24 80:22	104:6 137:9	phone (7)	109:24	103:19	places (2)
80:25 81:2	143:16	10:7,8	110:14	122:22	123:5 156:1
83:21 84:22	personal (1)	44:15 56:1	112:16,19	141:17	placing (1)
84:24 85:1	101:10	69:11,12	114:14,22	Pinellas (1)	95:19
94:4,6,8	personally	70:19	118:8,20	134:18	Plain (1)
102:4,6	37:3,4	phones (3)	121:25	pinned (1)	49:13
103:19,21	persons (5)	11:14 44:15	122:5,16	163:22	plan (1)
109:7	6:14 7:15	70:20	125:19,25	pipe (1)	15:12
128:13	66:3 67:5	photo (1)	126:12	26:18	plane (6)
138:9	175:16	137:19	129:10	pipeline (1)	29:7 58:5
147:18	petition (10)	physically (	132:23	25:3	111:11,15
5		1			<u> </u>

					207
111:17	4:13 9:5	147:19	polluting (1)	92:22 153:2	95:12
138:22	10:4,6	163:14	104:15	Port (1)	131:12
planes (28)	11:17,20	poisoned (7)	pollution (	143:24	154:1
28:9,23	12:16 13:13	28:22 77:20	3:6 5:21 6:2	Porter (2)	potentially
29:13 42:8	22:11 27:5	88:13 96:19	6:6 17:12	165:19	91:6 93:14
57:24 58:10	34:7,25	141:12	29:5 32:18	166:1	Poulsen (4)
59:2,14,23	35:16 39:23	146:13	32:24 41:11	portion (2)	35:22 40:3
60:3 61:14	44:19 46:11	151:3	41:24 43:14	55:1 140:13	40:5,7
122:23	48:20 52:6	poisoning (	53:2,4,16	Portland (3)	pounds (3)
123:16	52:7 54:23	15:20 41:14	54:10 62:19	122:19	41:10 139:5
133:25	55:9,15,25	41:21 50:5	65:10,16,20	123:18	146:6
134:1,25	61:23 63:24	60:6,6,7	74:16 83:9	143:24	poverty (2)
136:5 138:4	68:16 69:7	80:6 89:12	83:19,22	pose (2)	74:7 85:2
139:2,23	69:11 70:21	90:1,2	84:8 86:13	141:17	power (7)
140:20	70:25 71:24	91:19	88:6 98:11	160:15	107:5
141:18	96:23 97:4	103:25	102:10	poses (2)	109:18
142:2	97:12,13,15	105:9	112:1	32:2 128:11	121:14
147:18	109:22,22	125:18	113:12,22	position (2)	140:11,12
150:13	125:6,21	128:9	113:23	121:5,6	170:4
166:18	137:7 144:4	130:14	114:5 119:9	positive (2)	173:12
168:20	147:14,24	131:20	119:17	17:9 132:15	powered (5)
169:19	147:25	139:21,24	121:17	positively (1)	26:6 127:19
planning (2)	148:3,4	145:11,22	125:12	40:25	154:21,22
26:21	174:18	147:14	127:10	possible (7)	155:13
148:25	pleased (2)	167:6	136:8	23:22 58:24	practice (2)
plants (1)	75:17 127:6	169:14	152:17	59:5 95:15	137:23
164:11	pleasure (1)	poisonous (	154:6	102:24	143:4
platform (4)	156:17	168:25	pollutions (1)	132:17	practicing
34:23 63:8	plenty (2)	police (3)	33:4	161:3	138:5
69:9 71:2	105:1 124:7	38:11 58:11	<b>Ponce</b> (10)	possibly (2)	pre (1) 42:8
play (5)	plummeted	58:12	33:21 34:23	59:7 93:12	precisely (1)
108:25	80:19	policing (1)	34:24 35:1	post (4)	101:5
111:25	<b>plus (1)</b> 53:2	85:12	35:15 57:1	12:24 45:3	predicame
127:24	point (10)	policy (4)	57:5,8,12	56:18 116:9	94:22
130:6	10:11 31:4	20:2 115:13	61:12	posted (11)	predomina
149:21	31:24 69:15	148:21	poor (1)	10:21 33:18	152:22
playgroun	73:23 75:16	157:5	43:17	35:13,19	153:1
14:25 40:22	76:11	politicians	populated	69:25 91:24	preeclamps
119:19	116:18	139:7	14:24 40:21	112:20	79:5
146:8	125:15	pollutant (7)	73:22 84:19	126:6	Preface (1)
playing (2)	169:16	42:2 43:21	102:1 130:5	148:11	98:16
127:21	points (1)	54:18,19	134:19	162:18	pregnancy
164:13	23:19	86:23 92:24	population	165:18	100:25
Plaza (1)	poison (9)	151:20	78:13,18	potent (1)	pregnant (5)
1:21	53:8 61:13	pollute (2)	81:9 93:21	117:6	28:20 92:24
Pleasant (2)	78:2 94:18	97:11 125:8	94:5 136:19	potential (7)	101:1
45:16,22	111:4,9	polluters (1)	147:18	9:25 27:10	108:19
please (48)	132:13	119:17	population	41:13 76:8	170:14
L	I	l	l	l	l

					200
premature	54:12	37:19	Professor (1)	129:13	62:22 65:7
101:3	131:12	pro (2)	142:18	133:3	65:7,22,23
117:10	preventabl	156:12,15	profit (7)	137:11	65:24 66:8
prepared (2)	132:10	probable (1)	30:17 51:11	142:13	66:24 67:7
10:25 70:4	Preventati	49:23	113:9 115:6	144:15	68:11,17
preschool (1)	142:19	problem (13)	126:18	148:16	73:3 76:15
46:20	prevention	32:8 57:20	137:22	152:4 156:6	82:6,21
preschools	17:4 103:24	59:4 85:24	142:22	158:24	83:3 84:11
46:24	103:25	93:9 101:24	profits (1)	162:16	86:22 87:18
113:25	131:21	105:24	147:24	165:22	90:16
present (5)	prevents (1)	116:16	profound (2)	167:12	102:23
10:25 46:7	154:21	124:2 132:9	82:11 83:23	168:10	127:7
70:4 92:11	previous (3)	149:12	program (5)	171:10	129:20
166:3	25:24 55:6	156:14,16	20:11 25:13	promoted (	152:15
presentatio	57:14	problems (	122:25	11:8 44:9	155:18
6:14 7:16	primarily (3)	43:23 76:5	149:8 159:5	57:2 70:13	159:11
66:3 67:6	120:13	93:23 94:1	programs (5)	87:8 103:4	161:1
presented (1)	153:5	96:8,18	10:16 26:22	113:1	175:12
75:11	166:11	111:7 147:6	69:20	114:18	proposing (
presenting	primary (5)	154:21	142:24,25	118:16	6:1 65:15
49:8	17:3 74:3	169:4,5	progress (5)	152:5	86:1
presents (1)	84:24 102:6	proceed (2)	20:15 21:14	promoting	proprietar
166:14	150:10	11:4 70:7	24:3 26:3	13:25 118:3	85:17
President (4)	prime (1)	proceeding	170:11	prompt (5)	protect (34)
23:4 25:15	51:8	13:15 72:1	prohibited	13:25 45:9	17:16 43:13
142:21	prior (3)	176:5	167:14	49:3 103:8	49:17 51:2
171:21	44:10 70:14	process (8)	prohibiting	113:5	51:21 53:23
presiding (4)	171:19	19:9 20:6	157:23	promptly (2)	54:4 58:7
5:2 8:14	prioritize (1)	26:20,24	168:19	56:23 62:12	58:16,17,18
64:15 67:25	161:15	95:20 107:6	prolonged	properties	76:2 85:6
press (11)	prioritized	150:16	31:17	20:21	87:14 90:8
34:7,25	89:15	168:25	promote (41)	proposal (12)	93:17 95:17
35:16 39:24	prioritizes	procrastin	13:22 17:23	7:6,9 8:9	98:11
52:6 55:9	43:6	168:4	22:16 30:8	9:1,7 66:13	102:20
61:23 107:5	priority (5)	produce (2)	30:19 33:23	66:20,23	106:13
110:11	84:9 145:16	154:23	34:10 35:4	67:22 68:12	107:8 115:8
137:7	147:8 148:1	163:8	35:25 40:4	68:18 99:10	115:25
144:12	155:16	producing	45:7 49:1	proposals (1)	120:9,9,14
pressing (2)	private (7)	167:10	52:14 57:15	6:24	122:4
85:14	24:18 28:23	production	77:11 81:24	propose (1)	140:24
155:14	94:8,10	140:16	87:6 90:9	116:19	145:15
pressure (1)	122:21	141:7	92:4 97:22	proposed (	146:1,16
108:17	124:4 136:7	products (4)	103:3	1:5 3:4,9	148:4 151:1
preterm (1)	privately (1)	42:20	107:25	5:18,19 6:8	170:23
79:5	147:16	115:10,15	112:25	6:9,10,19	protected (3)
prevailing	privilege (1)	115:16	114:17	7:9,17 8:25	89:12 147:7
42:7	37:16	professiona	118:14	9:6 14:11	166:13
prevent (2)	privileged (	29:8	122:8 126:4	23:1 62:17	protecting
	ı	1	1	·	

89:16 118:2	73:5	157:25	119:22	radius (5)	reading (1)
protection	proximity (3)	159:24	134:11,12	31:5,24	79:2
3:3 4:18	42:4 116:3	163:19,21	quantity (1)	73:23 99:18	ready (4)
43:10 52:22	153:25	163:25	105:7	169:16	4:13 62:6
62:16 64:6	public (90)	164:14	quarter (4)	RAHN (1)	63:25 175:7
88:4 170:22	1:3 3:3,7	168:4 171:3	74:4 94:4	176:22	real (5) 12:17
protects (1)	4:20 5:16	176:23	143:5,6	raining (1)	24:3 32:8
24:24	5:22 6:3,7	published (9)	question (6)	88:13	41:14
protest (1)	7:21 8:3	5:23 9:2	107:12	raise (12)	144:21
157:24	9:20,20	65:12 68:13	136:4,6	34:7 35:16	realize (1)
prove (1)	11:24 12:10	74:23 75:19	151:15	39:25,25	46:16
31:12	16:4 17:12	75:23	155:6	40:22 55:25	realized (2)
proved (1)	17:14 21:25	100:12	163:12	56:6 61:23	133:21,24
104:17	24:18,21	104:23	questions (6)	135:10	really (14)
proven (1)	31:10 36:20	Pulitzers (1)	6:17,19	137:7,8	37:23,25
141:10	52:23 53:13	137:21	30:4 66:6,8	144:11	38:15 58:18
provide (27)	62:16,20	pumped (1)	115:20	raised (4)	61:14 104:5
3:25 6:22	64:8 65:4	134:23	quick (3)	36:10 56:11	116:6,13
7:15 8:3 9:1	65:11,17,21	purpose (2)	12:17 52:21	82:23	151:16
11:11 12:12	67:9,16	5:16 65:5	103:14	174:24	163:16
44:12,24	68:22 69:1	purposefull	quickly (12)	raises (1)	168:25
45:9 49:2	69:2 71:5	119:24	12:6 47:8	15:9	169:6 171:2
55:24 56:1	71:14,17	purposes (2)	48:12 71:13	ran (2)	171:3
56:12,14	73:3 76:1,6	39:11 41:18	86:4,22	111:19,21	reap (1)
63:14 66:11	80:13 81:7	pursue (1)	90:23 95:15	rapid (1)	168:1
67:4,17	82:13 83:9	20:19	106:6	86:16	reason (1)
68:12 70:17	83:12 85:4	pursuing (1)	116:23	rapidly (1)	125:17
71:19 96:4	85:6 87:13	25:7	144:22	86:16	reasonable
98:13	92:14 98:7	pushing (1)	151:24	rate (5) 16:22	8:15 68:2
101:23	98:11,13	170:10	Quiet (2)	30:2 92:17	reasonably
155:16	99:4 113:13	<b>put (5)</b> 26:6	149:4	131:11	3:7 5:22 6:2
175:16	115:3,25	91:6 97:16	156:12	135:7	6:6 62:20
provided (9)	116:20,22	136:12	quite (3)	rated (1)	65:10,16,20
7:10 24:15	120:3,9,10	147:24	58:24 59:5	140:12	152:18
55:22 56:6	120:14,23	puts (1)	174:1	rates (5)	reasons (1)
56:22 62:10	121:13,23	138:10	quote (1)	42:17,19	24:2
66:25	127:9	putting (2)	51:15	53:17 74:10	rebounded
104:23	130:23	50:3 93:20		92:18	54:8
119:22	132:2,9,17		<u>R</u>	reach (2)	rebuttal (2)
providers (1)	133:16	<u>Q</u>	racial (2)	29:18	8:4 67:18
20:19	139:21	qualify (1)	98:22	116:18	receive (7)
provides (5)	142:19	89:25	145:17	reached (1)	5:17 11:7
6:13 24:12	143:17	quality (11)	Racing (1)	115:18	15:3 44:8
24:13,20	145:15	5:6 14:15	21:13	reaching (1)	65:6 70:12
66:2	146:15	51:3 64:19	radiation (8)	19:15	167:23
providing (2)	151:8	75:24	4:16,19 5:1	read (4) 3:17	received (5)
24:25 95:25	152:18	104:22	7:22 64:4,7	38:6 47:14	13:25 32:1
proximate	155:2	105:4,23	64:14 67:10	63:6	61:20 77:1

