EPA

Conference call with EPA Assistant Administrator Paul T. Anastas, EPA's second round of independent dispersant testing (transcript)

Moderator: Brendan Gilfillan
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Operator: Good afternoon. My name is (Janetta) and I'll be your conference operator today. At this time, I'd like welcome everyone to the EPA Dispersant Testing conference call.

All lines have been placed on mute to prevent any background noise. After the speaker's remarks there will be a question-and-answer session. If you would like to ask a question during this time, simply press star then the number one on your telephone keypad. If you would like to withdraw your question press the pound key. Thank you.

Mr. Gilfillan, you may begin your conference.

Brendan Gilfillan: Thank you very much. Thank you everybody for joining us on today's call. This is EPA Deputy Press Secretary Brendan Gilfillan. In just a second, Dr. Paul Anastas who is the head of EPA Office of Research and Development is going to speak and my brief remarks and then we'll open it up to questions. We'll take as many questions as time allows.

So with that said, I will introduce Dr. Anastas. As I said the Assistant Administrator for the Office of Research and Development here in the EPA. Thanks.

Paul Anastas: Good afternoon. We've now passed the 100th day of the BP oil spill tragedy. We are relieved that the well is currently sealed and that dispersant application has been reduced to zero.

Let me be clear that as July 19th, no new dispersant has been released into the Gulf of Mexico. We hope and expect that this will continue to be the case, however, this tragedy does not end with the sealing of the well.

The President and the EPA have committed to the long-term recovery and restoration of the Gulf Coast, one of our most precious ecosystems. The use and application of dispersants is just one part of a much larger response strategy to the BP spill.

The strategy also includes direct recovery, containment, burning and skimming as important measures to keep oil off our shoreline. And this overall response plan dispersant use was an effort of last resort.

EPA recognizes that the dispersant usage was an environmental trade up not to be taken lightly. Rigorous daily monitoring of the environment for effects and effectiveness of dispersants is absolutely critical.

The EPA has continued constant monitoring of the air, water and sediments near and on the shore from the earliest days of this disaster. Jointly with the Coast Guard we have also directed BP to monitor for dispersants of the deep sea.

We've also conducted independent toxicity tests on eight available dispersants including Corexit the dispersant applied in the Gulf of Mexico, at the end of last month we released preliminary results on the toxicity of dispersants alone.

The (Columns D test) were comparative analysis of the eight dispersants. That report could be found on EPA's Web site. Today I'm reporting on Phase 2 of our testing. This phase includes tests on both Louisiana sweet crude oil alone and on mixtures of each of the eight dispersants combined with Louisiana sweet crude oil.

Results indicate that the eight dispersants tested have similar toxicity to one another when mixed with Louisiana sweet crude oil. Results also indicate that the dispersant oil mixtures are generally no more toxic to the test species than oil alone.

They would generally be categorized in the moderate range. Let me emphasize that the toxicity test discussed today have been conducted on

sensitive aquatic species using standard laboratory methods that are consistent with that National Contingency Plan Subpart J.

These standard methods are designed to test sensitive species to ensure that we are most cautious and maximally protected in determining the relative toxicity of pollutants. The species used are widely considered to be representative of species found in the Gulf and are tested during a juvenile life stage when organisms are even more sensitive to pollutant stress.

Let me also be clear on explaining that during these tests we continue to increase concentrations of oil in dispersant mixtures until we find toxicity effects that allow for a relative comparison of dispersants to be made to one another.

These tests were conducted over a range of concentrations including those much greater than what aquatic life is expected to encounter in the Gulf. We also have fluorescence data that indicate the dispersants are working to keep oil away from the shore.

These data are important but continued monitoring is necessary. We will continue monitoring efforts to ensure that dissolved oxygen levels do not decrease below levels of concern.

To date we have not seen dissolved oxygen levels fall below those levels of concern to aquatic life. So while more needs to be done needs to be done, the picture is becoming clearer. We see that dispersants are working to keep oil off our precious shorelines and away from sensitive coastal ecosystems.

