

**FINAL MEETING MINUTES
OAKLAND AIRPORT-COMMUNITY NOISE MANAGEMENT FORUM**

January 21, 2015

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1. INTRODUCTIONS

The January 21, 2015 meeting of the Oakland Airport-Community Noise Management Forum was called to order at 6:37 p.m. by the Forum’s Facilitator, Michael McClintock. Mr. McClintock welcomed the Forum members and guests. He asked the Forum members and advisors to introduce themselves for the benefit of the audience:

Forum Members/Alternates Present:

Benny Lee, Co-Chair, Elected Representative, City of San Leandro
Barbara Tuleja, Alt. for Walt Jacobs, Co-Chair, Citizen Representative, Alameda

Jesse Arreguin, Elected Representative, City of Berkeley
James Nelson, Citizen Representative, Berkeley
Greg Jones, Elected Representative, City of Hayward
Edward Bogue, Citizen Representative, Hayward
Kathy Ornelas, Alt. Citizen Representative, San Leandro
Pat Gascocos, Elected Representative, City of Union City
Subru Bhat, Citizen Representative, Union City
Kristi McKenney, Asst. Director of Aviation, Port of Oakland

Staff Members/Advisors/Guests:

Matt Davis, Airside Operations Manager, Port of Oakland
Larry Galindo, Noise Abatement/Environmental Affairs Supervisor
Jesse Richardson, Assoc. Airport Noise Abatement Specialist, Port of Oakland
Vince Mestre, Acoustical Consultant, Landrum & Brown
Harvey Hartmann, Consultant to the Port
Don Kirby, FAA Air Traffic Manager, Northern California TRACON
Sean Moran, Noise Analyst, Hayward Executive Airport
Bert Ganoung, Aircraft Noise Abatement Manager, San Francisco International Airport
Valerie E. Jensen Harris, CSR, Stenographer
Mike McClintock, Forum Facilitator

2. ANNOUNCEMENTS

A. Quarterly Noise Report 3Q 2014

The facilitator said the 3rd Quarter 2014 noise report was distributed with the agenda packages and was ready to be received and filed unless there were any questions or discussion. Co-Chair Benny Lee questioned the reason for the North Field compliance numbers to be significantly lower, “like 74 percent compliance and 82 percent compliance.” He said the compliance was down about eight percent, but the flights have only increased by about 33 flights. He asked for an explanation. Larry Galindo replied that the North Field quiet hours noise abatement procedure (NAP) was affected by the termination of a noise abatement procedure where aircraft were using Runway 10 runway at night to depart through a noise abatement procedure called “the 180 departure procedure.” He said it terminated because the FAA can no longer support reverse flow. The result of this is that more aircraft ended up having to use Runway 28R (right) for night departures. This required them to make a departure turn on the “Salad” NAP, which, for some aircraft, is difficult. It also requires a certain amount of pilot proficiency to make it effective. This is what drove the non-compliance. Galindo said he thought that better compliance would be seen in the next quarterly report, “as we’re out reaching to see how pilots [who] weren’t familiar with [the procedure] performed to make sure they stay inside over the bay.” A motion to receive and file was approved.

B. Noise Forum Dues Status

Facilitator McClintock said that the annual dues for all but one of the Forum member communities had been received, and that the check is in the mail from last community that has not paid.

The facilitator announced that he had two other informational items not on the agenda. The first was that, on March 3, in Washington, D.C., in association with the National League of Cities Conference, N.O.I.S.E. will have their annual legislative conference. He asked if any elected officials planned to attend the NLC conference, and, if so, could they arrange to attend the N.O.I.S.E. legislative session. The second item was the annual University of California Davis Noise and Air Quality Conference in Palm Springs. He said that if anybody from the Forum is interested in attending they should let him know.

