ENVIRONMENTAL ENGINEERING NEWSLETTER
17 JUNE 2013

Please be aware any Newsletter URL ending in **020701.pdf** is available for downloading only during the six days following the date of the edition. If you need previous Newsletter entries contact George at ghh@att.net.
Please Note: This newsletter contains articles that offer differing points of view regarding climate change, energy and other environmental issues. Any opinions expressed in this publication are the responses of the readers alone and do not represent the positions of the Environmental Engineering Division or the ASME.
George Holliday

This week's edition includes:

1) ENVIRONMENT – A. MISSOURI LAWYER BRINGS NUISANCE CLAIMS TO FRACKING ARENA

Six Pennsylvania families who sued Chevron Corp. (CVX) and units of The Williams Companies Inc. and WPX Energy Inc. (WPX) over hydraulic fracturing-related claims have turned to a Missouri lawyer who has used nuisance allegations to win cases against commercial animal feed operations.
The Fayette County residents last week alleged in a state court lawsuit that the energy companies' fracking efforts leaked methane and polluted water, while their employees intimidated them and even ruined a breeding stock of Black Angus cows. The focus of their lawsuit, however, isn't the property damage so much as the offensive byproducts of the operations, a legal tactic that has begun to gain traction as courts consider the application of nuisance law to the natural gas boom.
http://www.bloomberg.com/news/2013-06-11/missouri-lawyer-brings-nuisance-claims-to-fracking-arena.html
Joe Miller

2) HEALTH. A. HEPATITIS A - USA (03): FROZEN BERRIES

In this posting:
[1] Arizona
[2] Pomegranate seeds ex Turkey
http://www.cdc.gov/hepatitis/Outbreaks/2013/A1b-03-31/advice-consumers.html

3) SAFETY. A. NOTHING OF INTEREST

4) TRANSPORTATION. PIPELINE CALLED KEY TO CANADA OIL SANDS

Extracting Canada's huge deposits of oil sands in the next few years might not be economically viable without building the hotly contested Keystone XL pipeline into the U.S., according to new research that environmentalists said bolsters their view that blocking the project would shut off development of the energy source.

Environmentalists say producing Canadian oil sands releases more carbon dioxide than other kinds of oil and are pressing President Barack Obama to block the pipeline, which would carry oil from Alberta and help it get to Gulf Coast refineries. The U.S. State Department, industry officials and some analysts counter that burgeoning railroad capacity will eventually give Canadian crude a way to reach global markets even if Keystone is blocked.

http://www.eandp-environment.net/Transportation/Transportation020610.pdf

COMMENTS

A. THE WEEK THAT WAS: 2013-06-08 (JUN 8, 2013)

By Ken Haapala, Executive Vice President, Science and Environmental Policy Project (SEPP)

Sea Levels: As nature continues to ignore the temperature projections by human climate models, some in the Climate Establishment are responding by making ever more alarming projections of sea level rise. Fred Singer discusses sea level rise and what can be expected in the 21st century. In short, not much different than what was experienced in the 20th century. Singer brings out the different projections produced by the UN Intergovernmental Panel on Climate Change (IPCC) in the past and the greater, new estimate, appearing in the draft of the Fifth Assessment Report (AR5) as well as estimates by James Hansen, and Singer.

A new point Singer discusses is the possibility of two different mechanisms influencing Antarctica with opposite effects on sea levels. He suggests that the warming over the past century may increase the ice mass on the continent by promoting increases in snowfall on the continent. This mechanism may dominate the ice mass over decades or centuries and reduce projected sea level rise.

The second mechanism involves the West Antarctic Ice Sheet (WAIS). Unlike the Arctic ice sheets which are free floating, therefore, melting do not increase sea levels; much of the WAIS is anchored to bedrock that is below sea level, thus melting can increase sea levels. However, the melting, if it is occurring, is very slow and the time frame is in centuries or in millennia, and the extent and time frame of sea level rise have not been determined, should the globe continue to warm.

The melting of the WAIS, regardless of the cause, should be monitored; but, it does not pose a clear danger at this time. Humanity has decades, if not centuries, to determine the possible danger and how to address it.

