

July 12, 2013

Meeting Notes Summary – Workgroup for Global Air Permit Policy Development for Temporary Oil and Gas Drill Rigs

Date of Meeting: Monday, July 9, 2013

Time of Meeting: 13:00 – 17:00

Location of Meeting: Room 602, Robert A. Atwood Building, 550 7th Ave., Anchorage, AK 99501

Workgroup for Global Air Permit Policy Development for Temporary Oil and Gas Drill Rigs (Workgroup) Members: Alice Edwards, Director, Alaska Department of Environmental Conservation / Division of Air Quality (ADEC/AQ), William Barron, Director, Alaska Department of Natural Resources/ Division of Oil and Gas (ADNR/DOG), John Kuterbach, ADEC/AQ, Jim Shine, Special Project Assistant, ADNR/ Commissioner's Office, Gordon Brower, Deputy Director, North Slope Borough (NSB) Planning Department, Alejandra Castaño, BP Exploration Alaska (BPXA)(alternate for Ms. Martin), Brad Thomas, ConocoPhillips (CPAI) and Alaska Support Industry Alliance (ASIA), Nikki Martin, Alaska Oil and Gas Alliance (AOGA), Mike Munger, Executive Director, Cook Inlet Regional Citizen's Advisory Council (CIRCAC) – telephone, Randall Kanady, CPAI (alternate for Mr. Thomas)

Meeting Facilitator: Tom Turner, ADEC/AQ

Transcriptionist provided by ADEC/AQ

Public members present in person: Wally Evans, Hillcorp Energy (Hillcorp), Bill Britt, Hillcorp, Chris Kent, Arctic Slope Regional Corporation Energy Services (ASRC), Erin Strang, Environmental Resources Management (ERM), Mike Peters, Doyon Drilling (Doyon), John Neason, Nabors Alaska (Nabors), Ben Wedin, Nordic – Calista Services (Nordic), Noel Therriau, Nordic, Sara Longan, ADNR/Large Project Manager, Office of Project Management and Permitting (OPMP), Ron Wilson, Doyon, John Pavitt, US Department of Environmental Protection (USEPA), Kate Kaufman, Hillcorp, Tom Chapple, H&H Consulting, Ann Mason, SLR Consulting (SLR), Jeanne Swartz, ADEC/AQ

Public members present by telephone: Al Trbovich, SLR, Eric Fierson, Caterpillar, Inc. (Caterpillar), Marta Czarnecki, Apache Corporation (Apache), Tom Damiana, AECOM, James Halloran, Caterpillar, Sally Ryan, Cardno ENTRIX

Tom Turner provided all Workgroup members and alternates with an insert for the notebook (binder) distributed previously at the June 26 Drill Rig Workgroup meeting. The insert was a copy of the draft meeting summary from the June 26, 2013 meeting.

1) Introductions

The meeting commenced at 13:04. Alice Edwards welcomed all the participants and asked for introductions, first from the Workgroup members, then from the participants present in the meeting, and finally from the participants joining the meeting by telephone.

July 9, 2013

2) Agenda Check and June 26 Meeting Summary

Alice Edwards called for an agenda check and no one had any additions or corrections to the agenda to report. Alice asked for any comments or corrections to the meeting summary from the June 26 meeting. Some members had updates to the draft June 26 meeting summary, and it was agreed that the best way to make changes to the meeting summary was for the individuals to contact Jeanne Swartz directly.

3) Work on Goal Statement

Alice Edwards stated that the purpose of the meeting was to formulate a goal statement. Alice said that in previous meetings, some specific issues had been raised that may point to a broader issue, the issue of having more operational flexibility for the temporary drill rigs. Brad Thomas said that the flexibility issue was not with the way that the Title V companies have operated in the last several years as much as it is that continuing forward down this path will cause them to lose flexibility. Nikki Martin voiced one of the primary concerns; that drill rigs without highline power are unable to meet the National Ambient Air Quality Standards (NAAQS) through modeling. Brad Thomas continued this point by saying that when drill rigs have to demonstrate compliance, they can't do it without highline power within the existing increments.