3. CORRESPONDENCE

The facilitator stated that he had not received any correspondence, but that Co-Chair Lee had received copies of two letters from the San Francisco Community Roundtable concerning ABAG's Regional Airport Planning Committee (RAPC) and the lowering of FAA's DNL 65db noise standard. Co-Chair Lee said he would provide copies of the two letters to the facilitator to distribute to the Forum.

4. APPROVAL OF MINUTES (OCTOBER 15, 2014)

Facilitator McClintock noted that this item was for the approval of the draft minutes of the October 15, 2014 meeting. He said he would entertain any changes or corrections to the draft minutes. However, he cautioned, please remember that there was a problem with the stenographer's transcription equipment and that the minutes had to be transcribed manually from handwritten notes. He said that Valerie Jensen Harris did a tremendous job under the circumstances, but also understood that there are some questions about things that may or may not have been included in the meeting notes. No one on the Forum had any corrections, additions, or modifications for the draft minutes. However, Mr. Kurt Peterson said that "under public comments number five on Page 4, the first paragraph of public comments, the last sentence -- everything else seems fine, but [he] wanted to note that Matt Davis clearly said one of the issues of concern was the cost factor [for a permanent noise monitor at Encinal High School]. He said this omission was Davis's number one concern as far as not being able to put a permanent monitor at the high school. He asked that this be added to the minutes. The facilitator asked Mr. Davis if he wished to respond. Mr. Davis said that this was not the number one issue. There were numerous issues at that monitoring site. He said the Port has numerous reasons why they may or may not install permanent noise monitoring at any given location -- primarily, because they're used to establish 65dB CNEL, and anything outside that contour would be something the Forum would have to take into consideration and propose to the Port. The facilitator said because of the conflicting information, he would review the transcript of the meeting and make any changes accordingly.

Mr. Peterson added that "not only did [Davis] say that it was a factor as far as the cost, he also stated something to the effect that if he was to set up one in West Alameda, it would open up other areas asking for the same." McClintock said he would look at the transcript, but it should be understood that there were technical difficulties and, as a consequence, the transcript be incomplete. There being no further discussion, the facilitator asked for a motion. Co-Chair Lee moved approval of the draft minutes. Councilmember Jones seconded. There being no further discussion the question was called. Motion approved with appropriate changes.

5. PUBLIC COMMENT

The facilitator announced that this was the time for members of the public to speak on issues not on the agenda but relevant to airport noise and air quality at Oakland International Airport. Kurt Peterson reiterated his concerns about the need for a permanent noise monitor at Encinal High School, or a portable monitor if nothing else. He said that it was his understanding that Port staff was working with the school and CLASS to set priorities. However, he believed there has been no Port contact with the school since the last meeting three months ago. He said the high school and two elementary schools on the west end of Alameda “are being subjected [to] incredibly loud takeoff noise.” The facilitator suggested that Mr. Peterson bring this issue before CLASS to be put into a formal request to the Forum and submit it through one or both of the Alameda representatives so that the Forum can deal with it on a formal basis.

Red Wetherill followed up on Mr. Peterson’s comments by noting that with the implementation of the Metroplex, the FAA has made considerable changes in the way air traffic is directed, and that has resulted in more aircraft “encroaching on our territory.” He said that “it’s been quite terrible out [on Alameda’s west end]” and that he is getting the feeling that they “are being pushed aside” by the FAA. The facilitator said that Mr. Galindo has an item on the night’s agenda that may shed some light on this. There being no else who wished to address the Forum, the facilitator closed the public comment period.

