

Maersk Representative Meets with District Shipping Leader Shares Green Initiatives, Perspective

In February, Lee Kindberg, Director of Environment and Sustainability for the Denmark-based Maersk Shipping Line, visited Santa Barbara and met with District staff and others, providing insights into the industry from the perspective of the largest container shipping company in the world.

The District estimates that ships going through the Santa Barbara Channel contribute just over 50 percent of the emissions of nitrogen oxides (NO_x), a smog-forming pollutant, in Santa Barbara County. Shipping is also a major source of emissions of particulate matter, air toxics, sulfur dioxide and greenhouse gases. The District has no direct regulatory authority over ships; however, state and international rules are now in place that will reduce levels of these pollutants over time.

Maersk, a leader in green shipping initiatives, supported the creation of a North American Emission Control Area by the International Maritime Organization in 2010. This action will phase in additional requirements for cleaner ship engines and fuels in the area up to 200 nautical miles off the coast of North America. "Regulation can be our friend



Lee Kindberg of Maersk with District Director Dave Van Mullem

because it rewards those who want to do the right thing, and levels the playing field," Kindberg remarked.

Maersk has been using lower-sulfur fuels for several years now, well before a state fuel rule took effect in 2009 off the coast of California. "Switching to lower-sulfur fuels is the fastest and most cost-effective way to reduce air emissions," said Kindberg. She added, "It also reduces impacts on water and marine ecosystems." According to Maersk figures, since starting fuel switching in 2006 off the coast of North America, the company has achieved a 95 percent reduction in sulfur dioxide emissions, an 86

percent reduction in emissions of particulate matter, and a 6-10 percent reduction in NO_x emissions. Maersk estimates the fuel switching has also prevented more than eight million pounds of toxic air emissions.

Maersk participated in a recent NOAA (National Oceanic and Atmospheric Administration) study. A plane flying over a Maersk container ship in the Santa Barbara Channel measured air emissions from the stack before and after the switch to the lower-sulfur fuel mandated by the state fuel rule. The study found a 90 percent reduction in emissions of particulate and sulfur dioxide after the fuel switch, as well as a

reduction in black carbon of 75 percent, greater than expected. The study did not measure NO_x emissions reductions, which were estimated to be about 5 percent. In addition to changing fuels, the ship also reduced its speed, resulting in additional emission reductions.

Maersk is a leader in "slow steaming," or the lowering of average ship speeds to conserve energy and reduce emissions. Maersk tested one hundred different vessels to determine the optimal speeds at which the vessels could operate. While ship engine manufacturers had previously recommended the ships run at 40-60% of load, Maersk found that operating at lower speeds and as low as 10% of load could be effective, and did not result in any damage to the engines. Manufacturers subsequently revised their recommendations.

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Maersk Representative (Cont'd)

Kindberg said, "More recently we are emphasizing something we call 'steady steaming,' we try to run our ships at the slowest constant speed throughout the route." Fuel costs represent more than fifty percent of the variable operating costs for Maersk, so saving fuel through slow and steady steaming strategies is key to profitability.

Reducing fuel use is also important to Maersk's efforts to reduce its carbon footprint. More and more companies worldwide are examining the carbon emissions involved in shipment of goods, and the ability to demonstrate low carbon leadership has brought Maersk customers, said Kindberg. Maersk is part of the Clean Cargo Working Group, a forum made up of shipping companies and global corporations such as Ikea and Nike. The group uses standardized carbon footprint calculation tools and emission factors with the overall goal of promoting more sustainable product transportation. Maersk aims to reduce carbon emissions by 25 percent of 2007 levels by 2020.

Kindberg also noted that at very low speeds it can become difficult to steer the ship. In the Charleston area, ships are required by NOAA to operate at a speed of 10 knots or less for the protection of the right whale species. The Charleston pilots find on some transits that a speed above 10 knots is needed to ensure effective steering in the approach to the Charleston Harbor. NOAA recognized that there may be conditions where 10 knots was not feasible, and provided a safety exemption for these conditions with required documentation. NOAA calls on ship captains to reduce speeds in the Santa Barbara

Channel when whales are present; however, unlike the Charleston area rules, these recommendations are voluntary.