Discussion about Drill Rigs Leaving the Pad after Operating for a Period of Time

Brad Thomas said that if the drill rigs have been operating for two or more years, they are then required to leave the pad and stay away for two years before they return to protect the increment. John Kuterbach said that having drill rigs stay away for two years was the most conservative option of the length of time between consecutive operations, but that the time limit has not been established in any specific permit yet. John continued by saying that the practice of moving a rig to protect increment, and then moving another rig immediately onto the same location, then the impact on ambient air is the same as if the original rig had stayed there the entire time. John asked how much time should be allowed to have the air quality to recover before another rig is brought onsite, or if a rig has to continually operate, what is the best way to address air quality impacts?

Discussion about How Drill Rigs Should be Permitted

Nikki Martin continued with the list of issues important to industry by stating that Lessees have responsibility for the equipment (maintenance and upkeep) on drill rigs under the terms of the permit even when the drill rigs are not on their property or under their control. Nikki added that a lot of the problems stem from trying to permit the rigs as stationary sources. John responded by asking if the main problem is that the traditional way of obtaining a permit is proving difficult for drilling operations due to the tighter federal standards? Brad Thomas said that permitting drill rigs is done through the Minor Permitting Program or through Title V, which is becoming more difficult with tightening federal

July 9, 2013

standards. Brad also said that this is not common anywhere else. Brad and John discussed the history of permitting drill rigs, John saying that the current generation of permits from the last ten years extends from the time there has been a Minor Permit Program which was established by the Legislature in 2003. John continued by saying that the state has always tried to ensure ambient air quality from all sources, but with the EPA-negotiated definition of a facility on the North Slope and the Minor Permit program, it is more regulatory now than it had been when there were only stationary source permits.

Discussion about Ambient Air Monitoring vs Modeling in Permit-Writing

Brad asked that, aside from the three major problems stated by the Lessees, whether ADEC perceives a problem regulating drill rigs as temporary construction activities? He also asked whether ADEC saw a problem with compliance with the NAAQS. John responded by saying that, depending on the amount of emissions generated and the weather conditions, ADEC has no evidence to say that they (the drill rigs) wouldn't threaten air quality standards. John said that Brad provided some monitoring information at the last meeting, but that based on what ADEC knows from other activities, the quality and quantity of the data need to be specific to the issue. John said the monitoring information Brad provided was not proof that the drill rigs are not a problem or will never be a problem, particularly considering that right now they are regulated. Brad responded by saying if that (drill rigs potentially violating NAAQS) is a problem, it should be captured when we identify what the problems are, because, if so, it would be a driver to capture the drill rigs in a regulatory program. If not, Brad said, there would be no reason to do so. John responded by saying, whether that was a goal or guardrail, ADEC's interest was ensuring that there were no ambient air quality violations. He continued, saying that if a well-defined, well-planned study showed that drilling operations have absolutely no chance of ever violating ambient air quality standards, ADEC would pursue that conclusion and not regulate drill rigs, but we are not there yet.

Mike Munger requested that the speakers identify themselves for the benefit of the callers.

Bill Barron made a comment that the dataset that was presented was real data, in contrast to a model. He said, from an engineer's viewpoint, if the basis for the model is unknown, then it can't be validated with real data. Bill asked if they were really comparing the right two things going forward in formulating how the State needs to look at the impact of the emissions of the equipment. There is a model based on a national standard, but Bill questioned again the basis for the model. He continued, saying, there is routine, actual data-gathering to certain standards and that if he can measure something and validate the data, that is always better than a model he needs to modify. Bill said the elephant in the room is that we are trying to judge and establish criteria based on something that isn't matching what we have measured. Alice Edwards said she thought one of the disconnects that we have when we are talking about the monitoring data that has been presented that doesn't show any problem with the NAAQS is that when we model for permitting purposes, we are looking at the allowable emissions for those units, where they operate, in whatever configuration it is, and whenever they are located. In the real world, the permitting models may not be how the sources actually operate because everybody wants to have