6. 2015 WORK PLAN

Facilitator McClintock said he had provided Forum members with copies of the draft 2015 Work Plan, which included some proposed changes, modifications, and additions. McClintock said he had added some new explanatory text, particularly with respect to a new item number four, which is to support FAA Headquarters' initiative to continue research into the NextGen air traffic control system, including OPD (optimized descent profiles), RNAV (area navigation), and other GPS-based navigation procedures and other acronyms. He said he added a drone-related item--monitor the progress of civilian use of unmanned aerial vehicles. He said that more and more government agencies are opting for the use of drones. These aircraft are flown remotely and are not subject to Part 14 or Part 36 of Code of Federal Regulations, which limits altitude on what they're calling model aircraft. He suggested that a presentation on the status of the civilian use of drones would be appropriate when the FAA releases its proposed rules. Also, he suggested that the Forum advocate for the use of drones, instead of helicopters by news organizations if that is not inconsistent with the FAA’s rules. The benefit of this is that drones are much quieter than helicopters and can probably fly lower without being disruptive. James Nelson asked if there would be a weight limitation on the size of civilian drones. McClintock answered that currently the weight limit is 55 pounds. This could change with the proposed FAA regulations.

Another proposed initiative is to support the N.O.I.S.E.-- National Organization to Ensure a Sound-Controlled Environment -- legislative priority for setting 60 DNL as the minimum threshold of community compatibility. The current threshold is 65 DNL/CNEL. As for studies, the facilitator said Co-Chair Lee has been collecting data to see if there is more community annoyance over noise than is reported in the noise complaints. McClintock said he had added some additional wording to go along with the initiative concerning the use of drones:

“Study news helicopter operational activity and noise impact on local community and possible noise abatement recommendations including the use of drones in lieu of helicopters. He said it would be necessary to get the reaction of local TV and news organizations in this process. Councilmember Arreguin said, as everyone knows, there were a number of protests that happened in Berkeley the past couple of weeks. There was a news helicopter hovering over downtown Berkeley yesterday due to a power outage. He said they continue to reach out to helicopter operators and news organizations, including a meeting last year. He said he believed that they should be at the table for any discussion of best practices. Because the FAA hasn't provided guidelines on how to mitigate impacts, it is important that this subject be discussed and negotiated with the individual operators. He strongly encouraged that this continue to be a component of the Work Plan. McClintock said another important study would be the potential benefits of the Optimal Profile Descent (OPD) procedures to provide noise reduction in the approach corridor to OAK, and to review OPD procedures for potential benefits and/or impacts. This goes along with the initiatives to study the effects for the NextGen air traffic control system and other satellite-based aircraft advanced flight tracking capabilities and their potential for significant noise reduction.

As for presentations, the facilitator said, it is recommended that the bi-annual Noise 101 program be put off for at least another year, because there are too many other things going on with the Port and the Noise Office is short-staffed. The same is proposed for the awards program. He said we need to keep the ongoing updates of the Burbank, Van Nuys and other Part 161 processes, as Vince is doing a pretty good job keeping the group informed on this subject. Councilmember Arreguin said that it was important to maintain the option for a special presentation on helicopter operations and issues, and to engage with representatives of news helicopter organizations, even to the extent of having them come to a Forum meeting. McClintock said he would work with staff and advisors to try to set up a meeting with the helicopter services and the news providers. Assistant Aviation Director McKenney added that “the point is well taken that if the [prior] presentation...did not include the primary folks who are using the service and are paying for [it] and instigating it, then that would be [worthwhile for the Forum] to hear, [with respect to] their perspective and goals, and, of course, the opportunity to share with them [our] concerns.” Jesse Arreguin added “Obviously, it's complicated because of first amendment issues. We want to respect their right to be able to do news reporting. At the same time, there are best practices they could implement that may reduce noise impacts.”

McClintock noted that these were pretty much all of the recommended changes to the Work Plan, and that it also includes a link to the N.O.I.S.E. legislative priorities, which were last updated in November of 2013. He said if there were no more additions, he would entertain a motion to approve the draft 2015 work plan with the suggested changes. Councilmember Gascoscos moved approval. Seconded by Co-Chair Lee. There being no further discussion the question was called. Motion carried unanimously.