We also see that dispersants are less toxic than the oil being released into the Gulf. We see further that the dispersant plus oil mixtures have roughly the same toxicity as the oil itself.

To date, monitoring data have indicated no dispersant contingents away from the well head. EPA monitoring has not found dispersant chemicals in water or sediment near coast or wetlands.

And to ensure that there is no confusion I remind that no dispersant application near wetlands or any other shoreline is permitted. By law,

dispersants are not to be used within three miles of the coast. BP's application, both on surface and under sea was primarily concentrated around the source of the leaks, some 50 miles offshore.

I will close by emphasizing that we will continue to monitor and ask the hard questions until we will fully understand the long-term effects of the BP oil spill. Additional investigations are required to ensure long-term recovery and restoration of the Gulf and every step of the way we are going to continue to follow the science.

We have taken nothing for granted. As seen by the fact that we are here today discussing testing that Administrator Jackson ordered to confirm what BP was telling us – what BP was telling us. We are consistent – questioned, verified, validated decisions with monitoring analysis and use of the best available science and data.

EPA is fully committed to working with the people of the Gulf, our federal partners, the scientific community and NGOs toward the recovery of the Gulf of Mexico and the restoration of its precious ecosystem. And I'll be happy to take any questions.

Brendan Gilfillan: Thanks Dr. Anastas. Operator, can we open it up to questions?

Operator: Thank you. Once again, if you'd like to ask an audio question, simple press star one on your telephone keypad. Your first audio question comes from the line of (Matt Wald).

(Matt Wald): Dr. Anastas, thank you for taking time for us today. Is it – the dispersants are generally regarded as toxic you're saying that when mixed with oil they're not more toxic than the oil alone, what's the approximate ratio if you're throwing more toxic material into the Gulf on top of material that's already toxic, what's the approximate ratio of dispersant to oil?

Paul Anastas: So we have in volume, we have about 100 times more oil that has been released to the Gulf by comparison to dispersant. Since we know that the oil is more toxic to the – more toxic than the dispersant, this is yet another multiplier effect. Add on top of that and we recognize that the type of acute

toxicity that we're discussing today is only one part of the hazards that the oil poses.

The oil also poses hazards of a physical form that so tragically with the coating of (inaudible) pelicans, other sea life, so the impacts of the oil in terms of volume, in terms of toxicity and in terms of hazards certainly far outweigh the – what we've seen so far from the data about the dispersants.

Operator: Your next audio question comes from the line of (Faweedy White).

(Faweedy White). Thank you for speaking with us today. The oil was sinking to the sea floor because of dispersant, how is this better than it washing up on shore when it's easier to clean and how will that be dealt with all this oil mixed with dispersant on the sea floor?

Paul Anastas: The good thing about the current scenario is that we are seeing the oil in a place where it can be biodegraded by the natural biodegradation process if that takes place. So, the purpose of the dispersant is to put the oil in a form that can can be broken down by the natural microbes, once that oil makes it to shore it's causing an impact on our most sensitive ecosystems that is extremely difficult to clean up and has an extreme impact – extreme negative impact on the precious ecosystem of the Gulf.

(Vernon): (Roberta) this is (Vernon) again, when you ask a question, of you can just identify what outlet you're with, we'd appreciate that, thanks. Operator, we'll take the next question.

Operator: Your next audio question comes from the line of John Pope with the Times Picayune.

(John Pope): (Inaudible) Hi, Dr. Anastas, I have a double barreled question here. Following up on the previous question about biodegradation, is there any estimate of how long that will take and two, do these results surprise you?

Paul Anastas: Thank you for those questions. The exact rate of biodegradation is something that we are looking at very seriously. We can see that we know that depending on conditions, that biodegradation can take place in enhanced

way and one of the purposes of the dispersant is to increase the degradation efficiency that would otherwise take place naturally.

What we've been seeing is the degradation rates are 50 percent faster when the dispersants are used. We're looking to get even more precise – more precise data on those degradation rates. And I'm sorry the second part of your question?