July 9, 2013

enough flexibility in their permit to have periods where they may run at more of a maximum output, or less output, or to be able to run more than one rig in an area. However, Alice continued, when we model for permitting, we look at the maximum allowable emissions that can exist in that location without creating a problem with the standard increments. If the modeling for the permitting was restricted to look like actual operations, the model might perform more appropriately and might show that it is in compliance with the standard, just like the monitoring data. In the permitting process, we model more emissions, potentially, than are being actually emitted. Because of that, and to get that flexibility, we have troubles. That is why we may get a disconnect between actual monitoring, which is happening under our regulated system already, designed to meet the ambient standards, and modeling. Albeit, the one-hour standards didn't exist at the time that these drill rigs were permitted. Alice concluded by saying that when we look toward solutions on this modeling/ monitoring aspect, one of the things we have to determine is if the model is being overly conservative– are we comparing the right monitoring to the right modeling? The only way you could figure that out is to run the model under an actual condition where you have monitoring data and met data that you can use to help calibrate it in some respects, as opposed to a more inflated, perhaps, modeling exercise where you are trying to allow potentially more emissions to see how far can we go before we violate the NAAQS or the increment. She asked if that information helped. Bill Barron said it did help, but that circular logic was part of the problem. If you try and permit to a maximum operation potential, knowing that there is only a remote chance of those activities taking place, and then you try and compare actual to a model. How do I ground-truth the information? As an engineer, Bill says he tends to always know to modify the model with actual data, to change the model to match actual situations. Perhaps, he said, we should have a two-step process in terms of how ADEC permits. Bill continued, saying one of the goals he would like to see is having more flexibility, having rigs being able to come and go off pads as needed without violating the air quality standards.

(Gordon Brower joined the Workgroup at 13:35)

Ron Wilson said that about fifteen years ago, the International Association of Drilling Contractors (IDC) worked with the oil companies and did actual modeling of a rig on location. They took the biggest rig with more equipment than any rig, making the worst case scenario. Ron thought it was a Parker 245 drill rig that they modeled on a pad for several months. And they came way, way under at that time on the air quality measurements, even using 100 percent of the engines, with cold-start engines, including other small pieces of equipment; that was the model they were going to use for the emissions for a rig. They figured that when they did actual modeling, they would have the data, but the data wasn't used. Ron said that we have come a long way as far as the type of equipment and emissions, and, of course, the air quality has changed as well. It is monitored a lot closer now. Brad Thomas said, to follow up, the way the permitting program works for any source is typically the rate at which you model and demonstrate compliance to obtain your permit is the rate you are limited to henceforth in the permit. If you model at a decreased capacity then you can't operate above that capacity going forward in the permitted operations. It restricts the Lessees to that one scenario and the unexpected conditions that

July 9, 2013

can be found in the subsurface demand that there needs to be flexibility to use different equipment at different times. That is why AOGA has made a case since December when we met the first time about this, that assurance exists based on monitoring data that the ambient air quality standards are being met. Our plea is to base the regulatory program on the ambient monitoring data that's been collected. Brad asked, there is the traditional approach of modeling to get a permit, but modeling at potential or allowable emissions versus what the actual ambient air quality impacts are, which do you base your permitting decisions on? Alice Edwards said that if we are going to work through this particular problem, there are probably a number of different ways that it could be approached, but it is going to be a technical path forward. John Kuterbach said that while we have had a good discussion, we are trying to drift into how do we solve the problem rather than what is the problem. Bill Barron said that we have identified that modeling versus monitoring is a problem. Bill said he thought there has to be balance between those discussions. He added that industry is now under a one-hour standard that they didn't have before.