Kindberg pointed out that ships need to maintain schedules for arrival at ports at specific times. For example, Maersk ships heading through the Santa Barbara Channel from the Port of Los Angeles need to arrive in Oakland in time for the dock workers' morning shift, or the company can face significant cost and schedule consequences.

The District is interested in the potential for vessel speed reduction to reduce emissions of NOx as well as other pollutants in the Santa Barbara Channel. The discussion with Maersk provided valuable insight into shipping industry practices and the variables that can impact ship speed.

Said District Director Dave Van Mullem, "We appreciated the chance to hear about the shipping industry from an industry leader. We learned a lot, and of course

we now have more questions than answers. But the answers we did get, and the information we are gathering, will help us move forward to reduce emissions from this source."

For more information on Maersk, visit www.maersk.com, and for more information on the Clean Cargo Working Group, see www.bsr.org. For background on marine shipping emissions in Santa Barbara County, see www.OurAir.org/itg/shipemissions.htm.

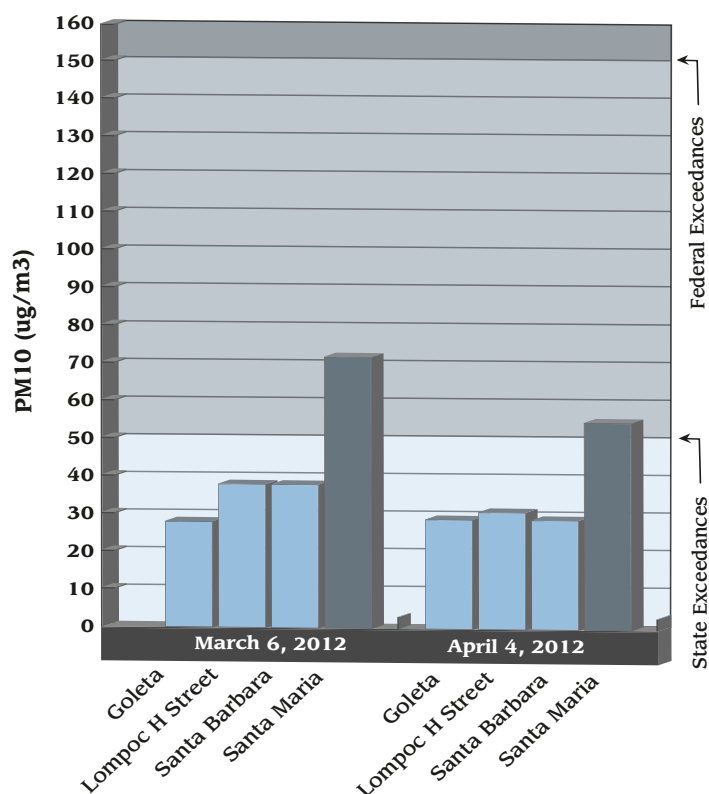
High Winds and Air Quality

In March and April the District issued air quality warnings for northern Santa Barbara County when high particle levels were recorded at the Santa Maria monitoring station during periods of high winds.

The District issues an air quality warning when there is already poor air quality in some areas of Santa Barbara County. The Santa Maria station recorded an exceedance of the state standard for particulate matter less than 10 microns in diameter (PM10) on March 6, and on April 4, based on a 24-average (from midnight to midnight).

For more information see "Today's Air Quality" on the District's website at www.OurAir.org, and to see exceedances of air quality standards recorded to date, see www.OurAir.org/airdata/exceedances.htm.

PM10 Daily 24 Hour Averages



As shown in the chart above, on March 6 and April 4, the Santa Maria monitoring station recorded a 24-hour average level of PM10 that exceeded the state standard. District monitoring stations at Goleta, Lompoc, Santa Barbara and Santa Maria measure PM10 and PM2.5 (PM less than 2.5 particles in diameter) in real time. PM levels are measured at three other stations – at El Capitan, Las Flores Canyon, and Vandenberg Air Force Base) every six days; March 6 and April 4 were not sample days at these stations.

Linda Alexander Retires after 20 Years

APCD Board Roundup

Following are the highlights of the January and March Board meetings.