(John Pope): Did anything surprise you in these results?

Paul Anastas: Well, I think it was – it was interesting to see that the dispersant and oil mixture was about the same toxicity as the oil alone. I think that that's probably shows us that the effect of the oil plus dispersant is based on this data, seems to be a wise decision and that the oil itself is the hazard that we're concerned about is the – as we've said before is enemy number one.

So that was something that this data did show us.

Operator: Your next audio question comes from the line of (Ethan Hop) with CNN.

(Ethan Hop): Hi, good afternoon. Two questions, first to doctor – I just want to clear up any confusion because it sounds like at times you've said that the dispersant has been shown to be less toxic and then I hear you say the same toxicity as the oil and the water. Could you clear that up for us?

Paul Anastas: Thank you very much, I appreciate that because it is a fine point that is very important. Our initial phase one toxicity tests were on the dispersant alone. The stage two was on the oil alone as well as the oil dispersant mixture. The oil dispersant mixture was of approximately the same toxicity as the oil alone. The dispersants are less toxic than either, the oil or the oil and dispersant mixtures.

(Ethan Hop): All right and my second question, have you received any evidence or any reports of any wildlife that have been sickened or killed as a direct result of the dispersants?

Paul Anastas: I have not seen any evidence, any data that has shown wildlife sickened or killed because of dispersants.

Operator: Your next audio question comes from the line of (Kate Bradshaw) with WMNS 88.5 Tampa.

(Kate Bradshaw): Hi, thank you for taking my question. I actually am just wondering about the funding source of the study. I mean I assume that the Federal Government, but I just wanted to get clarification on that?

Paul Anastas: Yes, this is a study that was funded by the U.S. EPA.

Operator: Your next audio question comes from the line of (Curtis Morgan) with the Miami Herald.

(Curtis Morgan): I got a number of questions. Is this data posted anywhere where people can look at in terms of what the levels of toxicity are and things like that?

Paul Anastas: Absolutely. The entirety of the report will be posted on the EPA Web site today. Now.

Male: Mr. (inaudible). That Web site is EPA.gov/bpspill.

Operator: Your next audio question comes from the line of (Dan Raggano) with USA Today.

(Dan Raggano): Hi, thanks very much, this is USA Today. I was wondering, can you say about biodegradation anything – I mean once the oil is consumed by these microbes it goes into the food chain doesn't it? I mean what is the eventual going to happen to the toxins and the oil and the dispersants once you know the microbes die and are eaten by little fish and so on up the chain?

Paul Anastas: That's a very important point, thank you for your question. No, the biodegradation process is where the microbes are degrading, consuming, metabolizing, breaking down the constituents of the oil ultimately until it is degraded into carbon dioxide and water. That's the natural degradation process that takes place.

So what we ultimately want is that this hazard, the oil – the oil constituents to of course go away. The way that it goes away in nature is goes to be degraded, to be metabolized by these microbes.

Operator: Your next audio question comes from the line of Jeff Ball with Wall Street Journal.

Jeff Ball: Hi, good afternoon, two questions if I could. First is – is this precisely what BP said in its letter to the EPA a while back or do your results differ in any way from what BP said that it had found? And then secondly, you had said that if I understood correctly, that you didn't find traces of any dispersant away from the well.

I mean I just want to make sure I'm understanding that given the joint analysis group reports that you've issued which as I understand have found plumes of dispersed oil in their characterization, some number of kilometers from the well. So I just want to make sure I'm reconciling those two things.

Paul Anastas: Thanks for your question, I appreciate it. The Environment Protection Agency made a request of BP for its data supporting its choice of Corexit. When they were unable to provide that data, the administrator ordered independent testing. What we're reporting today is that independent testing, that data to confirm not only on Corexit but the ability to do a comparative analysis across all of the eight different dispersants.