7. NOISE NEWS UPDATE

Vince Mestre provided an update on current noise and regulatory issues. He began with a discussion of CatEx II, which is the FAA's categorical exemption for airspace changes. The question has become when does the FAA have to do an environmental assessment, environmental impact statement, if a change in airspace could be categorically exempt. Two groups

have filed requests for the FAA to either hurry up or slow down. The airlines and aviation trade groups have requested the FAA hurry up and adopt their CatEx II provisions as developed by the NextGen Advisory Committee. The second group is the Noise Oversight Committee at Minneapolis-St. Paul International Airport, which has said that the policy needs to go back to Congress and ask them what they meant, as the proposal was poorly written and contradictory. Everyone is waiting to see whether the FAA will adopt the committee's recommendation or go back to Congress and asks what they really meant. He discussed the FAA's roadmap for updating its noise policy. The FAA 65 DNL noise policy and all of their other related orders, advisories and guidelines date back to the 1970s. In the fall, the FAA made a presentation outlining their roadmap process in which their intent is to collect data covering impacts of noise on sleep, health and children's learning and have a drafted policy ready for consideration by the year 2020. It's not clear that Congress will wait until 2020 to consider a new noise policy. The 13 member Congressional Quiet Skies Caucus signed a letter to the FAA along with 14 other Congressional representatives, requesting the FAA take the 65 DNL residential compatibility guideline and change it to 55 DNL. The 2014 election may have influenced the caucus to expedite this process.

With respect to Part 161, LAX has had a Part 161 in the works for some time and the FAA recently rejected it, after the airport spent \$3.4 million. They're throwing in the towel. This would have been a rule that mandates over-ocean operations at night. Right now, it's a voluntary program. They wanted to make it mandatory, and the FAA said, "No." So this is the end of the LAX Part 161 study. Mestre said oil prices have dropped a lot since our last meeting. They've been cut in half in three months. It's not clear what that is going to mean in terms of delivery schedules for new aircraft by Airbus and Boeing. It's too early to draw any quick conclusions from it, but history tells us that when fuel prices increase the airlines that continued their modernization programs were in a far better position to make profit.

At Gatwick Airport outside of London, they have a new program to study noise, termed "rotation respite." This is the idea that you move aircraft operations from community to community to increase the amount of time between overflights. You don't just count the number of overflights the community gets, but you try to provide a period of quiet and rotate it from community to community. It has been tried before, but never successfully. In addition to this, the UK is considering a new runway for either Gatwick or Heathrow. Heathrow had a new runway program that was proposed about five years ago. It was rejected when a new government was put in place. Now they're back. They will do a new runway, but they don't know at which airport. It's an extremely controversial project.

Donald Trump is notorious for suing the West Palm Beach Airport over noise. He is specifically suing them over the new RNAV procedures. It's called the "ONCOG 1," and the waypoints are named "Donald" and "Trump." Mestre said he will keep the Forum posted on how this lawsuit turns out. Mestre next updated the Forum on the Santa Monica Airport which maintains that the deed of transfer requiring it to be used as an airport is legally unenforceable, and the City wants to close the airport. So the aircraft business interests put a measure on the ballot requiring the city to study any traffic impacts and other impacts that may come from closure and reuse of the airport for other purposes. A counter-proposal was put on the ballot by the residents that basically said, "If the airport closes, it won't be a big problem." The citizens' proposal won by a landslide, even though they were outspent almost 10 to one by the aviation interests. In Kentucky and Illinois, there are two proposed bills which would give tax

cuts to homeowners near airports. This is going to get a lot of discussion at this year's UC Davis Noise Symposium. They have a session set up just for this discussion. Part of the problem is that the municipality that will be losing tax revenue is not the airport operator. In fact, this tax benefit to the resident comes from a funding source that is not aviation-related. Similarly, the State of Kentucky has proposed a bill that any homeowner who does sound insulation inside their house for noise and they are within a 60 DNL contour around an airport, they would get a tax break equivalent to 100 percent of the cost of insulating their homes. The FAA will allow airport "sponsors" to provide a sound insulation programs only if the noise exceeds 65 DNL and will not fund, nor will they use aviation funds if it's outside the 65 DNL contour. Again, this is a tax credit, so it would come as a cost to the taxing agency and not to the airport, unless they so happen to be the same. The East Hampton Airport is an airport we discuss a lot because of the battle between the one percent and the point one percent. This is the rich people complaining about the very, very rich people who won't take the Long Island Expressway to Manhattan or the Hamptons, but instead fly by helicopter. They've been doing a lot of analysis on the distribution of noise complaints, and nearly 70 percent of all complaints are related to helicopters, and those helicopters essentially fly between Manhattan and the Hamptons.