Singer's analysis brings up an interesting test. In the draft of AR5, the IPCC predicts the sea levels will rise 45 to 110 cm by the end of the century – about 1 to 2 inches every five years. James Hansen predicts the sea levels will rise 20 feet, or about 30cm, 12 inches, every five years. But Fred Singer predicts a sea level rise of only less than 1cm, 0.4 inches, in five years. Who is right? We will know in five years. [Hansen plots the sea level rise as highly exponential, with an increase in the last decade of the century in excess of what occurred during the melting of the great ice sheets covering much of North American and Eurasia.]

As reported in the *Wall Street Journal*, the most recent paper in *Nature Geoscience* states that the rise from 2005 to 2011 was about 1.68 cm. This would work out to be about 1.4 cm per 5 years or 0.55

inches per 5 years – based on only six years of data. At this point, it appears that the IPCC and Hansen, not Singer, are the climate contrarians. Of course, the headlines claimed accelerating ice melt, for which they seem to have little basis. Please see Articles #1 and #2.
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Models v. Observations: Many people who have little experience in reading charts and graphs are confused by the graphs that show the temperature projections from the numerous climate models. When presented on one graph, the projections appear to be a mass of spaghetti. In an effort to clearly illustrate the differences between model projections and observations, Roy Spencer and John Christy simplified the model projections temperature into a linear from, covering the period from 1979 (when satellite measurements started) to 2012 and roughly covering the mid-troposphere over the tropics (20deg N to 20deg S). On the same graph, using 1979 as the base point, they compared these projections to the observations for that period over the same area from two satellite datasets (UAH and RSS) and four radiosonde datasets (from balloons), also in a linear form. The visual results are striking. The mean temperature increase of the projections from the models are about three times the temperature increase shown by observations.

One must be cautious in not inferring too much from such linear graphs. The richness of the data is lost by making it linear. For example, the jump in temperatures around the big El Nino year of 1998 is gone. The actual data indicates a climate shift around 2001-2002 which needs careful examination. A similar climate shift occurred in the mid to late 1970s.

In responding to critics, Spencer produced a similar graph, but without the linearization. The results are similar but for those not experienced in reading graphs the visual impact is not as striking. Spencer suggests that the reason for the disparity is that the models have too strong of a positive water vapor feedback to warming. But, there are also other possible explanations. Please see links under Models v. Observations.
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Blinded: The governments of the UK and the US appear to be blinded by ideology and/or myths and are unaware that of the dire consequences their policies may have on the general public. For example, when considering an energy bill this week, the UK parliament narrowly defeated an amendment (290 to 267) to "decarbonize" electricity generation by 2030 – essentially abandon fossil fuels for the generation of electricity, with legally binding limits. Prior legislation had targets, without enforceable limits. Those who voted for the amendment appear to be unaware that industrial and household electricity costs are increasing and that shutting off fossil fuel generation will put a great burden on the entire generation and distribution system.

Similarly, the US administration appears to be blind to reality. As reported in last week's TWTW, President Obama falsely declared that over the past 5 to 10 years the globe has been warming faster than anyone projected. The new Secretary of Energy claimed the cause of warming is not a subject for debate. This week, the Secretary of Agriculture made similar declarations, stating that climate change is new and different than anything the agriculture industry has faced. Apparently, he is unaware of the great "dust bowl" of the 1930s and the enormous benefits enhanced atmospheric carbon dioxide (CO2) provides to virtually all green plants, making them grow more robustly and more resistant to stresses such as drought.