So now we have data in order to support decisions that were being- that were being considered in an ongoing way. The second part of your question is also an important one. What we're saying is that we have seen no data that is showing the presence of dispersant constituents away from the well head.

What you're referring to is that there have been reports of dispersed oil, which is not the presence of dispersants, but dispersed oil away from the well head. What NOAA has reported is that they have seen at various depths previously was oil at one to two parts per million. So very, very dilute oil – sometimes referred to as clouds or plumes – away from the wellhead. That is different from say, dispersants away from the wellhead. We have seen no data that shows dispersants away from the wellhead.

Operator: Your next audio question comes from the line of (Tom Levicano) with (Platt's Inside Energy).

(Tom Wilbianco): Yes, hi, (Doctor), this is (Tom Wilbianco) at Platt's Inside Energy. Thanks for doing this, much appreciate it. Two questions here, both related. The – Ed Markey has been reporting that BP was using more Corexit than what was being reported to the U.S. Coast Guard and the EPA.

So, does that affect your ratio calculations in determining the toxicity if, in fact, as Ed Markey and his staff seem to be reporting. He said that there was two to three times more Corexit used than what was reported.

And then the follow-up on that is related, is the EPA and U.S. Coast Guard directive regarding the mitigation – the decrease in use of Corexit. Did that hold any sway, because Ed Markey and his staff seem to be saying that BP was disregarding that?

Paul Anastas: Well, the EPA and the Coast Guard have worked extremely closely throughout this – throughout this response. After putting out that directive at the end of May, we have seen the decrease in dispersant use. We saw a decrease in dispersant use by 72 percent from its peak usage.

While it may be true that EPA may not have concurred on every decision or waiver of the amounts of dispersants being used, that is – that is a decision of the federal on-scene coordinator. We do believe that overall the use of dispersants was one important tool in the overall response to this tragic oil spill. I'm sorry, the other part of your question?

Brendan Gilfillan: I think we lost him, Operator. Can we move on to the next call?

Operator: Your next audio question comes from the line of Amina Khan of the Los Angeles Times.

(Amina Khan): Hi, and thank you again for having this press conference. I have a few questions. One of my questions is, this is one of the first times that dispersant has been used at this depth with oil that is that temperature, it looks like, about 100 degrees centigrade? I mean were the tests done on the oil or on the dispersant in these conditions or were they down at the scene of the standard conditions?

I mean because we don't know exactly how that may affect the chemical reaction. My other questions are, you mentioned that this – the results here show that this was a wise approach for EPA in terms of dispersant usage. Did this affect EPA's approach moving forward and also, given that you've now tested the dispersant and dispersed oil, is there another round of tests you will be conducting?

Paul Anastas: Thank you for your questions. So, to answer your first question directly, the tests were done under standard methodologies in order to allow for comparisons, so those are the methods that were -- are used at set – at set temperatures, at set concentrations and set concentration ranges with species at particular ages, particular species, so if you're asking if the conditions at 5,000 feet at those temperatures, the answer is no.

They were done by the standard methodologies that have been applied. The second part of your question, does it show that this was a wise decision by EPA? I'd say that the data tells us specifically what we're asking and that is the dispersant and oil mixtures that the toxicity levels and that that confirms that under these specific—under the specific scenario – this specific scenario being an unprecedented release of a quantity of oil to the Gulf, at a particular depth in the ocean, proximity to particularly sensitive ecosystems, that this was an important – one important tool in the response.

I would not generalize – moving beyond that in terms of going forward because with a wide range of conditions that can change spill to spill, it's important to evaluate and make those decisions and this – and this data will be one piece of information going forward if we have to make these decisions again in the future.

Operator: Your next audio question comes from the line of Eli Kintisch with Science Magazine.

(Eli Kintisch): Hi, it's Eli with Science. I just want to be clear – the drops – when the dispersant breaks up the oil into tiny droplets, you get what you're calling dispersed oil. Did any of your tests look at the toxicity of the dispersed oil versus the un-dispersed oil?