The new Boeing 737 will use the CFM LEAP engine. It's now being flight tested as a fourth engine on the B-747. It's in the flight test program. We will start seeing noise data from the LEAP engine in the next couple years on an actual B-737 aircraft. Airbus is using a different technology engine, a geared turbofan, on the new A-320 Neo family. So there is some debate, possibly, over whether Airbus or Boeing comes out with a quieter aircraft or with more fuel efficiency, which is a bit of a tradeoff. Mestre said, we've talked before about the program NASA has developed for shaped sonic booms for business jet aircraft. Supersonic jet aircraft are on the drawing board. This is the first time we've seen, in at least 15 years, discussions of a supersonic air transport to replace the Concorde. The last time this was studied in the late 1990s, the cost of a replacement aircraft for the Concord would be on the order of a billion dollars, and no airline would ever be able to afford it. It all may hinge on the manufacturer's ability to solve the sonic boom problems.

The Germans have a program to look at quieter aircraft landings using lasers to study air flow around the wing. Aircraft wings on commercial aircraft are designed to be very efficient at cruise altitude because that's where most of the fuel is burned. By using this technology, they can study air flow in the very-slow approach conditions and in the initial stages of flight. Their idea is to make a wing more efficient for all phases of operation by understanding the very detailed air flow that occurs around all the various surfaces. When you couple this with materials that can, to use the sci-fi term, "shape shift" -- that is, change its shape in four different stages of flight -- we start to see potential for reducing aerodynamic noise. That's very important, because the engines are quiet enough now that, on approach, it's not the engine noise that's dominating, it's the airframe noise. Mestre next showed a picture of the Cirrus aircraft with a built-in parachute. Cirrus is proposing a small jet capable of carrying seven passengers that will be equipped with a parachute. He discussed electric airplanes and the fact that we are getting closer to electric flight training aircraft. This would be a big deal for noise and air pollution because the propeller aircraft are the source of lead emissions, and electric aircraft would be very quiet.

As for air quality and greenhouse gas stories, he led off with the U.S. airline fuel efficiency ranking. Alaska, Spirit and Frontier airlines placed first because they have the newest, most fuel-efficient fleets. The lead emissions lawsuit from propeller aircraft has been settled. This was a settlement agreement regarding a lawsuit filed by the Center for Environmental Health,

which is based in Oakland, and was against the companies that sell leaded gas at California airports. This is different from the FAA and EPA programs to eliminate leaded fuel from piston aircraft. The settlement was reached just in the last month, and it affects 23 California airports. In the settlement, there were three major provisions. One is that the fuel distributors will use the lowest leaded fuel that is commercially available. They will provide "mogas," which is premium automotive gas, to airport-based fuel companies. The third provision is that the companies are required to warn residents living within one kilometer of the airport of the lead risk and to post warning signs at the airports. Oakland International is one of those airports that are on the list. This is only a partial solution. The real solution is that by 2018 the FAA has required a substitute for leaded gas. They are testing four gas substitutes right now. He noted that the Bristol Airport in the UK is operating a bus based on human and food waste. There are too many bad jokes about this, so Vince skipped over it. The Airport Cooperative Research Program, which is part of the National Academy of Science, released a sustainability rating system report that says it is possible to create a sustainability rating for an airport. So an airport could be rated at 50 different activities, then they would be scored for sustainability. We would expect this to get a lot of review within the industry, and, perhaps, pretty soon we'll see airports start to get low scores and high scores based on how well they do in each of the 50 sustainability categories.