Perhaps the strangest statement, backed-up by the Forest Service, which is part of the Department of Agriculture, is that western wildfires will increase significantly. For many decades, the policy of the Forest Service was to fight fires as they were seen to be wasteful and destructive. This policy resulted in a large build-up of flammable vegetation in forests. In recent decades, the policy shifted to only fight selected fires. If more wildfires occur in the future, it will be a result of changing government policy rather than increasing CO2, which makes the forests more resistant to drought and insects. Please see Article #3 and links under Defending the Orthodoxy and Problems in the Orthodoxy.
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Ray of Hope? As the UK and US governments seem to be oblivious to the failure of global warming/climate change claims, there may be a shift occurring in Australia. Prime Minister Julia Gillard is facing an election on September 14, and indications are that Ms. Gillard, who implemented an unpopular carbon tax in spite of promises not to do so, may be in significant difficulty. One indicator of the extent of this difficulty is that The Climate Group, one of largest international pressure groups advocating the replacement of fossil fuels, is closing its offices in Australia, claiming an unfavorable political climate. Please see link under "Problems in the Orthodoxy."

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Whom to Blame? Recently, there have been a number of essays exploring why the Climate Establishment, which seemed so powerful a few years ago and had enormous government support, was unable to get the public to support international agreements, and the US to restrict carbon dioxide emissions. Among the more interesting ideas is that the establishment was too focused on the small number of skeptics and attacked them for non-science reasons, thus giving the skeptics greater credibility with the public than their numbers would suggest. The establishment railing against the skeptics rather than debating them, no doubt, played a role.

However, one can also argue that it was the willingness of a few skeptics to publically state, in spite of personal abuse, that the science is shoddy, ignores climate history and contradicting data, and is largely based on models that have not been validated and are failing. When the internet became popular, the skeptical blogs furthered skepticism of the establishment science. The issue will not be settled for years to come and many different opinions will appear. Please see links under Seeking a Common Ground.

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Bureaucratic Games: Three years ago, the current US administration introduced the concept of Social Cost of Carbon (SCC) as part of its decision-making. Such concepts give bureaucrats and politicians great opportunity to play numbers games with the public under the guise of making important, necessary decisions. The Interagency Working Group on Social Cost of Carbon, made up of 11 Federal agencies, raised a new SCC of $35 per metric ton, from $21 per ton, which is an increase of 67% in three years, ostensibly due to the increased risks from sea level rise. (See discussion in the first section.)

The SCC number may be adjusted to $52 per ton simply by applying a different discount rate, and it is the discount rate that is the source of great game playing, the lower the discount rate, the higher the SCC. The $35 per ton is derived from a 5% discount rate (the current value of money or property in the future) and the $52 per ton is derived from a 2.5% discount rate. The extent of the game playing is highlighted by the fact that the Office of Management and Budget (OMB) has established that the base discount rate should be 7%. By rule of thumb, the SCC from the Interagency Working Group, which includes OMB, is 40% above what would be calculated using OMB's accounting procedures. No doubt, the EPA, and other agencies, will apply the new SCC in demanding changes to many products, such as appliances, to make them more energy efficient. Overall, such demands have resulted in higher prices and in many instances requiring far more time to operate to accomplish a specific task. The net effect is that energy efficiency in labor saving appliances results in human inefficiency. Please see links under Communicating Better to the Public – Make things up and http://www.whitehouse.gov/omb/circulars_a094

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US Production of Oil: The US Energy Information Agency forecasts that, in September, US production of oil will exceed imports for the first time in two decades. The Mid-East is becoming less important for US energy security, which is really based on assuring safe lines of transport in case of war or other drastic emergency, rather than the production source. Foreign policy implications are beyond the scope of TWTW, but this simple fact further illustrates the misguided thinking of the US Navy in developing biofuel alternatives at a cost of over $27 per gallon to replace petroleum fuels at

a cost of less than $4 per gallon (about 7 times) – all in the name of national security. Please see Article #4

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Air Pollution and Rainfall: A press release by the Georgia State University claims that a study confirms that the passage of the Clean Air Act is linked to increased rainfall in Atlanta. With no geographic constraints, such as ocean, major rivers, or mountains, Atlanta is one of the fastest growing metropolitan areas in the US in both area and population. According to the Bureau of the Census, in 1990 the MSA had a population of 3,069,000, in 2000 4,248,000, a growth of 38%, and in 2010 5,269,000, a growth of 24%. Could it be that population growth is linked to precipitation? Please see link under Below the Bottom Line.

http://www.sepp.org/twtwfiles/2013/TWTW%206-8-13%20-%20converted.pdf

C. REGULATORY DELAY CLOSES SAN ONOFRE

Both reactors at the San Onofre nuclear power plant in California are being retired due to the lengthy and uncertain regulation surrounding their return to service.