receiving (2)	reduced (4)	66:20,22	88:22 96:6	remaining	153:24
21:7 130:21	19:7 42:18	67:22 68:13	99:14	56:4 90:25	166:24
recess (2)	49:25 85:19	174:15	101:23	remains (2)	176:5
56:25 62:13	reducing (1)	175:17	102:13	46:2 53:9	reportedly
reckless (1)	42:23	registered (	104:12	remark (1)	167:12
168:1	reduction (4)	11:20 70:2	105:11,14	103:14	reporter (2)
recognize (1)	54:1,7	70:24 171:8	105:21	remarked (1)	13:14 71:25
121:20	149:8 167:6	regular (2)	106:8,24	98:16	Reporting
recognized	reductions	130:11	108:8 112:9	remarks (1)	1:20
82:24 84:10	53:20	143:4	161:13	129:9	reports (2)
91:9	reenergize	regulate (5)	167:15	remedy (1)	38:11 114:4
recommen	107:1	88:5 115:4	168:21	109:18	represent (3)
10:15 69:19	refer (6) 3:8	151:14	169:11,16	remember	50:24
173:7	6:11 9:5	160:11,20	169:22	141:13	152:13
recommen	62:21 65:25	regulated (1)	Reilly (1)	remind (4)	169:23
172:19	68:16	119:20	157:8	6:25 56:13	representat
reconnects	referenced	regulating	reiterate (3)	66:14 175:1	87:13
9:16	99:10,13	90:6 117:25	25:4 49:21	reminder (3)	114:25
record (6)	referred (1)	regulation	50:21	44:7 55:21	representat
8:1 13:15	25:20	85:3 121:17	related (4)	62:2	8:23 68:9
53:16 67:15	reflects (1)	135:21	6:24 20:2	reminders	158:6
71:25 151:8	52:23	159:17	53:2 66:13	44:7	170:19
recorded (6)	refuel (2)	161:5	relation (1)	remote (1)	represente
4:11,12	32:11,13	regulation	41:24	22:6	31:2 88:3
7:20 63:23	refuse (2)	7:25	relationshi	remove (2)	representin
63:24 67:8	51:12 151:6	regulations	42:3 43:25	113:12	11:18 18:12
recreation	refused (1)	33:5 83:6	78:6	131:13	23:8 40:7
39:12	144:1	regulations	relative (2)	removed (1)	49:16 70:22
124:21	Regan (2)	12:14 45:2	176:9,11	96:10	72:16
recreationa	98:16	56:15 62:4	relatively (1)	removing (1)	represents
14:19 15:2	154:14	67:14 71:21	167:23	25:6	41:13 74:18
15:13,17	regarding (6)	175:5	release (1)	renewed (1)	126:19
22:3 41:18	1:6 3:9	regulatory	47:16	42:1	149:13
43:8 47:20	22:25 48:16	19:9 20:2	released (3)	repeated (1)	reproducti
94:10	62:22	154:3	98:18 99:11	123:12	93:23
101:11	175:12	Reibstein (2)	153:9	repeatedly	request (6)
129:25	Regardless	148:12,19	releases (1)	130:4	6:20 17:8
134:16	26:11	Reid-Hillvi	107:5	repeating (1)	66:9 76:21
147:13	region (1)	28:7 29:2	relied (1)	117:7	127:2
recreationa	31:20	29:12,22,24	158:7	repetitive (2)	159:21
38:17 41:19	regional (2)	30:25 32:14	relief (1)	15:1 93:6	requested (1)
recruited (1)	82:17	36:8 38:18	90:20	replacing (1)	159:18
94:12	119:23	46:15 48:16	reluctant (1)	106:2	requesting
reduce (6)	register (15)	57:24 59:1	158:2	report (4)	160:1
86:12 89:14	5:24 7:6,8	73:21,23	rely (1)	75:17 102:6	requests (1)
98:10,17	8:8 9:2	74:17 77:25	119:22	105:8,10	56:11
139:15	10:23 55:13	80:8,10	remain (1)	reported (4)	require (3)
149:9	55:14 65:12	84:2,15,18	51:15	73:12	15:15 27:16
I	I			l	

					211
94:17	respond (3)	83:25	117:12	54:22	91:12 94:21
required (2)	6:21 66:10	reviewing (1)	127:12	rose (1) 79:18	100:18
116:8	160:3	159:14	128:3 129:5	Rosemary	105:2,7,16
120:20	responded	Reyes (4)	129:6	2:5 5:8	114:9
requireme	115:19	92:1 107:25	130:24	64:21	115:21
20:9 95:19	159:20	108:4,5	132:6	rotocraft (1)	117:13
requiring (1)	160:6	rich (4) 43:16	139:19	27:15	130:20
94:25	response (6)	156:13	141:3,9,15	route (1)	131:1,7
rescue (1)	6:22 38:7	173:2,4	141:17	158:11	132:14
22:4	66:11 78:6	Richard (10)	167:6 169:3	<b>RPR (1)</b> 1:14	141:5
research (5)	135:19	35:21 39:22	169:3	Rubin (1)	146:20,22
19:23 78:3	160:4	39:22,23	risks (4)	78:20	150:13
128:10	responsibil	45:6,8,14	38:15	rule (6) 83:1	153:17
138:10	122:2	148:12,15	100:17	84:11 86:1	154:5
153:12	responsible	148:17	101:5 128:1	128:16	161:20
reside (1)	29:3 41:10	Richson (5)	<b>Rita (2)</b>	161:3,22	168:23
76:11	89:19 94:14	12:22 13:22	33:20 34:9	rules (3) 8:11	safely (5)
residences	responsive	14:3,7,8	River (3)	59:20 67:24	17:6 23:23
14:25	31:21	rid (2) 58:14	40:8,9	run (8) 42:9	25:8 27:13
resident (2)	rest (4) 33:14	161:11	157:13	44:23 58:22	27:17
126:21	38:25 44:3	right (14)	road (2)	137:22	safety (17)
156:22	93:20	50:25 61:1	50:16 54:13	154:19	20:4,22
residential	restart (1)	105:10	roads (1)	158:16	21:18 24:1
40:10,14	123:16	116:11,12	26:10	162:25	43:6 50:3
residents (	result (2)	136:8 137:9	Robert (9)	173:2	85:6,9
28:20 29:15	15:20 29:6	140:23	12:22 17:23	running (3)	93:17 140:2
29:16 37:17	resulted (1)	141:4 143:2	17:23,25	5:15 65:3	140:7,20
72:18 74:2	164:4	151:13	18:7 25:25	173:4	141:3,9
74:5 82:12	resulting (2)	155:7	165:20	runs (2)	155:2,17
85:1 94:18	53:25 54:7	163:10	171:9,20	106:5 143:4	174:6
95:2 102:2	results (7)	164:6	robust (1)	runway (3)	sale (9) 32:10
102:5	31:5,9 37:9	rights (2)	41:25	93:2 153:23	47:9 77:4
116:12	42:6,25,25	30:20 51:3	Rocana (1)	166:9	145:9
130:6 139:7	80:8	Riley (4)	170:19	runways (2)	147:12
140:25	resume (4)	137:4	Rodriguez	46:22 93:4	148:5
170:3	9:24 56:23	142:12,16	33:21 35:3	rural (2) 22:5	167:12,14
resolution (	62:11 77:4	142:18	35:6	143:12	168:19
32:8	retired (1)	ripple (1)	role (3) 11:8		sales (2)
resources (5)	172:4	85:9	44:10	<u>S</u>	85:18,22
27:8 32:5	return (1)	risk (30)	121:15	sadly (3)	Sam (1)
85:13 98:6	54:21	42:16 43:2	<b>roll (1)</b> 70:13	47:11 84:15	80:21
120:21	reveals (1)	47:5 48:18	Rome (2)	94:22	Sammy (2)
respect (1)	94:3	50:4 74:25	53:25 54:6	safe (31)	74:22 80:11
23:2	review (6)	79:4,8,12	room (3) 4:2	14:15 19:2	Sammy's (1)
respectfull	9:19 14:14	81:13 93:3	63:15 110:4	19:11 23:20	80:14
17:8 43:3	20:4 52:21	93:21 99:20	root (1)	25:23 28:17	sample (1)
respiratory	75:21 94:2	101:2	164:7	31:14 43:17	41:25
131:11	reviewed (1)	102:21	roots (1)	50:12 81:8	sampler (2)
L	I	l	l	I	