Mestre spoke to the issue of drones. He noted that within the last couple of weeks, the FAA issued law enforcement guidance for suspected, unauthorized UAS -- that's unmanned aerial systems -- operations. UAS is a fancy acronym for drones. Under this guidance the FAA retains the responsibility for enforcing federal aviation regulations, including those applicable to the use of drones. Then it goes on to say: "But the agency recognizes that state and local police officers are in a better position" to ensure enforcement. The document essentially divides the world into commercial and hobby aircraft, which is all subject to further modification once the FAA publishes its long anticipated drone policy. Of significance is that the drone has to be operated in a manner that does not interfere with and gives way to any manned aircraft: "When flown within five miles of an airport, the operator of the aircraft provides the airport operator and the airport air traffic control tower with prior notice of the operation. If it's a permanent operation within five miles of the airport, then you have a mutually-agreed-upon operating procedure with both the airport operator and the air traffic control tower. So everybody within five miles of Oakland Airport who wants to fly drones should have an agreement with the airport and the tower.

So, how many drones are out there—an estimated 200 thousand small drones are being sold each month. So when you think about how many of these drones may be being operated within 5 miles of an airport, you begin to get an idea of the potential magnitude of the problem. Fortunately, they are not all that noisy, unless they are constantly buzzing overhead. Subru Bhat asked who is buying all these drones. Mestre replied, mostly photographers. The question of privacy was raised. Vince replied that this is the number one issue of concern to everyone because these drones all come with a high definition camera right out of the box. Red Wetherill said he called the noise office about a low flying aircraft. He was told that the planes altitude was 685 feet...well within the capabilities of most drones, although the FAA has tried to limit their altitude to 400 feet. James Nelson said he had heard one operating in a local park. He said it sounded like a bee hive. Pat Gascocos suggested that if so many were being sold already, it must be very easy to buy one. Mestre said it's just like walking into a store and buying a computer. Ms. Gascocos said she believed with such proliferation, the

use of drones should be regulated. Jesse Arreguin commented that Alameda County and the City of Berkeley have been debating the use of drones for law enforcement and surveillance, and that privacy has been the big issue. Mestre concurred that privacy seems to be the number one issue, especially when the paparazzi start using drones. Mestre continued his discussion with the commercial drone market, which includes UAS up to the size of a jet aircraft or a full-sized helicopter. He said there are lots of great uses for these, but there's also a huge potential for misuse.

Co-Chair Lee raised the issue of safety with respect to the possibility of a drone weigh from 5 to 55 pounds crashing into someone or something. Mestre replied that even a small drone crashing into something at terminal velocity would be the equivalent of a brick. Harvey Hartmann described some of the work he was doing with NASA on drones. He acknowledged that they could be annoying, but they also have a wide variety of useful applications in agriculture and other outdoor industries. McClintock added that they have a lot of practical applications -- search and rescue, floods, forest fires, and etc. Hartmann offered that NASA has agreed to give a presentation at the SFO Roundtable, and that the same presentation could be made to the Forum if anyone was interested. The Forum indicated their interest in having NASA make a presentation. Benny Lee said we should also look into the social aspects of drone use. Pat Gascoscos said she had three concerns: safety, privacy and noise. Jesse Arreguin suggested that the Forum take an advocacy position with regard to regulating the use of drones. McClintock thanked Vince for his presentation and the Forum for its interest in the subject matter.