"We have concluded that the continuing uncertainty about when or if San Onofre might return to service was not good for our customers, our investors or the need to plan for our region's long-term electricity needs," said Ted Craver, chairman and CEO of Edison International - the parent company of San Onofre owners Southern California Edison (SCE).

The plant's problems began in January 2012 with a fault in one of two new steam generators installed as part of an uprate and modernization program of unit 3. The reactor shut down automatically when a minor amount of radioactive material was detected coming from a failed tube in the steam generator, but this aspect of the issue led to the mobilization of an anti-nuclear campaign against the plant, its majority owner Southern California Edison (SCE), and Mitsubishi Heavy Industries which supplied the faulty component.

SCE proposed to restart unit 3 at reduced power to provide an additional safety margin for the steam generators, but the Nuclear Regulatory Commission's (NRC's) review processes have so far taken eight months without reaching any conclusion.

Around 900 jobs will be lost with the closure of both units as SCE scales back its plant workforce from 1500. >>> enc Already a like number were lost when Unit 3 was de-fueled... <<<<

Now, said SCE, decisions by the NRC's Atomic Safety and Licensing Board have "created further uncertainty," adding that "additional administrative processes and appeals could result in delay of more than a year." During this time, SCE would have to purchase replacement power for its customers as well as maintain the plant in a state of readiness to operate.

The issue with unit 3 is exacerbated by the outage at unit 2, which has been kept from restarting from maintenance because it shares the same steam generator design. **SCE said it cannot afford to wait for permission to restart unit 3 without income from the operation of unit 2.** The reactors produce 1080 MWe and 1070 MWe respectively.

Around 900 jobs will be lost with the closure of both units, said SCE, as it scales back its plant workforce from 1500. "This situation is very unfortunate. This is an extraordinary team of men and women. We will treat them fairly," said Pete Deitrich, chief nuclear officer of SCE.

The wider region will be affected by a tightening balance of power supply and demand. "Thanks to consumer conservation, energy efficiency programs and moderate summer, the region was able to get through last summer without electricity shortages. We hope for the

same positive result this year, although generation outages, soaring temperatures or wildfires impacting transmission lines would test the system" said Ron Litzinger, SCE president.
San Onofre is owned 78% by SCE, 20% by San Diego Gas and Electric and 2% by the city of Riverside.
http://www.world-nuclear-news.org/C_Regulatory_delay_closes_San_Onofre_0706132.html

D. CLIMATE MODELS PREDICTED TOO MUCH WARMING

Climate models used by the United Nations Intergovernmental Panel on Climate Change and other climate groups to predict future temperatures have failed miserably predicting climate in recent years, new data show.
Scientists overseeing temperature data collected by NASA satellite instruments compared real-world temperatures since 1979 to 73 climate prediction models produced by international government agencies, universities, and other climate groups, including 19 models produced by U.S. agencies, universities, and climate groups. All 73 models predicted substantially more warming than actually occurred, with the mean of the 73 models predicting three times as much warming as actually
http://news.heartland.org/newspaper-article/2013/06/07/issue-94-new-data-climate-models-predicted-too-much-warming

E. SEA SURFACE TEMPERATURES SHOW NO RECENT WARMING

Global sea surface temperature remains flat with no rise in temperatures for at least the past decade, satellite instruments report. Sea surface temperatures in May were 0.01 degree Celsius below the 2003–06 average when global sea surface temperatures were relatively steady. Since 2006, sea surface temperatures have been more variable with cooler temperatures somewhat more prevalent than warmer temperatures.
http://www.drroyspencer.com/2013/06/global-microwave-sst-update-for-may-2013-0-01-deg-c/