16:13,13   samples (2)   107:1   111:12,13   second (5)   171:10   71:2   71:3   71:4   71:3   71:4   71:4   71:2   71:4   71:						
samples (2)         107:1         111:12,13         second (5)         171:10         71:2         Senior (3)           31:4 104:24         saving (1)         113:23,25         16:119:22         174:21         Senior (3)           105:12         saw (1) 55:7         121:23         20:10 83:17         secing (10)         18:8 23:4           2:6 5:9         151:11         124:21         30:13 86:14         52:33 39:22         seniors (1)           64:22         160:6         130:6         76:13 86:14         91:23         seniors (1)           45:15 46:15         41:2 63:8         146:7         107:18         144:10         136:18,22           72:18 73:22         Scaffuse (1)         157:19,21         121:25         174:23         sense (5)           84:19 88:24         scaled (1)         157:19,21         121:25         174:23         sent (1) 103:7           99:14         scaled (1)         158:8         141:19         102:17         secking (1)         sent (1) 103:7           166:13         42:24         science (3)         77:14 67:4         42:23         sector (1)         10:5         24:5         sector (1)         10:5         24:5         sector (1)         10:5         24:5         sector (1)         10	16:13.13	save (1)	102:3	40:9.19	165:21	11:21 44:21
31:4104:24   saving (1)	•	` ′		·		
sampling (1)         87.23         119:18         20:10 83:17         secing (10)         18:8 23:4           305:12         saw (1) 55:7         121:23         102:14         34:5,23         25:25         seniors (1)           Samulski (3)         saying (2)         123:2         seconds (10)         35:23 39:22         seniors (1)           64:22         160:6         130:6         76:13 86:14         91:23         sense (5)           San (18)         says (3) 3:19         43:16         107:18         144:10         136:18,22           72:18 73:22         Scaffuse (1)         157:19,21         121:25         174:23         170:4           84:19 88:24         cale (1)         158.8         141:19         102:17         sentences (1)           96:5,6         21:15         172:22         155:22         secking (1)         sent (1) 103:7           166:13         42:24         science (3)         7:14 67:4         sect (1)         12:23         September           166:13         42:24         78:11 119:7         sectiff (6)         34:2:96:25         Sargeant (8)           166:13         42:24         75:20         52:20         52:21         52:21         52:21         52:21         52:21			l '	` /		
105:12		0 ( )	l '			` '
Samulski (3)         saying (2)         123:2         seconds (10)         35:23 39:22         seniors (1)         108:15         66:23         108:15         109:23         118:11         49:14 121:9         136:18,22         123:10         136:18,22         118:11         149:14 121:9         136:18,22         127:23         170:4         136:18,22         170:4         100:17         seeking (1)         100:17	1 0 1					
266:22		` '			· /	
64:22 San (18)         160:6         130:6         76:13 86:14         91:23         sense (5)           45:15 40:15         44:2 63:8         146:7         107:18         144:10         136:18,22           74:8,18         123:10         157:25         125:19         seeking (1)         170:4           84:19 88:24         scale (1)         158:8         141:19         102:17         semt (1) 103:7           99:14         128:24         scaled (1)         173:8         sction (4)         142:23         scent (1) 103:7           166:13         42:24         142:20         sector (1)         150:22         22:3         52:45           166:13         42:24         142:20         sector (1)         150:22         23:54           166:16         55:11         100:11         scentific (6)         35:24 45:6         98:1,45         56:20,21           106:12         30:2 46:14         42:12 88:14         11:5 33:22         100:15         50:20         116:21           107:16         46:14,18         88:16         35:24 45:6         segment (1)         116:21           Sandra (1)         57:19 59:25         104:17         48:25 52:11         secentifix (1)         100:20           36:7 47:11	\ /			` ′		` '
San (18)         says (3) 3:19         134:16         91:20         118:11         49:14 121:9         14:21:9           45:15 46:15         72:18 73:22         Scaffuse (1)         157:19,21         121:25         174:23         170:4           74:8,18         123:10         157:25         125:19         seeking (1)         sent (1) 103:7           84:19 88:24         21:15         172:22         155:22         seeking (1)         sent (1) 103:7           96:5,6         21:15         172:22         155:22         seeking (1)         sent (1) 103:7           112:11         128:24         scales (1)         78:11 119:7         82:19 83:6         34:21 96:25         September           166:13         42:24         78:11 119:7         82:19 83:6         34:21 96:25         Sargeant (8)           167:15         scheduled (2)         5ciences (2)         21:23         170:8,11         56:20,21           168:16         55:11         174:14         100:11         sceurity (2)         59:14,5         56:20,21           177:12         35:14,18         42:12 88:14         11:5 33:22         102:15         60:20,21           179:16         46:14,18         88:16         35:24 45:6         8egal (6)         116:3						
45:15 46:15						` '
72:18 73:22         Scaffuse (1)         157:19,21         121:25         174:23         170:4           74:8,18         123:10         157:25         125:19         secking (1)         sent (1) 103:7           84:19 88:24         scale (1)         158:8         141:19         102:17         sentences (1)           99:14         scaled (1)         173:8         section (4)         142:23         september           166:13         42:24         142:20         section (4)         142:23         september           167:15         scheduled (2)         78:11 119:7         sector (1)         150:22         2:3 5:4           167:15         scheduled (2)         Sciences (2)         21:23         170:8,11         56:20,21           168:16         55:11         75:20         security (2)         Segal (6)         62:8,9           171:21         174:14         100:11         scientific (6)         sec (45) 4:4         98:1,4,5         serious (4)           106:12         30:2 46:14         42:12 88:14         11:5 33:22         102:15         100:20           Sandra (1)         57:19 59:25         104:17         48:25 52:11         21:2         12:2         12:12         12:12         125:12         125:1	` /				_	
74:8,18         123:10         157:25         125:19         secking (1)         sent (1) 103:7           84:19 88:24         21:15         172:22         155:22         secking (1)         102:17         sentences (1)           99:14         scaled (1)         173:8         section (4)         142:23         september           112:11         128:24         science (3)         7:14 67:4         sec (5)         24:5           166:13         42:24         142:20         section (4)         150:22         2:3 5:4           166:13         42:24         142:20         sector (1)         150:22         2:3 5:4           166:16         55:11         75:20         security (2)         Segal (6)         62:8,9           171:21         174:14         100:11         51:3 113:8         92:1 97:22         64:17 175:9           sand (2)         school (31)         scientific (6)         sec (45) 4:4         98:1,4,5         serious (4)           107:16         46:14,18         88:16         35:24 45:6         segment (1)         116:21           Santa (22)         85:11         scientist (1)         57:3,14         102:4         seigregated           36:7 47:11         114:1,1         79:17 81:7						•
84:19 88:24 96:56         21:15         158:8 172:22         141:19 155:22 seeks (1)         102:17 seeks (1) 110:5           99:14 scaled (1) 112:11         128:24 science (3)         7:14 67:4 seem (5)         24:5         5eptember 24:5           146:3 148:4 scales (1) 166:13 42:24 167:15 scheduled (2) 168:16 55:11 171:21 174:14 100:11 scientific (6) 106:12 30:2 46:14 42:12 88:14 171:23 3:22 107:16 46:14,18 88:16 35:24 45:6         5ecurity (2) security (2) segal (6) 62:8,9 serious (4) 100:10 51:3 113:8 segment (1) 100:20 security (2) 107:16 46:14,18 88:16 35:24 45:6 segment (1) 116:21 21:2 145:6 60:25 78:25 120:4 151:4 55:6,18 segregated 166:3 seriously (5) 83:13 13:20 32:9 113:15 scientist (1) 77:18 70:9 72:11 scientist (1) 29:21 31:1 114:1,1 79:17 81:7 90:14 92:3 select (4) 4:5 167:21 109:22 36:7 47:11 114:1,1 79:17 81:7 sores (3) 103:7 4:7,7 26:20 109:22 170:8 82:14 188:22 130:19 147:3 112:24 93:20 140:16 51:5 170:8 seriously (5) 106:8,10 138:1,3 screen (11) 118:15 sell (2) 94:19 63:2 82:14 10:10:21 142:23 142:12 31:417 137:5 75:14 76:20 142:23 142:12 31:417 137:5 75:14 76:20 142:23 142:12 31:417 137:5 75:14 76:20 142:23 142:12 31:417 137:5 75:14 76:20 15:5 157:14 143:14 136:15 72:17,23 168:16 152:25,25 112:23 12:3 6:15 15:16,6 55:25 56:1 58:19 122:18,19 47:1,1 61:5 sear (1) 72:18 158:23 174:18 serving (3)           8aunders (8) 14:25 28:25 112:21 36:15 sear (1) 10:17 149:20,21 44:19,24 144:19 58:16 152:25,56:15 157:14 16:3 sear (1) 10:17 149:20,21 144:19 52:15 58:11,15 153:5 service (7) 122:18,19 47:1,1 61:5 sear (1) 72:18 158:23 174:18 serving (3)		` ′	·			
96:5,6         21:15         172:22         155:22         seeks (1)         110:5         September           99:14         scaled (1)         128:24         science (3)         7:14 67:4         seem (5)         24:5         September           146:31 48:4         scales (1)         78:11 119:7         82:19 83:6         34:21 96:25         Sargeant (8)           166:13         42:24         142:20         sector (1)         150:22         2:3 5:4           168:16         55:11         75:20         security (2)         Segal (6)         62:8,9           171:21         174:14         scientific (6)         42:12 88:14         11:5 33:22         92:1 97:22         64:17 175:9           sand (2)         school (31)         scientific (6)         42:12 88:14         11:5 33:22         92:1 97:22         64:17 175:9           106:12         30:2 46:14         48:12 88:16         35:24 45:6         segment (1)         100:20           8andra (1)         57:19 59:25         104:17         48:25 52:11         21:2         12:2           145:6         60:25 78:25         104:17         55:6,18         segment (1)         116:11           29:21 31:1         108:12         77:18         70:14 9:2         seit sei					U \ /	` '
99:14         scaled (1)         173:8         section (4)         142:23         September         24:5           112:11         128:24         78:11 119:7         78:11 119:7         34:21 9 83:6         34:21 96:25         34:21 96:25         5argeant (8)           166:13         42:24         142:20         sector (1)         150:22         23:54           168:16         55:11         75:20         security (2)         5egal (6)         62:8,9           171:21         174:14         100:11         security (2)         59:19:197:22         64:17 175:9           sand (2)         school (31)         scientific (6)         scet(45) 4:4         98:1,4,5         92:1 97:22         64:17 175:9           sandra (1)         57:19 59:25         104:17         sec (45) 4:4         98:1,4,5         100:20           santa (22)         85:11         scientist (1)         57:3,14         57:3,14         100:20           36:7 47:11         114:1,1         77:18         70:9 72:11         scizures (1)         90:8 95:1           31:20 32:9         113:15         scientist (2)         81:25 87:18         50:10         selet (4) 4:5         serously (5)           42:11 88:12         130:19         147:3         103:7 <t< td=""><td></td><td>` '</td><td></td><td></td><td></td><td>` '</td></t<>		` '				` '
112:11	1				` '	
146:3 148:4   scales (1)   42:24   142:20   sector (1)   150:22   2:3 5:4     167:15   scheduled (2)   55:11   75:20   security (2)   51:3 113:8   92:1 97:22   62:8,9     171:21   174:14   school (31)   scientific (6)   42:12 88:14   100:11   51:3 113:8   92:1 97:22   62:17 175:9     106:12   30:2 46:14   42:12 88:14   42:12 88:14   100:11   51:3 113:8   92:1 97:22   62:17 175:9     145:6   60:25 78:25   104:17   48:25 52:11   108:12   77:18   scientist (1)   57:3,14   102:4   seizures (1)     29:21 31:1   108:12   77:18   scientist (2)   70:9 72:11   scientist (2)   36:7 47:11   141:1,   79:17 81:7   82:19 83:6   82:19 83:0   82:19 83:6   34:21 96:25   Sargeant (8)   2:3 5:4   45:6   60:28,9   62:8,9		` '		` ′		-
166:13			·		` '	
167:15         scheduled (2)         Sciences (2)         21:23         170:8,11         56:20,21           168:16         55:11         75:20         security (2)         Segal (6)         62:8,9           171:21         174:14         100:11         51:3 113:8         92:1 97:22         64:17 175:9           sand (2)         30:2 46:14         42:12 88:14         11:5 33:22         102:15         100:20           107:16         46:14,18         88:16         35:24 45:6         segment (1)         116:21           Sandra (1)         57:19 59:25         104:17         48:25 52:11         21:2         125:12           145:6         60:25 78:25         120:4 151:4         55:6,18         102:4         seriously (5)           Santa (22)         85:11         scientist (1)         57:3,14         102:4         seriously (5)           29:21 31:1         108:12         77:18         70:9 72:11         seizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         4:etct (4) 4:5         167:21           48:15 72:16         127:13,21         30:9		` '				• • •
168:16         55:11         75:20         security (2)         Segal (6)         62:8,9           171:21         174:14         100:11         51:3 113:8         92:1 97:22         64:17 175:9           sand (2)         30:2 46:14         42:12 88:14         11:5 33:22         102:15         100:20           107:16         46:14,18         88:16         35:24 45:6         segment (1)         116:21           Sandra (1)         57:19 59:25         104:17         48:25 52:11         21:2         125:12           145:6         60:25 78:25         120:4 151:4         55:6,18         segregated         166:3           Santa (22)         85:11         77:18         70:9 72:11         sciums (1)         109:24           29:21 31:1         108:12         77:18         57:3,14         102:4         seriously (5)           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           82:11 88:22         130:19         147:3         112:24         93:20         56:16*5           106:8,10         139:8         3:20 4:5         126:4,7				\ /		
171:21         174:14         100:11         school (31)         51:3 113:8         92:1 97:22         64:17 175:9           sand (2)         30:2 46:14         42:12 88:14         42:12 88:14         11:5 33:22         102:15         100:20           Sandra (1)         57:19 59:25         104:17         48:25 52:11         21:2         125:12           145:6         60:25 78:25         120:4 151:4         55:6,18         segregated         166:3           Santa (22)         85:11         scientist (1)         77:18         scientist (2)         85:25 87:18         102:4         seriously (5)           31:20 32:9         113:15         scientist (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selfgesly (1)         60:28 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         serve (6) 3:14           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22		` '	·		· · · · · · · · · · · · · · · · · · ·	ŕ
sand (2)         school (31)         scientific (6)         see (45) 4:4         98:1,4,5         serious (4)           106:12         30:2 46:14         42:12 88:14         11:5 33:22         102:15         100:20           107:16         46:14,18         88:16         35:24 45:6         segment (1)         116:21           145:6         60:25 78:25         104:17         48:25 52:11         21:2         125:12           Santa (22)         85:11         scientist (1)         57:3,14         102:4         seriously (5)           29:21 31:1         108:12         77:18         70:9 72:11         seizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         scree				• • •	0 ( )	
106:12         30:2 46:14         42:12 88:14         11:5 33:22         102:15         100:20           107:16         46:14,18         88:16         35:24 45:6         segment (1)         116:21           Sandra (1)         57:19 59:25         104:17         48:25 52:11         21:2         125:12           145:6         60:25 78:25         120:4 151:4         55:6,18         segregated         166:3           Santa (22)         85:11         ro:intist (1)         57:3,14         102:4         seriously (5)           29:21 31:1         108:12         77:18         70:972:11         seizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5						
107:16         46:14,18         88:16         35:24 45:6         segment (1)         116:21           Sandra (1)         57:19 59:25         104:17         48:25 52:11         21:2         125:12           145:6         60:25 78:25         120:4 151:4         55:6,18         segregated         166:3           Santa (22)         85:11         scientist (1)         57:3,14         102:4         seriously (5)           29:21 31:1         108:12         77:18         70:9 72:11         5eizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5	` '	` /	\ /	` /		` '
Sandra (1)         57:19 59:25         104:17         48:25 52:11         21:2         125:12           Santa (22)         85:11         scientist (1)         57:3,14         102:4         seriously (5)           29:21 31:1         108:12         77:18         70:9 72:11         seizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         14:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         served (1)           140:23         142:1,23,24         10:5 11:7         133:6,13         selling (5)         served (1)           16:13         143:11         70:12 71:7<						
145:6         60:25 78:25         120:4 151:4         55:6,18         segregated         166:3           Santa (22)         85:11         ro:entist (1)         57:3,14         102:4         seriously (5)           29:21 31:1         108:12         77:18         70:9 72:11         seizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           145:4         143:6,7,10         44:9,21<		· ·				
Santa (22)         85:11         scientist (1)         57:3,14         102:4         seriously (5)           29:21 31:1         108:12         77:18         70:9 72:11         seizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         167:20           117:22         141:21         10:5 11:7         133:6,13         selling (5)         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           168:16         152:25,25         144:21	\ /					
29:21 31:1         108:12         77:18         70:9 72:11         seizures (1)         90:8 95:1           31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         167:20           117:22         141:21         10:5 11:7         133:6,13         selling (5)         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           145:4         143:6,7,10         44:9,21         142:12,14         77:2 136:10         serves (3)           168:16         152:25,25         144:21				·		
31:20 32:9         113:15         scientists (2)         81:25 87:18         50:10         109:22           36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         167:20           117:22         141:21         10:5 11:7         133:6,13         selling (5)         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           145:4         143:6,7,10         44:9,21         142:12,14         77:2 136:10         serves (3)           161:13         152:25,25         144:21         144:15         send (12)         153:5           169:10         158:3         screening (1)	` '		\ /	· · · · · · · · · · · · · · · · · · ·	I	
36:7 47:11         114:1,1         79:17 81:7         90:14 92:3         select (4) 4:5         167:21           48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         167:20           117:22         141:21         10:5 11:7         133:6,13         selling (5)         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           145:4         143:6,7,10         44:9,21         142:12,14         77:2 136:10         serves (3)           161:13         143:11         70:12 71:7         143:14         136:15         72:17,23           168:16         152:25,25         144:21         144:15         send (12)         153:5           170:9         schools (31)         10:17         149:20,21 <td></td> <td></td> <td></td> <td></td> <td>\ /</td> <td></td>					\ /	
48:15 72:16         127:13,21         scores (3)         103:7         4:7,7 26:20         170:8           76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         167:20           117:22         141:21         10:5 11:7         133:6,13         selling (5)         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           145:4         143:6,7,10         44:9,21         142:12,14         77:2 136:10         serves (3)           161:13         143:11         70:12 71:7         143:14         136:15         72:17,23           168:16         152:25,25         144:21         144:15         send (12)         153:5           170:9         schools (31)         10:17         149:20,21         44:19,24         51:7,9 58:6           Saunders (8)         14:25 28:25         search (2)         150:19 </td <td></td> <td></td> <td>\ /</td> <td></td> <td></td> <td></td>			\ /			
76:15 82:5         127:23         42:18 78:8         109:10         selflessly (1)         serve (6) 3:14           82:11 88:22         130:19         147:3         112:24         93:20         40:16 51:5           106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         167:20           117:22         141:21         10:5 11:7         133:6,13         selling (5)         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           145:4         143:6,7,10         44:9,21         142:12,14         77:2 136:10         serves (3)           161:13         143:11         70:12 71:7         143:14         136:15         72:17,23           168:16         152:25,25         144:21         144:15         send (12)         153:5           169:10         158:3         screening (1)         148:15         35:17 40:1         service (7)           170:9         schools (31)         10:17         149:20,21         44:19,24         51:7,9 58:6           Saunders (8)         14:25 28:25         search (2)         150:19 </td <td></td> <td>· ·</td> <td></td> <td></td> <td>` '</td> <td></td>		· ·			` '	
82:11 88:22       130:19       147:3       112:24       93:20       40:16 51:5         106:8,10       138:1,3       screen (11)       118:15       sell (2) 94:19       63:2 82:14         107:15       139:8       3:20 4:5       126:4,7       135:15       167:20         117:22       141:21       10:5 11:7       133:6,13       selling (5)       served (1)         140:23       142:1,23,24       12:1 34:17       137:5       75:14 76:22       24:17         145:4       143:6,7,10       44:9,21       142:12,14       77:2 136:10       serves (3)         161:13       143:11       70:12 71:7       143:14       136:15       72:17,23         168:16       152:25,25       144:21       144:15       send (12)       153:5         169:10       158:3       screening (1)       148:15       35:17 40:1       service (7)         170:9       schools (31)       10:17       149:20,21       44:19,24       51:7,9 58:6         Saunders (8)       14:25 28:25       search (2)       150:19       52:7 55:15       58:8,11,15         118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       6		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	
106:8,10         138:1,3         screen (11)         118:15         sell (2) 94:19         63:2 82:14           107:15         139:8         3:20 4:5         126:4,7         135:15         167:20           117:22         141:21         10:5 11:7         133:6,13         selling (5)         served (1)           140:23         142:1,23,24         12:1 34:17         137:5         75:14 76:22         24:17           145:4         143:6,7,10         44:9,21         142:12,14         77:2 136:10         serves (3)           161:13         143:11         70:12 71:7         143:14         136:15         72:17,23           168:16         152:25,25         144:21         144:15         send (12)         153:5           169:10         158:3         screening (1)         148:15         35:17 40:1         service (7)           170:9         schools (31)         10:17         149:20,21         44:19,24         51:7,9 58:6           Saunders (8)         14:25 28:25         search (2)         150:19         52:7 55:15         58:8,11,15           112:22         32:16 38:18         22:3 56:15         151:6,6         55:25 56:1         58:19           122:8,12,15         46:21,25         62:4 175:5         157:14<						
107:15       139:8       3:20 4:5       126:4,7       135:15       167:20         117:22       141:21       10:5 11:7       133:6,13       selling (5)       served (1)         140:23       142:1,23,24       12:1 34:17       137:5       75:14 76:22       24:17         145:4       143:6,7,10       44:9,21       142:12,14       77:2 136:10       serves (3)         161:13       143:11       70:12 71:7       143:14       136:15       72:17,23         168:16       152:25,25       144:21       144:15       send (12)       153:5         169:10       158:3       screening (1)       148:15       35:17 40:1       service (7)         170:9       schools (31)       10:17       149:20,21       44:19,24       51:7,9 58:6         Saunders (8)       14:25 28:25       search (2)       150:19       52:7 55:15       58:8,11,15         112:22       32:16 38:18       22:3 56:15       151:6,6       55:25 56:1       58:19         118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td></td<>						
117:22       141:21       10:5 11:7       133:6,13       selling (5)       served (1)         140:23       142:1,23,24       12:1 34:17       137:5       75:14 76:22       24:17         145:4       143:6,7,10       44:9,21       142:12,14       77:2 136:10       serves (3)         161:13       143:11       70:12 71:7       143:14       136:15       72:17,23         168:16       152:25,25       144:21       144:15       send (12)       153:5         169:10       158:3       screening (1)       148:15       35:17 40:1       service (7)         170:9       schools (31)       10:17       149:20,21       44:19,24       51:7,9 58:6         Saunders (8)       14:25 28:25       search (2)       150:19       52:7 55:15       58:8,11,15         112:22       32:16 38:18       22:3 56:15       151:6,6       55:25 56:1       58:19         118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5       seat (1) 72:18       158:23       174:18       serving (3)		· ·	` '		· /	
140:23       142:1,23,24       12:1 34:17       137:5       75:14 76:22       24:17         145:4       143:6,7,10       44:9,21       142:12,14       77:2 136:10       serves (3)         161:13       143:11       70:12 71:7       143:14       136:15       72:17,23         168:16       152:25,25       144:21       144:15       send (12)       153:5         169:10       158:3       screening (1)       148:15       35:17 40:1       service (7)         170:9       schools (31)       10:17       149:20,21       44:19,24       51:7,9 58:6         Saunders (8)       14:25 28:25       search (2)       150:19       52:7 55:15       58:8,11,15         112:22       32:16 38:18       22:3 56:15       151:6,6       55:25 56:1       58:19         118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5       seat (1) 72:18       158:23       174:18       serving (3)				-		
145:4       143:6,7,10       44:9,21       142:12,14       77:2 136:10       serves (3)         161:13       143:11       70:12 71:7       143:14       136:15       72:17,23         168:16       152:25,25       144:21       144:15       send (12)       153:5         169:10       158:3       screening (1)       148:15       35:17 40:1       service (7)         170:9       schools (31)       10:17       149:20,21       44:19,24       51:7,9 58:6         Saunders (8)       14:25 28:25       search (2)       150:19       52:7 55:15       58:8,11,15         112:22       32:16 38:18       22:3 56:15       151:6,6       55:25 56:1       58:19         118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5       seat (1) 72:18       158:23       174:18       serving (3)				-	J ( )	` '
161:13       143:11       70:12 71:7       143:14       136:15       72:17,23         168:16       152:25,25       144:21       144:15       send (12)       153:5         169:10       158:3       screening (1)       148:15       35:17 40:1       service (7)         170:9       schools (31)       10:17       149:20,21       44:19,24       51:7,9 58:6         Saunders (8)       14:25 28:25       search (2)       150:19       52:7 55:15       58:8,11,15         112:22       32:16 38:18       22:3 56:15       151:6,6       55:25 56:1       58:19         118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5       seat (1) 72:18       158:23       174:18       serving (3)						
168:16         152:25,25         144:21         144:15         send (12)         153:5           169:10         158:3         screening (1)         148:15         35:17 40:1         service (7)           170:9         schools (31)         10:17         149:20,21         44:19,24         51:7,9 58:6           Saunders (8)         14:25 28:25         search (2)         150:19         52:7 55:15         58:8,11,15           112:22         32:16 38:18         22:3 56:15         151:6,6         55:25 56:1         58:19           118:13         40:16,21         searching (2)         156:7,18         56:7,7         services (2)           122:8,12,15         46:21,25         62:4 175:5         157:14         163:8         24:13 85:11           122:18,19         47:1,1 61:5         seat (1) 72:18         158:23         174:18         serving (3)			· /	· ·		` '
169:10         158:3         screening (1)         148:15         35:17 40:1         service (7)           170:9         schools (31)         10:17         149:20,21         44:19,24         51:7,9 58:6           Saunders (8)         14:25 28:25         search (2)         150:19         52:7 55:15         58:8,11,15           112:22         32:16 38:18         22:3 56:15         151:6,6         55:25 56:1         58:19           118:13         40:16,21         searching (2)         156:7,18         56:7,7         services (2)           122:8,12,15         46:21,25         62:4 175:5         157:14         163:8         24:13 85:11           122:18,19         47:1,1 61:5         seat (1) 72:18         158:23         174:18         serving (3)						· ·
170:9         schools (31)         10:17         149:20,21         44:19,24         51:7,9 58:6           Saunders (8)         14:25 28:25         search (2)         150:19         52:7 55:15         58:8,11,15           112:22         32:16 38:18         22:3 56:15         151:6,6         55:25 56:1         58:19           118:13         40:16,21         searching (2)         156:7,18         56:7,7         services (2)           122:8,12,15         46:21,25         62:4 175:5         157:14         163:8         24:13 85:11           122:18,19         47:1,1 61:5         seat (1) 72:18         158:23         174:18         serving (3)		· · · · · · · · · · · · · · · · · · ·			` '	
Saunders (8)         14:25 28:25         search (2)         150:19         52:7 55:15         58:8,11,15           112:22         32:16 38:18         22:3 56:15         151:6,6         55:25 56:1         58:19           118:13         40:16,21         searching (2)         156:7,18         56:7,7         services (2)           122:8,12,15         46:21,25         62:4 175:5         157:14         163:8         24:13 85:11           122:18,19         47:1,1 61:5         seat (1) 72:18         158:23         174:18         serving (3)						` '
112:22       32:16 38:18       22:3 56:15       151:6,6       55:25 56:1       58:19         118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5       seat (1) 72:18       158:23       174:18       serving (3)		` ′		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	·
118:13       40:16,21       searching (2)       156:7,18       56:7,7       services (2)         122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5       seat (1) 72:18       158:23       174:18       services (2)	` ′		` ′			
122:8,12,15       46:21,25       62:4 175:5       157:14       163:8       24:13 85:11         122:18,19       47:1,1 61:5       seat (1) 72:18       158:23       174:18       serving (3)				· ·		
122:18,19   47:1,1 61:5   seat (1) 72:18   158:23   174:18   serving (3)		· ·	U \ /	-	· · · · · · · · · · · · · · · · · · ·	` '
		-				
	· ·		` ′			• , ,
			(-)	,	(6)	