Paul Anastas: Yes. Let me make it clear – because in the full protocols of – I'm sure that The Times magazine will want to be looking at the specific methodology. But the full protocol – the full report has all of the details.

But let me just briefly explain, that yes, the protocol calls for taking the Louisiana sweet crude, putting it together with the dispersant, standardizing the energy input to create a high energy mixing in order to have the resultant dispersed oil and that is what's being – that's what's being tested in order to simulate the conditions in the Gulf in order to get a reliable test. So the short answer to your question is yes.

(Eli Kintisch): And so – what the tox – you found that – essentially those – this is Eli from Science, by the way, not the Times. The dispersed oil – are actually droplets of oil surrounded by these detergent particles from the dispersant and what you found in your tests was that those were equally toxic to un-dispersed oil. That strikes me as surprising – you'd think that they would either be more or less toxic since they present different chemicals to the cells of the organisms that you're using for testing.

Paul Anastas: And your question?

(Eli Kintisch): Is it – isn't it – I mean am I right that, these particles of oil are surrounded by dispersant particles or is it that the dispersant is in such small quantities in the sample that essentially what you're testing is dispersed oil versus non-dispersed oil?
Is it…

Paul Anastas: I'm sorry, go ahead.

(Eli Kintisch): My question is – I'll ask offline this first – it just strikes me as surprising that you would get the same level of toxicity for the oil – for the disbursement plus the dispersed oil droplets as you would for the original disbursement for the original oil given that the oil particles are surrounded by disbursement detergent particle. So it looks very different to the cell when they encounter those particles.

Paul Anastas: Eli I think that that's a very reasonable analysis. I can understand the nature of the question. I do think that it differs for each dispersant slightly and you'll see when you look at the data that they might be slight increases or one versus another but all of these are within the sensitivity of the test.

So what we're seeing across the test where we're not seeing that enhancement of toxicity that your question might suggest. And so I will be more than happy to further discuss this offline if you'd like but I think that your question is well taken.

Operator: Your next audio question comes from the line of (Eric Muller) with Discovery News.

(Eric Muller): Good afternoon, I'm just curious – this is Eric Muller Discovery News. About the up take particles and you know large globules or molecules of oil versus the small-dispersed ones is there any idea about how that affects marine organisms? Is it easier for smaller particles to make its way into food chain? I know you've addressed this a little bit already but I need a little more explanation on that.

Paul Anastas: Sure, I'd be happy to thanks. So what we are trying to do is make – what in essence, nature does when it's breaking down and degrading oil is it in the same way that the natural dispersing tendency makes these substances available to organisms to metabolize and degrade. The chemical dispersants are mimicking nature. And allowing it to degrade faster as we said the (inaudible) is at 50 percent faster rate in order to have it degrade faster.

Having them metabolize it and break these down does not mean that is bioacumulating or biomagnifying or getting into the food chain. That's why we- all of our modeling data, the modeling results have suggested that the degradation rates of the dispersants are rapid. The modeling -the monitoring data that we've seen both in deep ocean and along the shoreline has shown no bioaccumulation and no detection of the dispersant constituents. And certainly, there's ongoing monitoring by NOAA and FDA to ensure that the food chain is not affected.

Operator: Your next audio question comes from the line of David Biello with Scientific American.

(David Biello): David Biello Scientific American two questions. One, how does this match up with the data that industry provided which seemed to be pretty questionable. And second of all, how long were these studies and how much did you go into kind of by products and the actual degradation process. I know you said it ends up at CO2 and water but obviously often times the toxicity is not the original compound but what it breaks down into thanks.

Paul Anastas: Thanks both of those questions are very good and I'll take the second question first, which is about the various metabolites. You're absolutely right that what we have to see is all of the products being degraded to CO2 and water.

This particular test, data we're discussing today is specifically on the acute toxicity of the dispersants in the oil. I think a very important long-term – longer term research question is characterizing the various metabolites and seeing if there are any metabolites of concern that in the break down products and the degradation products.