F. CORN PRODUCTION IN THE USA IS ALREADY ADAPTING TO WARMING

So what's the longer-term outlook for the crop? In the concluding paragraph of their report, Butler and Huybers write, "losses to US maize yield from increased temperature," such as those suggested by Schlenker and Roberts (2006, 2009), "are almost certainly overestimated if adaptation is not accounted for." But if it is a part of the analysis, their work suggests there could well be no net loss in productivity across the entire corn-production region.
http://nipccreport.org/articles/2013/jun/4jun2013a1.html

G. GLOBAL WARMING: NOT A CRISIS

How much of the warming of the second half of the twentieth century was natural and how much was man-made? Did the warming continue into the twenty-first century? What are consequences of moderate warming? What, if anything, should be done? These are all legitimate questions that people all around the world are asking. The Heartland Institute, "a major force among climate skeptics" (according to the science journal Nature), publishes books and studies, produces videos, and hosts international conferences on this important topic.

H. I AM HIRING FOR THE FOLLOWING POSITIONS:

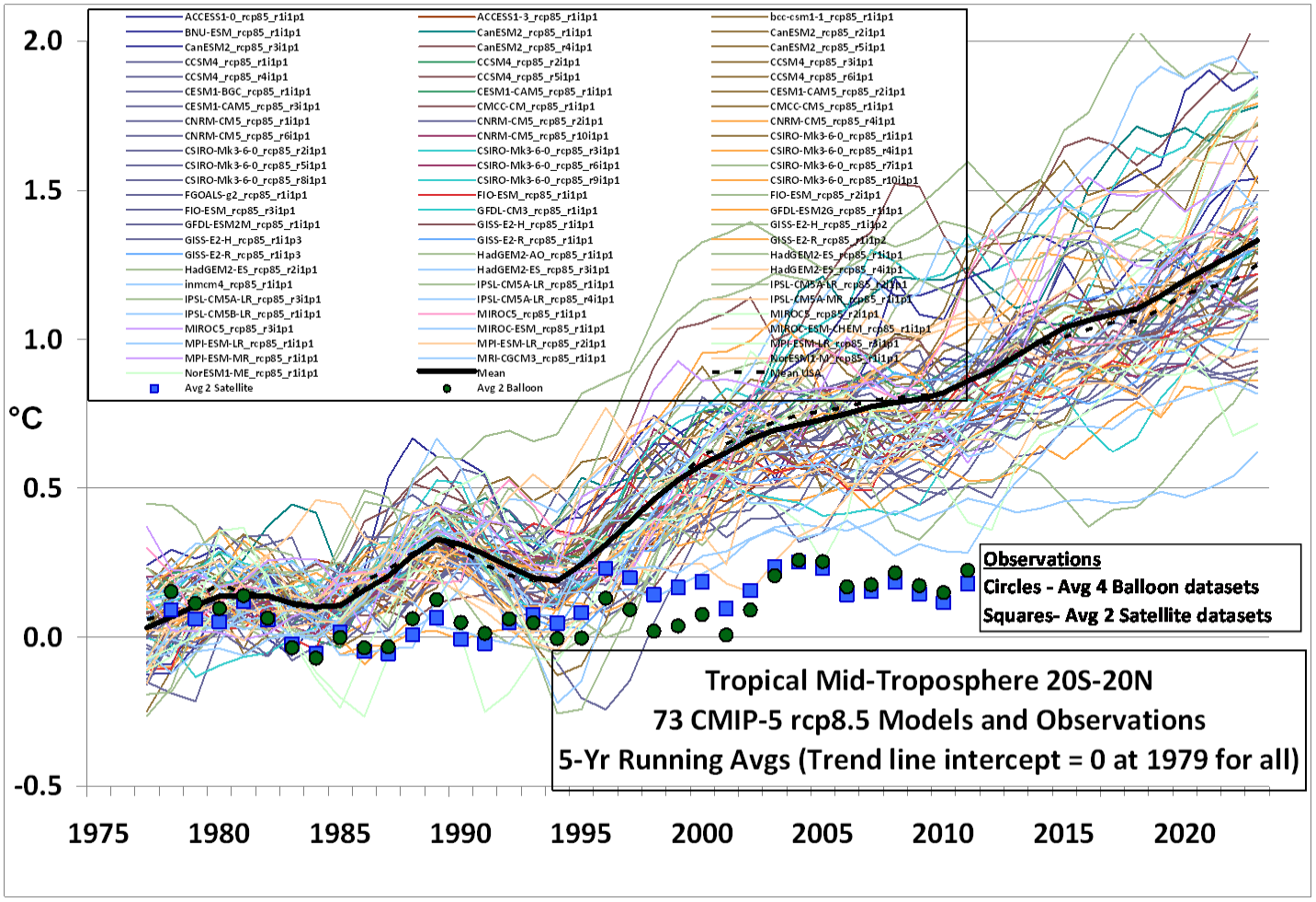
Safety Technician – Downtown Houston office
Very experienced Safety Professional – Downtown Houston office
Very experienced Environmental Professional – Downtown Houston office
Field EHS Coordinator – Pecos, TX/Midland, TX area
Please submit your resume and cover letter via our internet careers site at http://www.rosettaresources.com/careers/listings.html or email careers@rosettaresources.com (I'm told that everything has to go through HR to keep the EEOC people happy).
Please forward to anyone who you know to be qualified and possibly interested in a change.
Mike McKenna, CSP
EH&S Manager