	1	ī	Ī		213
session (8)	107:7	75:23	sleep (3) 58:2	soil (4) 125:9	132:11
55:20 56:4	shocked (3)	silenced (1)	58:3 120:19	153:20	135:15
56:12 62:1	134:21	123:16	slide (1) 62:2	164:10,13	139:24
69:4 174:16	139:6	silent (1)	slow (1) 39:5	soils (2)	sources (11)
174:17,25	156:23	108:7	slow (1) 33.3 slowly (4)	53:10 125:9	4:15,25
set (3) 18:2	shocking (1)	Silicon (2)	13:14,18	sold (1) 167:7	16:9 64:3
119:24	158:15	30:18 166:7	28:21 71:24	solely (1)	64:13 75:1
176:7	short (5) 51:6	similar (4)	slows (1)	51:10	84:14
sets (2) 58:8	133:13	42:14	147:4	solidarity (1)	119:20,24
83:1	163:22	104:14	small (18)	116:2	140:7
settle (1)	164:2,19	135:19	30:17 33:13	solution (3)	154:13
164:10	shortly (4)	161:12	55:1 100:19	24:4 27:12	south (2)
settlement	11:9 44:10	similarly (1)	105:7	116:17	40:11
167:3,5	70:14	100:2	113:12,20	solutions (4)	167:16
seven (4)	133:21	simply (2)	126:23	26:4 27:11	Southern (2)
40:17 41:21	show (5) 3:20	117:3 141:6	127:19	116:25	139:13
108:9 111:3	41:4 63:9	single (9)	131:9	151:23	152:13
severe (3)	101:14	48:7 58:15	133:24	solve (2)	space (1)
31:15,18	174:10	73:10 90:25	139:2	85:24	163:8
149:16	showed (2)	94:15	152:20	156:16	spaces (2)
severity (1)	31:6 80:5	108:25	153:7,10	somebody (	29:7 40:20
41:12	showing (4)	166:9,11	154:19	135:20	Spanish (15)
shaking (1)	74:10 80:14	169:19	172:12	son's (1)	3:23 4:1,6,8
58:5	88:19	sisters (1)	173:14	114:1	13:19 29:17
shame (1)	155:24	36:11	smaller (1)	soon (7)	33:25 34:11
61:3	shown (4)	sit (1) 108:14	149:23	15:16 21:16	35:6 57:8
shameful (1)	43:19 88:16	sites (1)	smart (1)	23:22 75:18	63:13,15,20
140:21	105:22	32:11	141:4	100:12	95:25 110:3
shape (1)	153:13	sits (1)	smartly (3)	102:24	spanned (1)
78:6	Shows (1)	166:12	23:23 25:8	132:17	31:3
share (4)	18:18	situated (1)	27:13	sooner (1)	spanning (1)
80:7 110:21	sick (2) 96:25	100:2	social (7)	96:24	88:10
136:2	97:14	situation (3)	15:10 42:24	sorry (6) 46:1	speak (32)
144:21	side (1) 36:12	14:18	78:23 85:9	52:16 54:2	8:20 11:1
shared (1)	sidelined (1)	150:25	98:22	57:18,19	11:17,20
32:12	170:7	169:11	145:18	133:9	12:4 13:14
shares (2)	significant	six (4) 43:24	166:4	<b>sort (3)</b> 135:9	13:17 23:11
14:19	15:9,13	57:25 60:18	societal (3)	136:4 164:2	49:8 52:21
129:24	16:4 21:14	110:11	50:6 85:9	sought (1)	55:12,13,13
sharply (1)	26:3 40:22	size (1) 41:25	94:1	74:19	55:15 57:16
79:18	42:16 74:9	skies (4)	societies (2)	sounds (1)	68:7 70:21
Shepler (8)	103:16	150:14	43:7 94:17	111:19	70:25 71:11
137:3,7,14	113:19	151:25	society (2)	source (12)	71:24 74:3
137:15,18	117:8	152:14	76:7 136:21	31:25 73:10	75:16 84:24
137:19	166:14	154:7	socioecono	79:16 80:4	87:11 108:6
141:20	significantl	skipped (1)	102:10	83:21 88:6	126:15
142:10	85:19 150:4	54:2	software (1)	90:25	142:17
shield (1)	signs (1)	sky (1) 125:4	122:13	106:20,23	162:23
<u> </u>					