8. NOISE OFFICE REPORT

A. FAA OAPM Update and HUSSH Noise Monitoring Report

Larry Galindo called on Don Kirby to provide an update on the status of the OAPM or Metroplex project as it is now called. Mr. Kirby said that the FAA had completed 3 of the 5 project phases. The first phase was an internal phase which resulted in some airspace changes, but no flight track or procedural changes. This positioned the FAA for phases two and three late last fall. He said they were now positioned for phase four, which is primarily an arrival phase. There are a number of arrivals to San Francisco, Oakland, and Sacramento that are of interest to them. They are working toward optimizing these routes to make them more efficient and repeatable. An example of repeatability is the HUSSH departure procedure which has replaced the old nighttime noise departure procedure at Oakland. Under this procedure the aircraft all join the same track northbound over the bay. The repeatability of this procedure is "fantastic" because it puts airplanes right where we want them to be -- away from the populous areas and out over the water as they climb northbound over the Bay and then proceed northeast bound for the most part. Mr. Kirby cautioned against making any decisions until all the data is in and has been analyzed. He said he would like to hear any comments on this, and offered to have Patty Daniel provide more information as it developed. He concluded his remarks by saying that they have been very careful to follow federal laws, rules and regulations on this project, recognizing that there's a lot at stake for everyone. Their primary concern is the safe operation of the national airspace system. He said he is very proud of where they are on this very complex project and appreciated the constructive conversations he has had with the Forum and the SFO Roundtable.

Red Wetherill expressed his concern that flights are encroaching more on Alameda than they have been in the past. He said aircraft are flying over Alameda at fairly-low altitudes, and are not only noisy, but dangerous. Mr. Kirby said that flight track data are available and the Port's noise office is the best place to get any information. He noted, however, that there are some caveats around the newer technology. A certain altitude must be attained prior to making the turn out towards HUSSH, and the flight tracks he's seen are very similar to what we've seen for many years. Mr. Wetherill said that the FAA was looking at this issue from "30,000 feet" when they should be focusing in at what is happening at "3,000 feet." An unidentified speaker added that he had registered a noise complaint about early morning activity from 3:00 a.m. to 8:00 a.m. that was "constant aircraft every two minutes going over my house." The speaker said he also experiences similar activity from 4:00 p.m. until 8:00 p.m. Larry Galindo responded that the noise office can recreate and investigate altitudes, the type of aircraft, and frequency of overflight for any given location at any time. Unfortunately, their system was being upgraded at the time of the gentleman's complaint. Mr. Galindo went on to describe the characteristics of the HUSSH departure procedure which replaced the Silent 7 departure.

The Silent 7 was implemented in 1976 as agreed in Port settlement agreements with the City of Alameda and KJOB. The procedure turned aircraft out into the bay initially on a 270 degree heading and then to the 342 radial from San Francisco. The Silent 7 was designed as a nighttime noise abatement procedure from 10:00 p.m. to 7:00 a.m. It was used primarily by UPS and Federal Express for their nightly departures. Other nighttime departures make a 180 degree turn on takeoff and fly south down the bay. The Silent 7 was renamed Silent 8 when new charts were published by the FAA for a change in runway magnetic heading from 29 to 30 in late 2013. The Silent 8 flight tracks were designed to use land-based navigation, and flight tracks are not always consistent, due to aircraft weight, wind and piloting. The HUSSH noise procedure is one of three airport departure procedures. It's the only one that has a potential for noise impact over Alameda, Oakland and Berkeley. It was implemented by the FAA and in the OAPM. It was implemented by the FAA in November 2013. The HUSSH procedure uses GPS navigation. There are three GPS fixes in the procedure, but only the first two have noise implications. Because UPS and FedEx were the primary users of the Silent departures, they are also the primary users of the HUSSH procedure. Both UPS and FedEx fly aircraft with flight management systems they have the capability to fly these new procedures. Galindo said that his office has found, through their noise monitoring, that all the flight tracks were consistent with this new procedure. He showed graphical illustrations of the actual flight tracks taken from the airport's noise and operations management computer, which showed how precisely these tracks are followed with but few exceptions.