I. REVISITING CLIMATEGATE AS CLIMATISM FALTERS

Climatism, the belief that man-made greenhouse gases are destroying Earth's climate, is on the wane. Once riding high, the ideology of man-made climate change is losing its influence in governments across the world. Climategate, the release of e-mails from the University of East Anglia, called the science of dangerous warming into question and turned the tide of global opinion.
http://blog.heartland.org/2013/06/revisiting-climategate-as-climatism-falters/?utm_source=rss&utm_medium=rss&utm_campaign=revisiting-climategate-as-climatism-falters

J. 73 CLIMATE MODELS VS. MEASUREMENTS, RUNNING 5-YEAR MEANS

June 6th, 2013 by Roy W. Spencer, Ph. D.
In response to those who complained in my recent post that linear trends are not a good way to compare the models to observations (even though the modelers have claimed that it's the long-term behavior of the models we should focus on, not individual years), here are running 5-year averages for the tropical tropospheric temperature, models versus observations (click for full size):
http://www.drroyspencer.com/2013/06/still-epic-fail-73-climate-models-vs-measurements-running-5-year-means/



K. A COUPLE OF COMMENTS ABOUT THE OPPENHEIMER AND TRENBERTH OP-ED IN THE WASHINGTON POST

Posted on June 9, 2013 by Bob Tisdale

In response to the May 19, 2013 op-ed Overheated rhetoric on climate change doesn't make for good policies by Lamar Smith (Chairman of the House Committee on Science, Space and Technology), the Washington Post published an op-ed by Michael Oppenheimer and Kevin Trenberth on June 6, 2013. The Oppenheimer and Trenberth op-ed was titled Climate science tells us the alarm bells are ringing. Oddly, it is chock full of overheated rhetoric, which Representative Smith was cautioning against. Unfortunately, the Oppenheimer and Trenberth op-ed is typical of the responses by many climate alarmists to Representative Smith's op-ed, as discussed in Judith Curry's blog post Rep. Lamar Smith on climate change http://wattsupwiththat.com/2013/06/09/a-couple-of-comments-about-the-oppenheimer-and-trenberth-op-ed-in-the-washington-post/#more-87862 (http://judithcurry.com/2013/05/31/rep-lamar-smith-on-climate-change/)

L. GLOBAL MICROWAVE SST UPDATE FOR MAY 2013: -0.01 DEG. C

June 5th, 2013

The satellite-based microwave global average sea surface temperature (SST) update for May 2013 is -0.01 deg. C, relative to the 2003-2006 average (click for large version):