					214
171:25	133:10,16	156:21	standing (1)	73:15 79:7	124:5,16
174:14,16	137:3	spewing (1)	78:23	79:13,16	140:22
174:17	148:12	138:6	stands (4)	153:8	145:9 146:2
speaker (56)	156:18	spoke (1)	25:13	167:11	146:17,19
8:16 11:16	162:19	173:20	102:15	stating (1)	147:12
13:13,21	165:18	spoken (3)	163:24	159:21	148:5 155:5
17:22 22:15	166:2	55:14	168:20	station (1)	158:10
25:25 27:19	168:17,22	105:15	Stanford (1)	139:14	165:8,9,9
27:23 30:7	175:10	174:16	72:25	stations (1)	stopped (3)
34:4,9,16	speaking (1	sports (1)	star (10) 34:7	172:6	76:22 124:3
34:22 35:3	8:23 11:6,9	114:2	34:25 35:17	statistical (2)	149:22
35:13 39:21	11:25 44:8	spread (3)	39:24 52:6	43:25 135:9	stopping (2)
40:3 44:6	44:10 45:14	53:8 150:1	55:9 61:23	statistics (4)	107:6 145:5
44:19 45:5	68:9 70:11	172:21	110:11	31:6,9 94:3	stops (1)
48:24 52:11	70:14 71:6	staff (2)	137:7	101:11	149:19
55:5 57:14	73:1 82:4	74:20	144:12	<b>STC (6)</b> 20:6	store (1)
61:20 68:3	102:6 108:9	160:24	stark (1)	20:6,24	94:19
70:20 71:24	108:15,18	stage (1)	101:23	21:7 26:18	stored (1)
77:8,10	special (3)	138:16	start (3)	27:9	131:16
81:23 91:22	85:11	staggering	29:20 49:11	steady (2)	story (1)
95:24 97:21	120:11	83:21	49:20	54:1,7	136:3
103:2	145:5	stake (1)	started (1)	steeper (1)	strategies (1)
107:24	species (1)	107:20	91:11	78:8	136:15
110:1,8	54:8	stakeholde	starting (1)	stemming (1)	strategy (5)
114:16	specific (1)	25:21 141:6	150:15	53:3	86:12 89:14
118:10,12	150:7	156:16	state (5)	stems (1)	89:18 98:17
122:7 126:2	specifically	Stall (1)	11:17 18:14	101:10	102:19
129:12	45:16	145:6	70:21	stenograph	stream (3)
133:1	specifics (1)	stalling (1)	134:19	176:5	47:17
142:12	166:5	106:1	176:23	step (7) 21:3	131:15
144:9,14	specify (1)	Stamford (1)	stated (4)	82:22 115:4	138:4
152:3 156:5		82:4	25:15	118:1	streaming (
158:22	speech (1)	stand (4)	103:15	151:22	69:21
162:13	147:5	106:13	132:5	155:13	street (2)
168:9 171:9	speed (5)	142:1	161:19	172:10	60:1,2
173:25	151:22	164:21	statement (7)	Stephanie (	strength (2)
speakers (34)	156:20	171:2	8:16 12:12	1:14 176:22	19:3 87:16
8:4 10:21	161:2,9,23	standard (4)	50:14 55:19	steps (5)	stringent (1)
10:24 11:3	Speizman (6)	29:5 79:20	154:15	15:15 88:5	95:19
11:5,13	72:6,24	105:4,23	155:10	167:12	stroke (2)
33:18,19	81:24 82:2	standards (	174:22	168:18	74:11 92:19
35:14,20	82:3 86:15	5:5,11,13	statements	170:25	strong (1)
44:14 67:18	spend (4)	14:15 64:18	45:1 62:3	stop (24)	82:6
70:1,4,7,8	111:23	64:24 65:1	68:3 71:20	29:18 61:10	strongly (4)
70:19 72:4	120:3,20	75:25 83:2	175:3	61:15,15	14:11 76:3
87:1 91:25	124:13	86:2 117:2	States (10)	75:13 77:2	117:1
112:21	spent (2)	155:21	3:2 21:25	85:15,20	167:17
126:3,6	149:7	159:15,16	23:10 62:15	90:12 106:4	struggled (1)
	ı	1	ı	1	ı

					215
79:1	subjected (2)	summer (2)	124:17	116:17	tangible (1)
struggling	49:19 93:4	99:11	137:9	systems (3)	32:7
109:8	submission	142:25	163:16	85:10,11	tasks (1)
stuck (1)	73:8	summerti	169:7	147:3	19:20
38:24	submission	125:2	surprised (1)		tax (1) 50:23
student (5)	7:17 67:7	Supervisor	148:23	T	te (1) 69:2
39:14 72:24	submit (12)	74:17	surrounde	table (1)	teach (1)
82:3 94:12	7:2,5 8:4,5	supervisors	114:2	111:21	148:21
153:1	12:9 56:14	31:1 47:8	surroundin	tactics (2)	teachers (1)
students (4)	66:16,19	75:11	74:5 84:21	104:14	111:14
38:17 46:20	67:18,19	106:10	101:25	106:1	team (7)
148:23	71:16 175:1	107:15	surveys (1)	take (23)	78:20 80:11
149:2	submitted	supplemen	25:2	9:15,22	80:14,21
studied (2)	62:4 175:5	73:7	survive (1)	14:23 15:14	137:21
77:19,21	substantial	supplemen	173:16	33:8 56:22	148:3
studies (15)	78:19 81:12	20:5 26:18	survivor (1)	59:9 62:11	156:15
40:24 41:20	154:2	supplemen	138:15	88:5 99:4	Teamster (1)
41:22 74:23	substantive	8:5 67:18	suspect (1)	104:13	172:4
77:24 78:5	93:9	suppliers (1)	105:20	109:22	technical (5)
79:6 80:3	substitute (1)	24:23	swallows (1)	125:21	10:3 13:6
83:22 88:16	135:14	supplies (1)	104:6	126:24	13:10 44:17
99:6,10	subtitled (1)	27:2	swayed (1)	127:20	61:21
101:14	63:9	support (13)	120:11	134:7	technologic
130:9	subtitles (3)	14:11 24:15	sweetheart	140:11	86:3
153:23	3:21,22	25:6 33:1	157:21	144:2 146:1	teetering (1)
study (37)	63:10	82:6,16	Swift (5) 21:5	146:19	53:16
15:24 16:9	subtle (1)	87:20 122:3	21:8 26:23	147:11	telephones
16:14 31:2	78:17	129:19	27:2 86:8	148:1 170:1	11:14
31:8,11	successful (1)	144:25	swiftly (3)	taken (13)	tell (4) 14:17
46:13 47:12	21:17	161:1,11	76:17 86:1	4:21 26:19	136:1 151:6
48:14 74:15	successfull	172:11	87:21	56:25 62:13	174:2
74:20 75:10	115:14	supported	Sydney (5)	85:16 121:6	telling (2)
75:18,23	suffer (6)	50:22 74:19	72:6,23	125:7,13	53:22 54:3
76:8 78:1	32:22 93:14	supporting	81:24,25	136:1 144:3	tells (1) 104:3
78:24 79:11	98:24	3:14 6:20	82:2	167:12	temporaril
79:17 80:9	109:16	63:2 66:9	Sylvia (11)	168:18	9:13
80:10 83:25	117:16	129:4	3:25 4:2	170:7	ten (13) 9:21
88:19 92:14	130:13	supports (8)	63:14,16,17	takeoff (2)	18:12 32:16
99:11,21	suffered (2)	19:15 22:7	72:5,7,15	47:22	39:5,8 58:1
100:10,12	84:3 86:19	23:20 24:10	82:10	166:21	59:7 60:19
104:12,17	suffering (6)	76:15 123:2	110:10	takes (2) 90:8	81:2 96:20
104:20,23	43:12 53:22	126:25	117:20	149:17	96:21 97:16
104:25	54:3 108:16	172:9	system (6)	talk (4) 30:22	172:23
105:21	109:8 136:9	supposed (2)	21:22 26:12	77:16	tend (3)
112:1,4	sufficient (2)	170:21,23	29:18 30:2	124:18	42:20 50:11
130:16	82:24	<b>sure (9)</b> 8:19	75:15	148:22	170:2
subject (1)	159:22	12:3 34:18	130:25	talked (1)	term (5)
123:19	<b>suit (1)</b> 101:8	68:5 71:9	systemic (1)	135:17	163:21,22
	ı	1	ı	I	!

164:3,19	34:2,13	150:15	THIRVUE	11:9 12:3,5	titled (2) 5:18
terminatin	35:8,10	151:7,25	162:22	12:9 13:18	65:7
95:18	39:18,19	152:1,9,14	thorough (1)	27:4 31:17	tobacco (1)
terms (3)	40:5 44:2,4	156:2,3	48:13	33:14 35:15	104:14
29:19,20	48:21,22	158:18,20	thought (2)	41:14 44:3	today (61)
168:18	49:7 51:25	159:2,3	133:10	44:11,24	4:23 5:17
terrible (1)	52:2,20	160:22	163:12	51:6 52:1,1	8:23 9:4
97:2	55:2,3 56:2	162:8,10,23	thoughtful	52:17 54:16	11:6 17:19
terrified (1)	56:9,21	165:14,15	19:11	55:11 56:4	19:10 21:9
58:21	57:10,17,17	166:2 168:5	thousand (2)	56:24 62:12	23:11,19,24
test (8) 15:19	57:22 61:15	168:6 171:5	88:21 139:4	64:9 66:18	30:22 34:24
19:25 25:12	61:17 62:9	171:6	thousands	68:6 69:6	35:24 39:23
37:9 42:18	63:17,21	173:24	24:22 40:16	70:14 71:10	40:6 44:8
80:11 96:17	68:19,24	174:3,9,11	48:2 158:3	71:12,16	44:24 45:14
105:4	77:8,9,15	175:10,19	166:10	77:6,7 88:8	46:1 47:23
tested (3)	77:16 81:20	thanks (2)	threat (3)	95:21 101:7	48:17 49:8
15:22 21:11	81:21 86:23	73:2 145:6	145:14	101:10	56:22 62:10
37:8	86:25 87:10	thing (8) 13:7	162:5	107:21	64:11 65:6
testified (2)	91:21 92:10	54:13	167:21	110:24	68:9,15
132:4	95:22,23	140:23	threatens (1)	111:10,24	69:3 70:11
160:19	97:17,19	141:5 151:4	114:11	120:21	70:22 72:5
testify (5)	98:4,12	163:18	three (26)	127:11	73:1,7
4:22 17:19	102:24,25	172:24	9:25 23:18	128:14	77:17 81:16
64:10	103:9	173:11	24:3,7	129:8	82:5 87:11
132:22	107:20,22	things (4)	36:11 38:17	133:11	88:2,14,19
170:20	109:23,24	134:2 164:8	46:25 69:5	142:8,23	104:10
testimony (9)	110:12,20	172:1,8	73:16 74:24	143:12	105:15
8:6,18	112:6,14,15	think (15)	80:1,2,5	151:18	108:6
67:20 68:4	112:16,18	33:10 37:24	98:8 113:25	155:1,3	126:15
92:11 96:4	114:12,14	39:6 47:25	119:2 125:4	160:12,13	127:15
129:18	114:21	51:15	129:18	162:7 172:2	129:18
162:9 176:4	115:2 118:5	110:23	133:19	174:14	132:5 137:6
testing (5)	118:8 122:4	121:1 135:7	134:14	175:10	142:17
16:13,14	122:5	151:5 157:8	137:21	176:6	148:20
21:15 27:8	125:23,25	163:20,24	138:4 142:3	timeline (1)	149:3,5
32:6	126:11,12	164:7,15	162:18	127:3	150:10,20
tests (2) 21:6	126:14	165:6	165:18	timely (2)	151:7,20
74:24	129:8,10,15	thinking (2)	169:24	15:15 172:2	160:19,22
thank (149)	132:21,23	29:19,20	threshold (3)	times (6)	173:23
4:10 9:8,17	133:10,15	third (4) 88:8	131:2,6	24:13 89:24	today's (29)
13:4,9 14:7	133:15	104:10	134:11	119:2	3:15,16,23
17:18,20	136:23,25	138:2	thrive (1)	137:20	4:9,20 5:2
18:3,5,6	137:10	160:19	17:17	150:18	5:16 7:1,10
22:9,12,13	142:9,10,16	third-party	tickets (1)	170:5	8:14 9:11
22:23 27:18	144:6,7,20	3:13 63:1	95:8	tired (3) 61:6	9:20 13:17
27:20,21	144:23	Thiruveng	time (62)	61:6,7	55:23 56:5
28:3 30:2,5	145:3 148:7	148:13	4:21 7:4	title (1)	63:3,4,12
33:13,15	148:9,19	162:14	8:19 10:2	170:22	64:8,15
<u>'</u>		1	1	<u> </u>	·