Discussion about How Drill Rigs are Regulated in Other States

Wally Evans said that he thought the group was on the right track, trying to figure out modeling versus monitoring and how to cope with the problem, but it almost seems like we are trying to reinvent the wheel. Wally said that across the country, drill rigs come and go. He asked how drill rigs in other states comply with the same ambient air quality standards as Alaska? Wally said that was what he would be looking at to try to get a starting point on how to solve what seems like a difficult problem. Bill Barron asked if we are dealing with definitional standards of rigs as construction and are other states defining it differently? John Kuterbach said that was a very good point. He asked what are the conditions and sizes they are operating on in the other states. John asked where does the ambient air begin around those drill rigs? He asked if they are in the middle of private land somewhere or do they have the tighter ambient air boundaries that we have on the on the North Slope or in Cook Inlet? John also asked if the drill rigs were the same size. He said that all those variables factor into how they are regulated outside Alaska. Bill Barron said that there are some good points in the discussion. He said that industry could get some comparisons of rigs. Bill questioned the difference between public air and private air and how it defines the difference between public land and private land. John Kuterbach said that the issues weren't necessarily public land versus private land, that it was a matter of the ambient air quality boundary. He said that the ambient air quality boundary is where the general public has access. John said that as they discussed last time, if there was a larger area around the drill rigs where the public was excluded, it would be easier to comply, even using the tools we currently have for modeling. Bill Barron said it would be interesting, because a lot of the operations in the Lower 48 are fairly proximal to roads, and those are public access roads. He said that as they had discussed last time, the irony was that somebody from ASRC on location had a Doyon rig running, the Doyon employees would not be public, but the ASRC employee would be general public, even though they were under contract by the same operator. John Kuterbach said that if they were under contract by the same operator, then they were all considered employees. Bill Barron said that he appreciated the clarification, that he had heard it

July 9, 2013

differently before. Brad Thomas said he was not sure other states have the same issue as Alaska, because in the Lower 48, outside of California, they are not finding that the regulatory agencies do anything with drill rigs. Brad said they treat them as mobile sources, non-road engines beyond the reach of the Stationary Source Permitting program. He continued, saying the other states evidently have had no measured ambient air quality issues connected to drill rigs that we know of. Brad said that BLM has taken an interest in drill rigs on federal lands in the context of Environmental Impact Statements. As a result, Brad concluded, he was not sure the other states were doing anything about permitting drill rigs. Bill Barron responded, saying that if that were the case, then it was a really big piece of information from his perspective. He said we need to be able to answer the question of why we are singularly looking at this equipment, uniquely to the rest of the United States. Nikki Martin said that she agreed with Bill Barron. She said that they have started to look at other states and their operators have started to reach out to their colleagues in other states. The response, as Brad has said, is that they are not permitted as stationary sources and they are allowed to transport their rigs on and off. Nikki questioned how that helps develop our goal statement. She said it could be a very good agenda item in a future meeting where we all come in and share information from DEC offices in some other states and we say here is what we found from our contractors and operators. Nikki said that would be helpful to developing a solution, but not the goal statement. Mike Munger asked if Brad Thomas could elaborate on what California does on rigs for air quality standards. Brad Thomas responded by saying that what he knew about California was referenced in a 1998 letter, signed by John Stone from ADEC, referencing a California registration program for drill rigs. John Kuterbach said he had looked into it a little bit and that California has a different structure for their air quality regulation. John said that a lot of their air quality is done by the local air pollution control districts. So, for example, Ventura County Air Pollution Control District has the registration program, but then they have extra requirements. John said that Brad was right, that Ventura does not permit drill rigs as stationary sources, but drill rigs have extra requirements, like being hooked up to highline power whenever possible. John continued, saying that if not possible, they have to demonstrate that it is not possible and then they have to use the Best Available Control Technology on the engines. If it is a new rig coming in, they have to use Tier IV engines, so it is quite stringent. He finished, saying, some of the control requirements could be part of the registration program. Mike Munger asked whether drill rigs in other oil and gas-producing states are considered mobile sources. John Kuterbach said he didn't know and Brad Thomas said he thought they were mostly considered mobile sources.