Mr. Galindo called upon Vince Mestre to explain how the noise data for the HUSSH procedure was collected and what the analysis showed. Mestre explained that his analysis showed that HUSSH was slightly louder than the Silent 8 departures. He said his concern whether this was a significant difference or not. The L_{max} noise level at the measurement site in Alameda for the Silent 8 was 57.1 dB, the HUSSH was 57.9. That HUSSH was eight-tenths dB louder, but it was not entirely clear that the increase is statistically significant. So, as to the bottom line, it's a small difference, which may not be statistically-significant. Kurt Peterson asked what the value of HUSSH was if it was virtually the same as Silent 8. Mestre said the difference between the Silent 8 and HUSSH depends on where the measurement point is located. The difference occurs at the north end of Alameda where HUSSH is more out in the middle of the bay than up against Alameda. Red Wetherill said that this morning the planes were turn-

ing over Alameda. Mestre said that the HUSSH procedure is a nighttime procedure from 10 p.m. to 7 a.m. Mr. Peterson asked about any similar nighttime procedures for SFO that would benefit the Peninsula, and possibly adversely impact the East Bay. Harvey Hartmann responded since 1993, the effort has been to keep as many of the operations over the bay as possible, and that HUSSH has been successful in this regard. Mr. Peterson said that the late night departures from SFO are more noticeable now on the west end of Alameda than ever and the Korean Air flight at 3 o'clock in the morning is definitely louder. It sometimes awakens both he and his wife. The facilitator suggested that the noise office might want to look into the potential effects of any modified departure procedures at SFO on the East Bay. Kurt Peterson reiterated his concern that "most of the traffic from SFO is taking off to the east over Oakland Airport." Mr. Galindo said he would look into this.

B. Associate Noise Specialist Recruitment

Larry Galindo noted that the Port's senior noise specialist retired a year ago April. In August Jesse Richardson was promoted to senior noise specialist [applause]. In the meantime, the Port has taken steps to get Jesse's old position filled. Fifty-three applications were received and interviews with the most qualified applicants are being set up. Galindo said he should be able to provide more information at the April meeting.

9. NF/SF GROUPS STATUS REPORTS

On December 17, the South Field Group discussed material-related projects, talked about ongoing air quality projects to reduce the need for auxiliary power units by providing preconditioned air. The new BART service to the airport and potential changes to FedEx operations during the holiday period were also discussed. In the North Field Group, the North Field RSA project was the primary issue. He described the activities associated with this project, including the need to occasionally close runways. He said he appreciated the community working with them on that. He also described taxiway reconstruction work to replace 45-degree connectors with 90-degree connections for safety purposes. In other words, it's much easier for a pilot to look both ways on a taxiway that intersects at a 90-degree angle. He discussed "blast pad" issues. This is not pavement actively used by aircraft, but is in place for jets or propeller aircraft to accelerate without causing a problem with blowing rocks and debris around. Mr. Davis also gave an update on the engineered materials arresting system (EMAS), which is a bed of engineered materials built at the end of a runway. Engineered materials are defined by the FAA as "high energy absorbing materials of selected strength, which will reliably and predictably crush under the weight of an aircraft." The purpose of an EMAS is to stop an aircraft overrun with no human injury and minimal aircraft damage. The aircraft is slowed by the loss of energy required to crush the EMAS material. An EMAS is similar in concept to the runaway truck ramp made of gravel or sand. It is intended to stop aircraft that have overshot a runway when there is an insufficient free space for a standard runway safety area (RSA).

10. NEXT MEETING – April 15, 2015

11. NEW BUSINESS/ADJOURNMENT

Assistant Aviation Director, Kristi McKenney noted that the Aviation Director would normally be in attendance, but she is attending a meeting of the Airport Cooperative Research Program (ACRP) to help select projects that will be funded for research. So it's good to know from the

perspective of the Forum and the Port that we have great representation in terms of what's going to be funded at the federal level for research. The facilitator also announced that he was in the process of updating the Forum's glossary of aviation and airport planning terms and would make copies available when completed.

There being no additional new business the meeting was adjourned at 8:32 p.m.