	ı	I	I		217
65:4 66:15	towns (1)	124:13	24:21	1:8	155:4
66:25 68:1	24:12	125:22,23	traveled (1)	turn (42)	159:20
68:22 69:1	toxic (20)	143:4,10,13	138:21	3:16,18,22	Tye (4) 52:11
69:22 70:1	5:12 16:3	172:18	traverse (1)	4:14 9:9	52:13,16,20
98:14	17:12 47:18	173:2,8	123:8	11:1,6,12	type (2) 20:5
Todd (4)	49:23 64:25	trainings (2)	travesty (1)	13:13 14:1	111:1
112:23	93:8 95:14	123:3,3	157:7	22:17 44:13	
126:3,3,16	99:3 107:2	traits (1)	treatment (4)	63:5,7,10	<u>U</u>
toddlers (3)	107:7 115:9	43:1	17:2 131:13	64:1 68:20	<b>U.S (15)</b> 4:18
80:22,25	115:23	Transcribe	131:19,20	70:5,9,18	24:11 38:21
81:3	119:4,21	1:14	trees (4)	71:24 72:8	39:7 53:9
told (6) 58:12	121:7 147:1	transcribin	59:21 60:8	77:13 87:8	64:6 89:22
109:17	149:8,12	3:16 63:4	60:10,12	97:24 103:5	92:16 98:18
111:20	168:24	transcript (	tremendou	108:2 113:2	104:25
135:24	toxicity (3)	3:19 7:20	173:12	114:19	106:20
140:5	131:3	7:23 63:9	Trendy (1)	118:17	128:14
146:14	149:13	67:9,12	16:10	122:10	130:24
ton (1)	169:14	176:4	trigger (1)	126:7,9	132:4
134:12	toxin (3)	transiting (1)	58:10	137:13	159:14
tons (8)	52:25 92:13	85:21	Trinity (2)	144:18	ultimately
73:13 79:23	93:5	transition (	16:8,14	148:18	77:3 101:6
94:14 104:2	toxins (5)	15:15 18:25	trivial (1)	151:5 152:6	ultrafine (1)
104:4 134:8	53:14 72:22	19:12 21:17	78:18	159:1	121:21
134:20,20	138:17	23:21,22	trouble (1)	165:24	unabated (2)
tool (1)	164:1,22	25:7,9	108:13	168:12	47:17 76:25
161:22	toys (2) 43:16	27:12 32:19	troubled (1)	171:13	unable (2) 106:16
tools (1) 43:16	108:24	32:20 39:6 43:5 155:1	46:1	TV (1) 139:13	149:21
	tract (1) 125:3	transitione	truck (1) 172:4		unaccepta
top (5)				twice (1)	48:5 164:22
105:18 145:16	tracts (1) 20:3	150:14 transitioni	true (4) 90:5 150:12	130:18 twins (1)	170:21
147:25	traditional	151:24	154:4 176:4	138:1	unanimous
150:9	20:5	translate (2)	truly (1)	two (29) 6:1	75:13
167:10	traffic (11)	13:19 72:1	140:19	19:18,24	unaware (2)
total (2)	41:7 42:9	translation	truth (1)	20:3,23	146:10
154:23	80:17,20	34:1,12	124:11	21:10 23:22	157:3
155:25	81:6 84:5	35:7 57:9	try (7) 8:17	46:24 47:1	unborn (2)
totally (1)	99:25	transmissio	68:4 96:10	65:15 72:17	92:25 147:2
48:5	100:14	25:23	96:24	73:20 78:3	unconscion
touch (3)	113:19	transportat	104:10	80:21 87:1	91:6
138:6	134:4	5:6 18:16	138:24	105:18	undeniable
172:13	166:11	23:15 54:10	141:14	106:7	149:16
173:1	training (20)	64:19	trying (7)	111:12,13	undeniably
town (9) 14:8	22:4 41:18	104:21	18:2 22:19	113:24,24	47:18
14:9,9,20	93:6 122:22	125:14	96:9 109:9	125:4 138:1	underachie
14:23 16:7	122:22,25	traumatize	109:9,10	139:9,11	76:4
16:10	123:1,3,6	111:18	140:22	140:25	underestim
129:17,24	123:15,20	travel (1)	Tuesday (1)	153:23	54:24
	<u> </u>				

	1	Г	Г		218
underlying	unleaded (	28:2 36:1	24:18 26:13	Valley (4)	Vice (1) 23:4
76:21	15:15 17:5	57:4 82:1	33:12 38:4	30:19 40:10	victims (2)
undermine	19:21 20:1	162:21	38:7 39:4	138:11	150:8,8
85:4	20:17,25	unnecessar	39:17,25	166:7	video (18)
understan	21:2,4,9,11	119:14	46:2 69:7	value (1)	18:2 22:18
30:3 46:11	21:21 23:21	unnecessar	86:6 88:18	138:23	49:5,12
119:11	23:24 24:4	119:19	89:8 90:23	vapors (1)	87:9 97:24
121:5 135:5	25:9 26:4	120:2 150:9	95:10 97:5	150:24	103:6 108:2
149:17	26:14,25	unquantifi	97:5 101:8	variables (1)	113:2
157:6 174:4	27:2,10,12	166:15	101:11	42:10	114:19
understan	76:19 86:6	unreasona	106:9	variety (1)	118:17
54:14 77:4	90:14 106:3	160:5	108:23	43:21	122:10
100:9	127:8	unregulate	111:2 114:9	various (1)	137:13
understan	132:16,19	86:20	115:10	164:1	144:18
165:6	140:17,21	unwilling (1)	116:24	vary (2)	148:18
understood	141:8,15,17	106:17	122:23	10:14 69:18	159:1
96:20	141:24	update (1)	124:6,14,17	vast (6) 15:21	165:24
underway (	143:23	14:14	129:22	41:16 95:8	168:12
20:16	155:2,3,11	upgrade (1)	130:14	101:9 120:3	videos (1)
undetected	161:9,16	124:14	132:19	153:6	29:13
41:15	167:13	uphill (1)	137:8	vegetables	view (2) 3:21
undue (1)	unmute (41)	121:19	140:14,20	123:25	63:9
86:4	11:10,14	upwind (1)	143:15	136:18	viewing (2)
unethical (1)	14:1 17:24	75:5	145:9 149:8	vehicle (1)	10:15 69:19
136:23	22:17 27:24	urban (2)	149:9	135:25	views (4)
Unfortunat	33:24 36:1	40:20	150:12	vehicles (3)	6:15 22:24
15:4 122:24	44:12,15	162:25	154:12,18	50:16 91:12	49:8 66:4
unhealthy	45:7,9 49:2	urge (10)	157:24	101:7	vigorous (1)
48:7	57:3 70:16	33:8 81:18	168:21	venues (1)	125:3
Unified (1)	70:19 72:8	85:25 87:21	user (7) 34:6	114:2	violence (4)
46:18	77:13 87:7	90:22 95:13	34:25 39:24	verbal (6)	42:18 43:2
unify (1)	87:8 97:24	102:22	52:5 55:9	3:18 8:18	53:20 93:24
30:18	103:5,8	132:15	110:2	12:2 63:6	violent (4)
uniquely (1)	108:2 110:7	161:2	144:11	68:4 71:8	43:25 50:9
102:9	110:10,11	167:17	uses (3)	Verona (1)	54:1,7
<b>Unit (1)</b> 1:21	113:2,5	urged (1)	38:12	60:1	virtual (8)
united (12)	114:19	74:15	101:12	Veronica (7)	3:3 4:20
3:2 19:6	118:17	urgency (2)	130:4	35:20,23	5:16 62:7
21:25 23:9	122:10	75:12 76:21	usual (1)	52:4,8	62:16 64:8
30:16 62:15	126:9	urgent (4)	53:2	57:14,15,23	65:4 68:22
73:15 79:7	137:12	17:14 99:4	utilize (1)	version (9)	virtue (1)
79:13,16	144:18	132:9,17	50:2	9:1,4,5,6	93:3
153:8	148:17	urges (1)		68:12,15,16	visible (1)
167:11	152:6 159:1	76:16		68:17 75:18	150:20
University	165:24	urging (1)	validated (1)	vetted (1)	vital (3) 27:7
72:25	168:12	116:18	16:14	140:6	28:18 109:6
142:20	171:13	use (48) 10:4	validation	viability (2)	vocal (1)
148:22	unmuted (5)	22:1,3 24:6	27:9	19:4 24:2	157:24

	1			T	
voice (2)	141:23	158:10	3:8 5:23 6:4	53:18	25:9 26:24
87:20 165:5	170:16	162:6	6:7 17:13	Williams (3)	30:17 49:5
vote (1)	174:3,25	ways (4)	29:18 62:21	2:4 5:7	49:6 87:14
170:3	wanted (5)	56:14	65:11,17,21	64:20	120:5 146:9
voted (1)	58:16	149:11	76:3 83:10	winds (2)	149:8
75:13	104:13	164:23	83:23 85:6	14:22 42:8	works (4)
<b>VP (1)</b> 21:13	136:2 140:3	165:12	113:13	winning (1)	50:23 115:7
vulnerable	175:9	weak (1)	130:23	137:19	126:18
28:13 43:7	wants (1)	105:10	137:22	Wisconsin	165:7
83:15 89:24	93:10	weakness (1)	152:19	14:9,18	world (9)
136:19,21	wards (1)	105:22	159:24	15:19,25	77:24
138:17	50:24	wealth (1)	well-being	113:9,14	105:19
141:11	warm (1)	161:18	140:25	129:17,22	106:5
	38:12	wealthy (1)	well-know	wish (6) 4:12	112:11
$\mathbf{W}$	warning (1)	147:16	43:20	14:2 63:23	126:22
Wagner (8)	107:10	web (2) 7:7	wells (1)	72:9 77:14	138:21
112:22	warnings (1)	66:21	54:20	152:14	146:23
118:11,11	116:9	webinar (10)	went (4)	withdraw (1)	159:9
118:15,18	Washingto	10:9,20	36:21	97:4	164:24
118:22,23	124:24	55:23 69:13	104:19	woman (2)	world's (1)
145:2	142:21,22	69:24 87:3	135:11	37:7,15	23:7
wait (9)	143:25	91:23 133:3	160:16	women (2)	worry (1)
32:15 39:5	wasn't (3)	137:6	weren't (1)	28:21	143:14
39:8 90:19	96:11	144:10	58:23	170:14	worrying (1)
96:20,21	159:22	website (14)	west (5)	won (1)	115:23
124:9 129:6	171:25	7:7,24,25	122:19,19	137:21	worse (2)
147:13	watch (3)	10:22 56:18	123:17,18	words (2)	15:11 146:6
waiting (1)	92:10 142:2	66:21 67:13	124:24	173:3 174:5	worst (1)
29:23	145:2	67:14 70:2	westerly (1)	work (15)	149:11
wake (1)	watching (1)	134:3,6	14:22	26:5 47:8	wouldn't (1)
167:20	171:24	148:4 166:8	wetlands (1)	48:11 87:22	173:16
walking (1)	water (12)	173:21	25:2	90:18,22	wrap (3) 12:6
97:2	41:12 47:14	week (7)	wherewith	98:9 117:2	27:5 71:13
<b>wall (2)</b> 1:22 158:14	47:15 75:8 77:21 84:4	98:18 103:23,25	94:9 <b>white (3)</b>	120:19 128:23	<b>writing (4)</b> 7:10 12:9
want (26)	98:10 100:7	104:1 108:9	84:23 94:8	137:21	67:1 71:17
4:10 26:11	115:11	111:3	101:17	141:7	written (22)
34:20 35:8	117:24	139:23	wholesome	156:14	6:22 7:2,3,5
35:14 49:7	141:3	week's (1)	51:23	161:7	7:17,20 9:7
50:13 60:12	146:18	139:22	wide (1)	172:14	12:12 44:25
61:8,9,10	way (11) 25:1	weeks (1)	149:16	worked (3)	62:3 66:11
63:22 75:16	29:13 46:5	131:16	widely (2)	106:6	66:16,17,19
80:7 96:3	60:19	welcome (7)	21:21 23:25	115:13	67:7,8
96:20	133:17	3:2 4:20	wife (1)	160:25	68:18 71:20
109:14	140:19	14:13 57:12	45:18	workers (2)	73:7 175:1
111:24	150:17	62:15 64:8	wild (2)	115:8 151:3	175:3,16
115:2,22,24	155:11	173:20	24:15 25:2	working (11)	wrote (1)
124:13	157:9	welfare (19)	wildlife (1)	12:16 23:20	159:14
	L				