Discussion about How Drill Rigs can be Both Mobile and Stationary Sources

Bill Barron said that this was an important point to drill down on. John Kuterbach said that non-road engines are regulated as mobile sources under Title II of the Clean Air Act (CAA). He said that Title II does not regulate heaters, boilers, incinerators, or any other kind of emission sources. John said that drill rigs are conglomerations of nonroad engines of various Tier classifications. He said the CAA also may regulate the boiler and heaters through federal stationary sources standards, new source performance standards and that means they are a mixture of both mobile sources and stationary

July 9, 2013

sources, sources regulated under Title II and Title I of the CAA. Gordon Brower and Bill Barron both questioned how a drill rig could be both a mobile source and a stationary source at the same time. John Kuterbach said that it goes back to how the CAA regulates their pollution. He said the CAA, Title II, regulates mobile sources, but not boilers, heaters, incinerators and emission sources that move around, just because they move around, otherwise anybody who wanted to permit an incinerator would put it on the back of a truck. John said the CAA regulates under Title I the type of sources not regulated under Title II. It is easier to control the mobile sources under Title II by regulating the manufacturer at the federal level rather than letting each state regulate the sources at the state level. Brad Thomas said that he agreed with John, but added that he thought that we have the luxury of being able to consider small boilers as stationary sources because there are no federal emissions standards that apply to temporary boilers. Brad said that when the potential to emit is added together from the heaters and boilers on the rigs they don't rise to the level of the Minor Source Permitting Program. Brad said that we could treat the boilers and heaters on the rigs as mobile sources. Bill Barron said that was a worthwhile exercise for the Workgroup to take on.

Discussion about Maintenance Requirements for Temporary Boilers

John Kuterbach asked Brad Thomas about the maintenance requirements that were mentioned as a challenge for industry; John wanted to know if the maintenance requirements were for nonroad engines. Brad Thomas said the maintenance requirements were for the boiler to include temporary weather provisions and that it was not an immediate problem. Bill Barron said that was still a valid issue for the Workgroup to resolve. Bill said the question was between owner and operator and between who is responsible for the maintenance, documentation, and compliance of the equipment. Brad Thomas said he agreed with Bill and that before the permit had the temporary boiler language in it, it had very prescriptive maintenance, recordkeeping and reporting requirements. Brad continued that when they saw the language in the draft permit, they were alarmed, but that since the Environmental Protection Agency (EPA) corrected their problem including the temporary boiler provision, the issue went away. Brad said there are still some recordkeeping issues that apply to the lessee if they are carrying the rigs and permits for the contractor; the maintenance records associated with the state's good air pollution control practice standards. He added that it was not a huge issue, but it was still there. Brad said that it could probably be ironed out with some language changes.

Discussion about the Wording for a Workgroup Goal Statement

Alice Edwards said she wanted to go back to the issue of the goal statement and that she wrote a goal statement down. The goal statement Alice wrote was: **The goal of the workgroup is to develop recommendations to streamline the air permitting process for temporary drill rigs with a particular focus on both the operational flexibility and compliance with the standards.** She said that we could figure out how to make this more streamlined, flexible and still environmentally sound. After a brief

July 9, 2013

discussion, the Workgroup members decided to take a ten-minute break and went off the record at 14:12.

The Workgroup Meeting Resumed at 14:25.

Alice Edwards asked if anyone joined the call, who didn't introduce themselves originally. Alice mentioned that Gordon Brower and Ann Mason joined the meeting since the original introductions took place. She asked if the Workgroup members wanted to continue working on the goal statement or go in a different direction. Nikki Martin and Brad Thomas said they both wanted to continue working on the goal statement. Nikki said the goal statement was really well-written, but that it might be worth considering listing some of the bigger topics like modeling versus monitoring, the definition of temporary, the definition of non-road activities.