January

- 🔹 Elected Steve Lavagnino Chair and Jim Richardson Vice-Chair for 2012.
- 🔹 Appointed John Deacon to the District Hearing Board for a 3-year term.
- 🔹 Executed lease agreement between the District and Acquistapace Ranches, LLC extending the existing tenancy of 301 East Cook Street, Santa Maria.
- 🔹 Received summary of renewal rates for 2012 employee insurance plans and programs.
- 🔹 Selected Chair S. Lavagnino, Vice-Chair Richardson and Board member Reddington to serve on the Executive Committee in 2012.
- 🔹 Selected Board members Reddington, Aceves, Farr, Martner, and L. Lavagnino to serve on the Hearing Board Nominating Committee in 2012.
- 🔹 Appointed Board member Aceves to serve as the representative to the South Central Coast Basinwide Control Council.

- 🔹 Received a report from the Air Pollution Control Officer on County air quality and District programs.

March

- 🔹 Adopted APCD Resolution No. 12-03 to approve a standardized grant agreement specific to the Electric Vehicle Charging Station Infrastructure Program.
- 🔹 Reappointed Donald Ward to the Hearing Board for a three-year term.
- 🔹 Received and filed an update on the Lower Emission School Bus Program for school bus replacement and school bus retrofit grants.
- 🔹 Received and filed an update on recent marine shipping developments and activities.



In January, Linda Alexander, Supervising Accountant, retired after 20 years at the District. During that time she saw the District's manual accounting system transition to a fully automated one, creating savings and efficiencies, and reducing

the number of staff needed. Before joining the District, she worked at Santa Barbara Research, Tracor, and Santa Barbara County.

Alexander commuted to the District's Santa Barbara office on the Clean Air Express bus from Lompoc, making friends on the bus. "I am the last of the group to retire," she remarked, "and I'll have more time to

get together with everyone now." She is also looking forward to having more time to spend with her granddaughter, who spends summers with her.

"I've enjoyed working for an agency that watches out for

our environment and makes improvements," she noted. She added, "I will really miss the people at the District—but I won't miss the commute. I've been able to ride my bike almost every day now since I retired."

Tips for Greener Living

1. Use less electricity. Use compact fluorescent light bulbs or LED lights, and think about solar.
2. Drive less: Walk, bike or take the bus or train when you can, or try telecommuting.
3. When you do drive: combine car trips, carpool, keep your car tuned , and your tire pressures up, and don't top off your tank at the gas station.
4. Use less toxic products.
5. Shop local.

See more tips at www.OurAir.org.

Jim Swihart Retires after 21 Years



In March, Jim Swihart, Senior Data Processing Specialist, retired after 21 years at the District. Prior to joining the District he taught computer

operations at Santa Barbara City College, assisting in the computer lab, and supervising students who interned at a range of Santa Barbara businesses.

Swihart came to computer science after a career as a licensed plumbing contractor. He remarked, "The huge thing I learned from plumbing is customer service. It's particularly important

in plumbing to keep in touch with your customers as the job goes along, as you're often building up quite a bill. It's also like computer work in that it

involves problem-solving, putting together the pieces of a puzzle." He will miss that exercise, and also all the people at the District.

Swihart, who has five children and eight grandchildren, is looking forward to more family time, to walking five miles a day, and to pursuing interests in vocal and instrumental music, art, science and family history. He will also finally be able to get to a long list of house projects, and noted, "Now that I have the time, I will have to find another excuse not to get to the list."

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District Board Calendar

All meetings start at 1:30 p.m. For final meeting agendas, call Sara Hunt, 961-8853, or see www.OurAir.org/apcd/agenda.htm.

May 17

Board of Supervisors'
Hearing Room
511 East Lakeside Parkway
Santa Maria, CA 93455

June 21

Board of Supervisors'
Hearing Room
105 East Anapamu Street
Santa Barbara, California 93101

August 16

Board of Supervisors'
Hearing Room
105 East Anapamu Street
Santa Barbara, California 93101

October 18

Board of Supervisors'
Hearing Room
105 East Anapamu Street
Santa Barbara, California 93101

Community Advisory Council

The APCD Community Advisory Council meets as needed at the Days Motor Inn in Buellton. The public is welcome. For more information, call Sara Hunt, 961-8853.



Charging Up on the Central Coast!