Table   Tabl						
Table   Tabl	<u> </u>	143:9.21	174:18	24:18 73:5	<b>2</b> (1) 134:8	167:9
Tyard (1)		·			` ′	
yard (1)         117:55,18         75:22 80:11         79:19         159:12         65:13 68:14           year (19)         159:12,20         99:11 130:9         16 (6)73:16         168:20         2023 (10) 73           year (19)         159:12 (23)         150:16         159:12 (20)         65:13 68:14           30:25 36:19         10:22 70:1         year (19)         75:10,12,18         156:19         16 (6) 73:16         168:20         2000 (2)         82:12:11           94:15         young (1)         33:14 52:1         0         75:10,12,18         156:19         161:10         27:1 56:17           103:21         97:1         0         77:19 (1)         122         69:13         161:00         200 (2) 74:6         66:17 67:16         66:17 67:16           133:21         younger (1)         131:14         138:13         140:18         144:9         144:18         10:8         69:12 106:6         17:18         161:00 (1)         94:8         2006 (3)         176:24         70:19         19:33         85:1         71:18         2006 (3)         176:24         70:19         70:19         71:18         2006 (3)         176:24         88:11         20:00 (3)         20:07 (1)         90:17         90:11         150:19         1	<u> </u>		` '		` /	` '
111:25   159:12,20   99:11 130:9   16 (6) 73:16   168:20   2023 (10) 7:3   7:1   7	vard (1)			` '		
year (19)         172:5,23         Journ's (3)         77:1 79:25         20,000 (2)         8:2 12:1         17:8 21:8           30:25 36:19         10:22 70:1         yesterday (2)         75:10,12,18         156:19         16:10         200 (2)         74:6         75:1 56:17           90:16 92:16 94:15         young (1)         97:1         young (1)         007719 (1)         156:19         200 (2) 74:6         66:17 67:16         77:1 79:25         2000 (2)         74:6         66:17 67:16           103:21         young (1)         97:1         young (1)         97:3         85:1         71:18         2026 (1)         156:12           133:81         133:14         young (1)         133:14         147:9         69:12 106:6         69:12 106:6         73:8:2 9:3         106:11 55:14         156:19         2006 (3)         156:1         2020 (1)         156:1         71:18         2030 (7) 19:2         156:1         97:3         85:1         159:13,19         2027 (1)         156:1         97:3         85:1         159:13,19         2027 (1)         16:2         16:00 (1)         97:3         85:1         150:1         156:1         156:1         97:3         85:1         2006 (3)         176:24         2030 (1)         159:13,19         2020 (1) </td <td>` ` ′</td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td>99:11 130:9</td> <td><b>16 (6)</b> 73:16</td> <td>168:20</td> <td><b>2023 (10)</b> 7:3</td>	` ` ′	· · · · · · · · · · · · · · · · · · ·	99:11 130:9	<b>16 (6)</b> 73:16	168:20	<b>2023 (10)</b> 7:3
15:11 26:7   yesterday (2)   30:25 36:19   yield (2)   33:14 52:1   young (1)   103:21   97:1   105:18   105:18   105:18   133:21   134:18 138:13   140:18   146:8   years (59)   25:10 28:6   28:7 29:23   31:3 36:9   33:3 36:9   33:3 36:9 39:5 52:23,24   52:22   200m (1)   46:23   20m (2)   20m (3)   20m (1)   200 (0)   200 (2) 74:6   66:17 67:16   71:18   2000 (1)   156:17   156:17   156:17   2000 (1)   156:17   2000 (1)   2000 (2) 74:6   66:17 67:16   71:18   2000 (2) 74:6   66:17 67:16   71:18   2006 (3)   2026 (1)   156:17   156:17   2000 (1)   159:13,19   2027 (1)   17:20   2000 (3)   2020 (7)   17:20   2000 (3)   2020 (7)   17:20   2000 (3)   2020 (7)   17:20   2000 (3)   2020 (7)   19:20   2000 (3)   2020 (7)   19:20   2000 (3)   2020 (7)   19:20   2000 (3)   2020 (7)   19:20   2000 (3)   2020 (7)   19:20   2000 (1)		172:5,23	130:16	` '	20,000 (2)	` ′
46:17 79:14   90:16 92:16   97:19   103:21   97:1   105:18   153:22   134:8 138:1   138:13   140:18   146:8   287 29:23   28:7 29:23   28:19 29:3   29:11 29:11 29:11 29:11 29:11 29:11 29:11 15:61   15:12 29:11 15:12   15:12 29:11 15:12   15:12 29:11 15:12   15:12 29:11 15:12   15:12 29:11 15:12   15:12 29:11 16		yesterday (2)	Zuron's (3)	91:1 154:11	21:24	17:8 21:8
90:16 92:16   94:15   young (1)   1:22   16   (2) 10:9   132:16   2003 (3)   2026 (1)   156:11   156:11   156:11   156:11   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2027 (1)   159:13,19   2030 (7)   19:2   2030 (3)   176:24   88:11   159:13,19   2030 (7)   19:2   2030 (3)   176:24   2030 (7)   19:2   2030 (3)   176:24   2030 (7)   19:2   2030 (3)   176:24   2030 (7)   19:2   2030 (3)   176:24   2030 (7)   19:2   2030 (2)   176:24   2030 (7)   19:2   2030 (2)   176:24   2030 (7)   19:2   2030 (2)   140:19   100:11   19:13   48:5   100:11	30:25 36:19	10:22 70:1	75:10,12,18	156:19	161:10	27:1 56:17
94:15   young (1)   97:1   younger (1)   1:22     161 (2) 10:9   69:13   132:16   156:1   156:1   132:16   133:21   youngest (1)   134:8 138:1   138:13   youth (1)   140:18   146:8   years (59)   25:10 28:6   28:7 29:23   41:21 115:6   24:11   15:182, 24:24   161:23   20:10 (1)   16:20 21:6   21:19,20   26:13   132:16   159:13,19   2027 (1)   17:22   2006 (3)   176:24   2030 (7) 19:2   2030 (7)	46:17 79:14	yield (2)		160,000 (1)	<b>200 (2)</b> 74:6	66:17 67:16
103:21	90:16 92:16	33:14 52:1		97:3	85:1	71:18
105:18   106:7   132:8   133:21   134:8   138:11   138:13   140:18   146:8   25:10   28:6   28:7   29:23   28:7   29:23   28:7   29:23   28:19   29:24   29:28   29:3	94:15	young (1)	` ′	<b>161 (2)</b> 10:9	2003 (3)	2026 (1)
106:7 132:8   133:21   youngest (1)   134:8 138:1   133:13   youth (1)   140:18   146:8   years (59)   25:10 28:6   zer (2)   41:21 115:6   28:7 29:23   41:21 115:6   29:33   36:9 39:5 39:8 40:17   45:18,24,25   46:8 48:5 52:23,24   53:6,8,14   59:6,7   77:19 78:4   33:23 34:6   91:1,5,11   93:11 96:5   96:7,16,20   96:21 97:16   102:8   103:17   69:9,24   105:9   71:28 7:3   106:18   103:17   69:9,24   100:18   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:19   100:10	103:21	97:1	1:22	69:13	132:16	156:1
133:21	105:18	younger (1)	1	161,000 (1)	159:13,19	2027 (1)
13:12   13:14   youth (1)   147:9   140:18   146:8   25:10 28:6   28:7 29:23   31:3 36:9   36:19 39:5   39:8 40:17   74:5   20:10 (1)   16:20 21:6   25:23,24   53:6,8,14   25:23,24   53:6,8,14   25:6,6,7   4:5 10:20   77:19 78:4   33:23 34:6   91:1,5,11   93:19 33:2   34:23 35:18   91:1,5,11   93:19 106:18   103:17   69:12 106:6   1,000 (1)   16:20 21:6   20:19 (1)   16:20 21:6   16:7:10   1	106:7 132:8	153:22	1 (4) 1.0 10.0	94:8	2006 (3)	176:24
138:13   138:13   147:9   146:8   years (59)   25:10 28:6   28:7 29:23   41:21 115:6   23:13 36:9 39:8 40:17   45:18,24,25	133:21	youngest (1)	, ,	<b>17 (15)</b> 5:24	88:11	<b>2030 (7)</b> 19:2
140:18   147:9   147:9   27   200 (1)   147:9   140:18   146:8   27   27   27   27   27   201 (2)   140:19   151:12   21 (3) 74:1   201 (2)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (3) 74:1   201 (1)   21 (4) 23 (8)   21 (1)   21 (4) 23 (8)   21 (1)   21 (4) 23 (8)   21 (1)   21 (4) 23 (8)   21 (4) 24 (2) 21 (4) 23 (8)   21 (4) 24 (2) 21 (4) 23 (8)   21 (4) 24 (2) 21 (4) 23 (8)   21 (4) 24 (2)	134:8 138:1	113:14		7:3 8:2 9:3	104:11	19:13 48:5
146:18   146:18   147:9   146:18   146:14   166:24   166:25   146:24   166:25   146:24   166:21   166:21   166:21   166:21   166:21   166:25   146:18   146:19   146:19   146:19   146:19   146:14   166:21   16	138:13	youth (1)	` ` `	12:11 56:17	159:24	90:17 93:11
Years (59)         Zero (2)         41:21 115:6         71:18         71:18         161:21         94:8 102:3         13:13 74:1         161:21         94:8 102:3         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         13:11:17         2010 (1)         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (3) 74:1         161:21         94:8 102:3         21 (4) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	140:18	147:9		65:12 66:17	2008 (2)	140:19
years (59)         25:10 28:6         zero (2)         41:21 115:6         12 (2) 22:8         71:18         104:24         11:21         11:21         11:23         11:23         105:2,11,17         2010 (1)         94:8 102:3         214:4923 (8)         214:4923 (8)         214:4923 (8)         214:4923 (8)         214:4923 (8)         214:4923 (8)         214:4923 (8)         214:4923 (8)         21:49.20         100:00 (1)	146:8	7				
28:7 29:23	years (59)			71:18	` '	\ <i>'</i>
31:3 36:9         31:3 36:9         74:5         10 (1) 104:2         17,000 (1)         80:12         104:16         104:16         44:22 55:17           39:8 40:17         46:23         zoned (1)         46:23 zoned (1)         157:22         20md (32)         16:02 21:6         21:19,20         139:1         160:4         71:4 174:20         22,000 (1)         156:20 21:6         139:1         160:4         71:4 174:20         22,000 (1)         156:20 21:6         18(3) 76:10         2012 (1)         56:8 69:10         71:4 174:20         22,000 (1)         157:42:2         22,000 (1)         153:4         22,000 (1)         153:4         22,000 (1)         153:4         22,000 (1)         153:4         220,000 (2)         22,000 (1)         153:4         220,000 (2)         22,000 (1)         153:4         220,000 (2)         220,00	25:10 28:6	` '	` '			
36:19 39:5         74:5         10:00 (1) 1:9         80:12         10:4:6         44:22 55:17           39:8 40:17         46:23         20ne (1)         16:20 21:6         10:00 (1)         16:20 21:6         10:00 (1) <td>28:7 29:23</td> <td></td> <td></td> <td>i i</td> <td>` ′</td> <td>` ′</td>	28:7 29:23			i i	` ′	` ′
30:19 39:3   30:19 39:4   30:17   46:23   20:19 30:	31:3 36:9	- ' '	` '			
45:18,24,25         46:23         16:20 21:6         139:1         2012 (1)         30:08 9:10         71:4 174:20           45:18,24,25         46:8 48:5         20ned (1)         157:22         26:13,25         176:24         2013 (2)         22,000 (1)         71:4 174:20           52:23,24         20m (32)         4:5 10:20         140:10         167:10         180 (1) 26:8         104:23         133:3         220,000 (2)         22:20,7:14           77:19 78:4         33:23 34:6         34:23 35:18         140:10         167:10         185,000 (1)         2014 (2)         22:2 27:14         220,000 (2)         22:2 27:14           93:11 96:5         35:24 39:23         44:20 48:25         100,000 (1)         45:23         167:9         160:9 167:5         231 (1) 82:19         231A (1) 83:6         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         24 (2) 108:9         25 (9) 53:6         26 (18         159:7         2019 (1)         76:9 77:19         76:9 77:19         76:9 77	36:19 39:5		` '			
45:18,24,25   20ned (1)   157:22   26:13,25   27:16 140:9   140:10   167:10   132:7   160:9 167:5   221:19,20   26:13,25   27:16 140:9   140:10   167:10   132:7   160:9 167:5   221:19,20   22:2000 (1)   153:4   220,000 (2)   22:2000 (1)   153:4   220,000 (2)   22:2000 (1)   153:4   220,000 (2)   22:207:14   2013 (2)   22:2000 (1)   2014 (2)   22:2000 (1)   2014 (2)   2015	39:8 40:17	` '	` ′	` '	` ′	
48:8 48:5         35:22         26:13,25         26:13,25         27:16 140:9         180 (1) 26:8         10:24         2000 (2)         157:22         22,000 (2)         153:4         220,000 (2)         153:4         220,000 (2)         153:4         220,000 (2)         22:22 27:14         20:01 (2)         22:20,000 (2)         22:20,000 (2)         22:22 27:14         20:01 (2)         22:20,000 (2)         22:20	1 1					
32:23,24         Zoom (32)         27:16 140:9         185 (1) 79:13         131:23         220,000 (2)         2		` /			` ′	, , ,
33:6,8,14         230m (2)         4:5 10:20         140:10         167:10         185,000 (1)         2014 (2)         222,0000 (2)         22:2 27:14           77:19 78:4         33:23 34:6         34:23 35:18         30:00,000 (1)         167:10         132:7         160:9 167:5         231 (1) 82:19           93:11 96:5         35:24 39:23         44:20 48:25         11 (5) 28:7         160:7,12         24 (2) 108:9           96:21 97:16         52:12 55:7         55:15 63:8         11 (5) 28:7         31:3 58:21         166:25         160:7,12         24 (2) 108:9           102:8         69:9,24         71:2 87:3         76:9 139:12         196,000 (1)         2018 (3)         24:10           105:9         71:2 87:3         91:23 92:4         11:59 (2) 7:4         166:25         74:17 92:14         25 (9) 53:6           106:18         112:25         118:12         113,000 (1)         159:7         2019 (1)         78:4 96:7           110:23         118:12         104:4         1970s (1)         106:13         76:9 77:19           120:5,5         142:12         46:25 78:5         1987 (1)         80:12 153:4         137:20           133:19         144:10,15         155:25         15(1)         55:15         87:25 94	· · · · · · · · · · · · · · · · · · ·			\ /		
39:6,7         33:23 34:6         33:23 34:6         167:10         132:7         160:9 167:5         221:27:14           91:1,5,11         34:23 35:18         35:24 39:23         44:20 48:25         100,000 (1)         132:7         160:9 167:5         231 (1) 82:19           96:7,16,20         44:20 48:25         52:12 55:7         31:3 58:21         76:9 139:12         167:9         160:7,12         24 (2) 108:9           102:8         55:15 63:8         69:9,24         76:9 139:12         196,000 (1)         2017 (2)         111:3           105:9         71:2 87:3         91:23 92:4         146:20         11:59 (2) 7:4         166:25         74:17 92:14         25 (9) 53:6           100:5         112:25         118:12         13,000 (1)         159:7         2019 (1)         78:4 96:7           110:23         118:12         104:4         19:9         2020 (2)         135:2           111:17         126:4 133:3         137:5         46:25 78:5         1987 (1)         80:12 153:4         137:20           133:19         144:10,15         155:25         158:23         155:25         156:15         36:20 75:10         250,000 (2)           135:1,2         137:20         166:12         106:18         138:10		` /		\ /		' '
91:1,5,11         34:23 35:18         34:23 35:18         100,000 (1)         45:23         100:9 16/:3         231A (1) 82:19           96:7,16,20         44:20 48:25         11 (5) 28:7         31:3 58:21         160:7,12         2017 (2)         231A (1) 83:6           96:21 97:16         52:12 55:7         31:3 58:21         76:9 139:12         1930 (1)         2017 (2)         111:3         247 (2) 22:8           102:8         69:9,24         71:2 87:3         46:20         11,464 (1)         166:25         74:17 92:14         25 (9) 53:6           109:5         112:25         66:18         113,000 (1)         159:7         2019 (1)         78:4 96:7           110:23         118:12         104:4         1989 (1)         106:21         106:18           11:7         126:4 133:3         137:5         46:25 78:5         1987 (1)         80:12 153:4         137:20           133:19         144:10,15         158:23         155:25         13 (1) 46:23         13:00 (4)         45:17         2021 (9) 9:3         143:20           137:20         165:21         13 (1) 46:23         13 (1) 46:23         13:00 (4)         106:18         13:10         126:19				, , ,	( )	
93:11 96:5 96:7,16,20 96:21 97:16 102:8 103:17 105:9       35:24 39:23 44:20 48:25 55:15 63:8 69:9,24 71:2 87:3 109:5 110:23 111:17 110:23 111:17 110:23 111:17 110:23 111:17 110:25 113:19 133:19 135:1,2 137:20       45:23 11 (5) 28:7 31:3 58:21 76:9 139:12 11,464 (1) 46:20 11:59 (2) 7:4 66:18 113,000 (1) 155:25 155:25 136:21       167:9 1930 (1) 104:4 106:4 106:4 106:5 106:18 106:18 113,000 (1) 104:4 113,000 (1) 104:4 113:5:25 113:19 135:1,2 137:20       167:9 1930 (1) 104:4 1104:4 1106:25 1106:25 1106:13 1106:21 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:13 1106:14 1106:15 1106:18 1106:18 1106:18 1106:18 1106:18 1106:18 1106:18						
93:11 96:5       33:21 96:7,16,20       44:20 48:25       11 (5) 28:7       1930 (1)       100:7,12       2017 (2)       111:3       247 (2) 22:8         96:21 97:16       52:12 55:7       55:15 63:8       76:9 139:12       196,000 (1)       2018 (3)       24:10       25 (9) 53:6         105:9       71:2 87:3       91:23 92:4       11:59 (2) 7:4       166:25       74:17 92:14       25 (9) 53:6         109:5       112:25       118:12       113,000 (1)       159:7       2019 (1)       78:4 96:7         110:23       118:12       104:4       19:9       2020 (2)       135:2         111:17       126:4 133:3       137:5       142:12       46:25 78:5       1987 (1)       80:12 153:4       137:20         133:19       144:10,15       155:25       155:25       106:18       36:20 75:10       250,000 (2)         137:20       165:21       13 (1) 46:23       106:18       138:10       126:19         137:20       165:21       13 (1) 46:23       160:17       2510 (1) 1:22						` '
96:21 97:16         52:12 55:7         31:3 58:21         76:9 139:12         41:11 73:11         247 (2) 22:8           102:8         69:9,24         76:9 139:12         106:18         71:2 87:3         71:2 87:3         74:17 92:14         25 (9) 53:6           106:18         91:23 92:4         11:59 (2) 7:4         159:7         160:13         2019 (1)         78:4 96:7           109:5         118:12         13,000 (1)         19:9         2020 (2)         135:2           111:17         126:4 133:3         137:5         142:12         46:25 78:5         1987 (1)         80:12 153:4         137:20           133:19         144:10,15         158:23         155:25         13 (1) 46:23         155:25         106:18         138:10         126:19           137:20         165:21         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         13 (1) 46:23         155:00         15 (1) 1:22         150:15         150:17         2510 (1) 1:22					ĺ	` '
76:21 97:16         32.12 33.7         76:9 139:12         104.4         41:11 73:11         247 (2) 22:8           102:8         69:9,24         76:9 139:12         196,000 (1)         2018 (3)         24:10           105:9         71:2 87:3         91:23 92:4         11:59 (2) 7:4         166:25         1969 (1)         160:13         76:9 77:19           109:5         112:25         118:12         13,000 (1)         19:9         2019 (1)         78:4 96:7           110:23         118:12         104:4         19:9         2020 (2)         135:2           120:5,5         137:5         46:25 78:5         1987 (1)         80:12 153:4         137:20           133:19         144:10,15         158:23         155:25         13 (1) 46:23         106:18         138:10         250,000 (2)           137:20         165:21         160:17         2510 (1) 1:22				` '	` '	
102:8         69:9,24         11,464 (1)         166:25         74:17 92:14         25 (9) 53:6           105:9         71:2 87:3         91:23 92:4         11:59 (2) 7:4         166:25         160:13         2019 (1)         78:4 96:7           109:5         112:25         118:12         13,000 (1)         19:9         2020 (2)         135:2           111:17         126:4 133:3         137:5         142:12         46:25 78:5         1987 (1)         80:12 153:4         137:20           133:19         144:10,15         155:25         13 (1) 46:23         106:18         138:10         250,000 (2)           137:20         165:21         13 (1) 46:23         13 (1) 46:23         160:18         138:10         126:19           137:20         165:21         13 (1) 46:23         13 (1) 46:23         160:18         138:10         126:19           137:20         160:17         2510 (1) 1:22						` /
105:17         71:2 87:3         46:20         1969 (1)         160:13         76:9 77:19           106:18         112:25         11:59 (2) 7:4         159:7         2019 (1)         78:4 96:7           110:23         118:12         13,000 (1)         19:9         106:21         106:18           111:17         126:4 133:3         137:5         104:4         19:9         80:12 153:4         137:20           124:3         142:12         46:25 78:5         46:25 78:5         1996 (2)         36:20 75:10         143:20           135:1,2         158:23         155:25         13 (1) 46:23         106:18         138:10         126:19           137:20         165:21         13 (1) 46:23         13 (1) 46:23         160:18         138:10         126:19           137:20         158:24         13 (1) 46:23         13 (1) 46:23         160:17         2510 (1) 1:22				, ,	( )	
103:9         71:207:3         91:23 92:4         11:59 (2) 7:4         159:7         2019 (1)         78:4 96:7           109:5         112:25         118:12         13,000 (1)         19:9         2020 (2)         135:2           111:17         126:4 133:3         137:5         137:5         142:12         46:25 78:5         45:17         2021 (9) 9:3         137:20           133:19         144:10,15         158:23         155:25         106:18         36:20 75:10         250,000 (2)           137:20         165:21         13 (1) 46:23         106:18         138:10         126:19           137:20         158:23         1300 (4)         1300 (4)         160:17         2510 (1) 1:22		· ·	·			` /
100:18         112:25         66:18         13,000 (1)         1970s (1)         106:21         106:18           111:17         126:4 133:3         137:5         137:5         12 (3) 1:21         46:25 78:5         45:17         2021 (9) 9:3         143:20           133:19         144:10,15         158:23         155:25         106:18         138:10         250,000 (2)           137:20         158:21         165:21         13 (1) 46:23         166:18         138:10         126:19           137:20         158:23         165:21         13 (1) 46:23         165:21         160:18         126:19           137:20         158:23         165:21         13 (1) 46:23         165:21         160:18         126:19           137:20         158:23         165:21         13 (1) 46:23         160:18         138:10         126:19           137:20         158:23         165:21         160:18         160:17         160:17				` '		
110:23       118:12       113,000 (1)       19:9       2020 (2)       135:2         111:17       120:5,5       137:5       12(3) 1:21       45:17       2021 (9) 9:3       137:20         124:3       142:12       46:25 78:5       155:25       1996 (2)       36:20 75:10       250,000 (2)         135:1,2       155:25       13 (1) 46:23       165:21       138:10       126:19         137:20       150:15       135:2       137:20       143:20         158:23       165:21       13 (1) 46:23       166:18       138:10       126:19         158:24       130:00 (4)       160:17       2510 (1) 1:22			` '		` '	
110.23       126:4 133:3       104:4       1987 (1)       80:12 153:4       137:20       137:20       137:20       137:20       137:20       104:4       1987 (1)       45:17       2021 (9) 9:3       137:20       143:20       143:20       143:20       143:20       250,000 (2)       143:20       250,000 (2)       143:20       250,000 (2)       155:25       106:18       138:10       126:19       126:19       155:25       160:17       160:17       2510 (1) 1:22				` '		
111:17       120:153.5       137:5       137:5       137:5       142:12       46:25 78:5       45:17       2021 (9) 9:3       143:20         133:19       144:10,15       158:23       155:25       106:18       87:25 94:3       94:11         137:20       155:21       13 (1) 46:23       13 (1) 46:23       160:17       2510 (1) 1:22					\ /	
120:3,5     142:12     46:25 78:5     1996 (2)     36:20 75:10     250,000 (2)       135:1,2     158:23     155:25     106:18     138:10     126:19       137:20     165:21     13 (1) 46:23     13 (1) 46:23     160:17     2510 (1) 1:22				` '		
133:19     144:10,15     155:25     50:15     87:25 94:3     94:11       137:20     165:21     13 (1) 46:23     13 (1) 46:23     160:17     2510 (1) 1:22	l '		` ′		\ /	
135:1,2 135:1,2 137:20			125 (1)	` '		
137:20   165:21   13 (1) 46:23   160:17   2510 (1) 1:22			155:25			
137.20   12.000 (4)	l '		<b>13 (1)</b> 46:23	100.10		
171.10			13,000 (4)	2		
	171.10	l			100.23	