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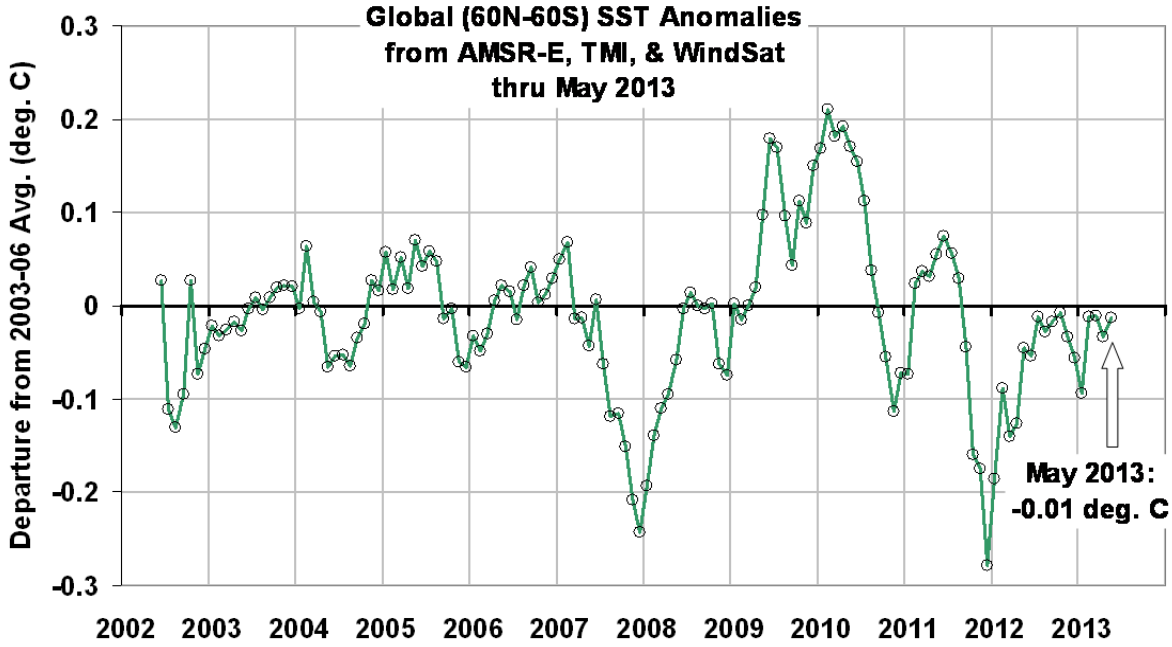

The anomalies are computed relative to only 2003-2006 because those years were relatively free of El Nino and La Nina activity, which if included would cause temperature anomaly artifacts in other years. Thus, these anomalies cannot be directly compared to, say, the Reynolds anomalies which extend back to the early 1980s. Nevertheless, they should be useful for monitoring signs of recent ocean surface warming, which appears to have stalled since at least the early 2000′s. (For those who also track our lower tropospheric temperature ["LT"] anomalies, these SST anomalies average about 0.20 deg. C cooler than LT since mid-2002, but there is considerable variability in that number).

The SST retrievals come from Remote Sensing Systems (RSS), and are based upon passive microwave observations of the ocean surface from AMSR-E on NASA's Aqua satellite, the TRMM satellite Microwave Imager (TMI), and WindSat. While TMI has operated continuously through the time period (but only over the tropics and subtropics), AMSR-E stopped nominal operation in October 2011, after which Remote Sensing Systems patched in SST data from WindSat. These various satellite SST datasets have been carefully intercalibrated by RSS. Despite the relatively short period of record, I consider this dataset to be the most accurate depiction of SST variability over the last 10+ years due to these instruments' relative insensitivity to contamination by clouds and aerosols at 6.9 GHz and 10.7 GHz.

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Roy Spencer

M. PHOTOS: SHELL IS MOVING MOUNTAINS FOR DEEP-WATER GULF OIL

Shell's Olympus platform prepares for Gulf journey
http://fuelfix.com/blog/2013/06/05/massive-shell-platform-readies-for-work-in-deep-water-gulf-photos/

Regards
George

Note: There will be no Newsletter for the week of 1 July 2013. I will be on vaction.