A recent electric vehicle workshop held at Santa Barbara Metropolitan Transit District offices featured displays of vehicles, including the Mitsubishi "i" all-electric vehicle (MIEV) above.

In March the City of Solvang welcomed new public electric vehicle (EV) charging stations, the first to be installed in Santa Barbara County as part of a cooperative program through the Community Environmental Council, Coulomb Technologies, the City of Solvang, the District, and other partners. The Santa Barbara Botanic Garden also welcomed new public EV charging stations from Ecotality. The stations can be used to charge all-electric vehicles, as well as plug-in hybrid vehicles. More stations will be installed soon at a variety of locations around the county.

In April, the District, along with the air pollution control districts of San Luis Obispo and Ventura Counties, announced that \$250,000 in grant funds from the California Energy Commission and the federal Department of Energy have been secured to develop an EV Readiness Plan for the Central Coast. A key goal is to develop a plug-in EV (PEV) charging infrastructure along the Highway 101 corridor through the Central Coast, connecting Southern California and the Bay Area. The three air agencies, working with non-profit organizations - the Central Coast Clean Cities Coalition and the Community Environmental Council - have created an EV Coordinating Council to support the emerging PEV market on the Central Coast.

The California Center for Sustainable Energy still has funding available to help consumers purchase PEVs. Rebate amounts vary by the vehicle purchased, and can be as high as a \$3,500 rebate for the all-electric Nissan LEAF.

For more information see www.OurAir.org/edu/clean-air-cars.htm.

Office

260 N. San Antonio Rd. Suite A
Santa Barbara, CA 93110-1315

Business Assistance

(805) 961-8868

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(805) 961-8800

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Green Businesses Thrive Albertsons Achieves Zero Waste

Achieving zero waste is an ambitious goal. The Albertsons supermarket company has proved it's a goal within reach. Speaking at a recent Green Business Program event in Buellton, Rick Crandall, Director of Environmental Stewardship of the Southern California Division of Albertsons, noted that the two stores in Santa Barbara are now diverting more than 95 percent of waste through programs including composting, food donation, and recycling. These stores are the first in the company to reach the zero-waste goal, and are a model for other stores. The company performs rigorous waste audits to verify that procedures are



Rick Crandall, Director of Environmental Stewardship of the Southern California Division of Albertsons

being followed. "None of this is greenwashing. We document everything," said Crandall.

He added, "Our goal is always first to go upstream and eliminate the need for the material, so we don't need to dispose of it. And whatever is left after that, we work to find uses for it or recycle it."

In 2011, Albertsons donated 28 million pounds of food to local food banks. "This is food that's just past its peak of freshness, but it's still

good," he said. In addition to helping people and preventing food waste, the company gets a tax deduction for the donation. "You have to do what's right for business," he noted.

The company is saving millions of dollars a year from green initiatives that reduce waste and save energy. Electricity use makes up 62 percent of the company's carbon footprint, and utility bills are the third largest company expense after labor and workers' compensation. Crandall has found that simple steps, including using LED lights and energy-conserving fans,

(continued on back)

Meet an Inspector: Jon Mundt

First in a series



A background in plant diseases may seem a bit unusual for an air pollution inspector, but Jon Mundt has found it has come in handy during his twenty-two years as a District Inspector. After seventeen years working at a Lompoc flower-seed company, Mundt, who has a

Masters in plant pathology from Kansas State, took the exam to become an inspector. One of the questions was about the odorant added to natural gas to make it easier to discover leaks; he knew the answer was butyl mercaptan from plant experiments. He remarked, "I was in grad school researching plant viruses and I was trying to purify these viruses using a number of chemicals. I found I just couldn't let the mercaptan hit the air, the smell was so bad. So I knew it was a powerful odorant."

One time he responded to an air pollution complaint from a person who was concerned that a strange substance on the ground might have come out of the air. The person described

the substance as looking like dog vomit. When he arrived to investigate the complaint, Mundt recognized the substance as a plant fungus. On researching it, Mundt found that there is a type of slime mold that creates spores that look like regurgitated dog food—it is actually referred to in botanical literature as "dog vomit fungus."