But those data are not look staining presented today but while there are differences from the data that we're presenting today versus the data that was submitted to the National Contingency Plan data there are not significant differences outside the sensitivity of the test. And so there are no dramatic – I don't believe there are any dramatic differences to report on that.

Operator: Your next audio question comes from the line of (Seabond Hughes) with Dow Jones.

(Seabond Hughes): Hi, thanks for taking the call a couple of questions. If the oil dispersant mixture is no more toxic than the oil alone or the dispersant alone what exactly is the trade off? What do you mean when you say there is still trade off?

Paul Anastas: Well thank you that's an excellent question, because of course I keep on repeating what I'm reporting on the data that we're presenting today. And the

data that we're presenting today is important but it is only one piece of the question. What we're reporting on today is the acute toxicity to these two sensitive test species.

But we also need to recognize is that we want to and intend to better and more fully understand all of the possible consequences of this tragic oil spill and that means that we know that we don't take adding large quantities of the chemical formulation into the Gulf lightly.

And so the reason that from day one the administrator insisted upon constant monitoring, constant vigilance about this because this is a significant quantity and we want to – one that we would want to avoid but felt it was a necessary and important tool of the tool box in combating this response.

Operator: Your next audio question comes from the line of (Karen Zeitvogel) with AFP.

(Karen Zeitvogel): She pronounced it very well it is (Karen Zeitvogel) and I'm from AFP *Agence France* Home Press. Looking at the release that is up on the EPA Web site and it says that in the case of Nokomis III AA when it was mixed with oil it was found to be more toxic than oil. So I'd like you to comment on that if I may please. And also did BP only use Corexit as the dispersant because in the release and everything else, it just says dispersant use but it doesn't specify which one was used.

Paul Anastas: Thank you for your question. You are absolutely correct. That while generally, I'm categorizing the group, the balance of moderately toxic. You are correct on the release and you will see in the report that the Nokomis dispersant did go into the highly toxic category.

And that is contained in the data. The only dispersant that BP reported using was Corexit in this spill. So that is the only one that has been reported to be used by BP since the outset of the spill.

Operator: Your next audio question comes from the line of (Pat Rizzuto) with BNA.

Brendan Gilfillan: Sorry, operator, this is Brandon Faber, if I could just interject. Unfortunately this is going to have to be our last question. Thanks. Pat, go ahead.

(Pat Rizzuto): Well, to the previous question and then my own question and thank you for your time today. Would EPA have any recommendations about the use of Nokomis product in light its increased toxicity? And second question, as you know the House passed legislation on Friday that would set up procedures for reviewing dispersant use. Could you comment on that need for such procedures.

Paul Anastas: Certainly, first let me – well let me stress that we're – and thank you (Pat) for your question. Let me stress that we are just profoundly relieved that the well is sealed. No more dispersant uses taking place and reiterate that the decision to make – the decision that was made to use dispersant was made as a last resort in what was – what is viewed as a necessary tool in the response, in the overall response when all other measures were not adequate.

Now in terms of Nokomis we are – since we are not in the position of needing to look at any decisions currently with regard to the BP oil spill, obviously this is not a question that we need to deal with currently.

However, as a general principle we certainly want to have the balance of effectiveness and low toxicity in any choices that are going to be made and all of this data will be added to the deliberations and decisions if we have to make these decisions going forward.

With regard to the recent legislation about dispersants, I think that the administrator has made clear that there is a need to look at lessons learned. And that includes taking a hard look at the existing regulations to ensure that we're always having the information and the data at our fingertips in order to make wise choices and we don't have to make these choices in crisis situations going forward.

So I think that that's the general principle but we've been saying all along. Thank you very much Pat.

Brendan Gilfillan: All right, thanks very much very everybody. This is Brendan again. If you all have additional follow-up questions please direct them to the EPA Press Office, contact information is on both the release and advisory that was sent

out earlier today. And thank you very much for you time. Thank you Dr. Anastas.

Operator: We thank you for joining the conference call today. You may now disconnect.

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