			221
10.9 60.12	02.15	152.0	I
10:8 69:13	92:15	153:9	
<b>26</b> (1) 115:6	<b>43 (2)</b> 28:6	154:23	
<b>260</b> (1) 138:5	109:7	70s (1) 135:2	
<b>27 (2)</b> 116:8	<b>45 (3)</b> 75:9	<b>72</b> (1) 15:24	
149:7	100:6	720,000 (1)	
<b>28 (1)</b> 170:17	103:21	94:3	
3	<b>450 (1)</b> 79:22	732-282-07	
	<b>46 (1)</b> 133:18	1:23	
<b>3.5 (3)</b> 80:23	<b>460 (1)</b> 73:13	732-282-07	
81:1,5	<b>47 (1)</b> 25:12	1:23	
3:33 (1)	<b>470 (1)</b> 94:14	<b>734 (8)</b> 10:6	
175:21	<b>489 (2)</b> 10:9	11:23 44:22	
<b>30 (17)</b> 36:12	69:13	55:17 56:8	
39:13 61:11		69:10 71:3	
76:13 86:14	5	174:19	
91:20 96:5	5,000 (3)	<b>7387 (2)</b> 10:9	
102:14	21:25 24:17	69:13	
103:19	146:6	<b>79 (1)</b> 102:5	
107:18	5,500 (1)		
110:23	24:19	8	
121:25	<b>5.2 (1)</b> 93:1	8/10 (1)	
125:19	<b>50 (4)</b> 52:24	29:23	
141:19	53:7 91:10	<b>80 (3)</b> 73:13	
143:9	157:5	74:3 84:24	
155:22	50,000 (1)	<b>800 (1)</b> 41:10	
172:5	134:6	<b>83 (1)</b> 99:25	
300,000 (1)	<b>500 (4)</b> 93:1	84,000 (1)	
23:8	129:21	167:1	
<b>307D (1)</b> 7:14	153:22		
<b>307D</b> (1) 67:4	162:3	9	
<b>35 (3)</b> 45:18	52,000 (2)	<b>90 (1)</b> 84:21	
75:9 100:6	73:24 102:2	<b>91 (1)</b> 94:6	
35th (1)		<b>94 (2)</b> 21:8	
84:17	6	27:2	
360,000 (3)	<b>60 (3)</b> 52:23	95122 (1)	
89:6 138:13	53:14	109:21	
162:1	169:23	<b>97 (2)</b> 74:1	
363,000 (1)	<b>61 (1)</b> 102:4	169:22	
153:21	<b>66 (1)</b> 21:12	975352 (1)	
	<b>669 (2)</b> 10:8	176:22	
4	69:13		
<b>4.5 (1)</b> 139:5	<b>69 (1)</b> 157:6		
40 (3) 75:4			
103:20	7		
109:5	<b>70 (7)</b> 14:22		
400 (1)	73:14 79:24		
151:18	83:21		
412,000 (1)	128:13		