Mundt grew up in Aruba, where his father worked in an oil refinery. After undergraduate and graduate school in Kansas, he moved to Lompoc in 1974. During his time at the District he has inspected a range of businesses with District permits—from gas stations to gravel companies. One year, when he was inspecting smaller

facilities, he did more than 200 inspections. For the past several years, his focus has been on inspecting onshore oil and gas facilities in northern Santa Barbara County. "Primarily we're looking for compliance with our rules—there has to be vapor recovery, equipment has to be functioning properly, and we're checking for leaks," he said. Mundt also determines the sulfur content in the gas lines.

He added, "It's almost an art form finding a leak—there could be a stain on a pipe, or you might see some sweating on a fitting. Something catches your eye, and you look into it and it often turns out to be a leak." Recently he was out at an oil field east of Santa Maria where there had

Business Focus

Donald C. Kendig, CPA Leaves for Position in Pension Plan Administration

Donald Kendig, District Business Manager, left the agency in early March to take a position in Ventura, CA, as the Retirement Administrator for the Ventura County Employees' Retirement Association. Said Kendig, "It's the opportunity of a lifetime for me. I'm young in my career, and this is a big step forward."

Kendig holds a bachelor's degree in business economics from UC Santa Barbara. He has been enrolled in various investment and pension management programs at UC Berkeley, the Wharton School at the University of Pennsylvania and Stanford Law School. He has been with the District since 2004, and previously, he was a financial systems analyst in the auditor-

controller's office in Santa Barbara County. He also worked as an analyst for the Santa Barbara County Superior Court and the County Executive Office in Santa Barbara County.

In addition to supervising the District fiscal section accountants, Kendig coordinated and prepared the District's annual budgets, prepared the comprehensive annual financial reports, and served as safety officer. He also served on the CAPCOA Fiscal Officers Committee and on the Santa Barbara County Employees' Retirement System Board of Retirement.

He will be administering Ventura County's pension system, known officially as the Ventura

County Employees' Retirement Association (VCERA), which has about 15,000 members. It covers employees of Ventura County government, the Ventura County Air Pollution Control District, Ventura County Superior Court and the Ventura Regional Sanitation District. VCERA is dealing with a number of issues including personnel changes, installing a multimillion-dollar accounting system and waiting to see what pension reform initiatives will materialize. Kendig remarked, "Bringing out the best in the Board and in my staff will be my biggest love and my biggest challenge. If I can succeed

at that, all of the other challenges we will face together will be that much easier."

In concluding, he reflected, "The District is in good hands and positioned for a bright future, which makes accepting this opportunity that much easier for me. I will still miss everyone and the fun and exciting times we had together."



Green Business (cont'd)



Green Business Program Coordinator Frances Gilliland (left) congratulates Kimberley True of the landscape architecture firm True Nature Design on her certification as a green business.

produce significant savings. One simple change – to turn kitchen equipment on later in the day – is saving \$1.3 million a year.

Although he has already achieved some ambitious goals, Crandall is not resting on his laurels. "We're going to continue to work – the last step is compost to farms, waste to energy, and waste to feed," he said.

He shares his ideas with other companies, including Albertsons' competitors, and remarked, "This is not about an individual company, it's about the community."

The Green Business Program has certified 45 businesses in Santa Barbara County as green businesses. The District is a sponsor of the program. For more information, see www.greenbizsbc.org.

Meet an Inspector (cont'd)

been a persistent problem with odors, but no one had been able to identify the location of the leak. He got there early in the morning when the winds were calm and walked up and down the road until he found a place where the TVA (toxic vapor analyzer equipment) showed an

elevated level of vapor, although there were no pipes visible. "I stuck the TVA probe in a gopher hole and it showed an even higher level, indicating an underground leak," he said. In this case the company dug up the pipe and fixed the leak. In another case, the company was able to re-route the gas and stop using the pipes in the area with the underground leak.

Mundt remarked: "I like this job: you get out and walk around in a beautiful environment, and you get to work with great people at the businesses, and at the District. I really enjoy it." He shared his approach to inspecting businesses: "I always try to be helpful. I look for compliance and I want to help the business come into compliance. That's my goal first and foremost: help people."



Mundt uses toxic vapor analyzer equipment to check on a reported leak in a gas line in an oil field.