Discussion about Types of Drill Rigs to be Considered in the Goal Statement

Nikki continued, saying she didn't want to limit what it is that the group is looking at, but that a more expanded goal statement could provide the roadmap for our future meetings. She said that instead of the word 'temporary' in temporary drill rigs, that 'transportable' would be a better description. Gordon Brower asked if transportable and temporary were similar descriptive words. Alice Edwards asked the group if drill rigs in general would be a more useful term. John Kuterbach said that drill rigs are both designed to move (transportable) and they are also temporary. He asked if there were any drill rigs that don't move and there was a brief discussion about the Liberty drill rig. John asked how long they would stay at a particular site, on a drill pad. Brad Thomas said that drill rigs did not stay on a pad for more than two years, in his experience. Ron Wilson said that they moved rigs sometimes a few days to weeks to six months and Alice Edwards repeated Ron's response for the benefit of the people on the telephone. Bill Barron said that there could be new developments and that platform rigs in Cook Inlet have never been moved. John Kuterbach asked whether the Workgroup wanted to address the permanently place rigs in the meetings. Brad Thomas asked if permanently-placed rigs were classified as non-road engines. Kate Kaufman said they were part of the Title V permitting program and Brad Thomas agreed. Kate continued, saying that permanently-placed drill rigs are not transportable and would not fit into the scope. Brad Thomas said that we wouldn't cover those rigs. Wally Evans said if it could be demonstrated that the permanently-placed drill rigs were non-operational for the time that they were sitting idle, disconnected from the fuel supply, they could be included in this argument. John Kuterbach said that the number of sources the Workgroup considers is going to define the amount of work for the group. Brad Thomas said the transportable drill rigs that sit on a pad for less than two years are an easier group to consider and that the group could consider extended development drilling secondly. For drill rigs that are permanently located on a platform could be handled as a third category, after Wally Evans clarified that another difference between the permanently-placed rigs and transportable drill rigs includes the logistical differences about how the different rigs are moved. Bill Barron said that a stepwise approach to handling drill rig issues would be beneficial. John Kuterbach

July 9, 2013

asked the group if the word transportable added anything to the goal statement and several members said that it did not. John asked if that meant that temporary was the right descriptor to use and Alice Edwards said just drill rigs with no descriptor. Mike Munger asked about whether jackup rigs operating in Cook Inlet were a different category than what was being considered. John Kuterbach said that the jackup rigs were not having any difficulties with their operations as far as the air quality regulations went, so he would prefer not having to deal with them specifically within the context of this workgroup. Mike Munger said that Hillcorp undertook a project in the last few years and removed the majority of six rigs on those platforms with the anticipation that they would be using mobile rigs in the future. Kate Kaufman said that Hillcorp has two drill rigs on two platforms which have been there since they were installed and they will remain. Mike asked if it was correct that the majority of rigs on the new Hillcorp platforms have been removed and Kate said that was true. Tom Damiana said that neither of the two jackup rigs have had to deal with the new standards, so we don't know way that compliance situation would look like. Tom said that if the mission statement has to do with streamlining the regulatory process, the jackup rigs are far from a streamlined process, considering the short time they would be on site. He said they have to go through a full minor permit with a full suite of modeling. Brad Thomas agreed with Tom and said that the Workgroup could catch the jackup rigs as a fourth category.

Discussion about the Definition of a Transportable Drill Rig to be Considered in the Goal Statement

Alice Edwards questioned whether the issues and problems that apply to rigs that are transporting and moving around on a regular basis truly translate over to these other categories of rigs. Alice said that was fine if that was where the group wanted to go and that she also understood the desire to make sure that all the rigs have a reasonable, streamline approach for permitting that works, but she didn't know how many of these other categories are having significant issues either getting their permits or complying with their permits. Brad Thomas said that in the case of the jackup rigs, they have the same regulatory program as the rigs onshore. He said they had the same compliance and permitting programs, the same structural issues. Brad said that a jackup rig and a rig on a pad on the North Slope have similarities in how long it stays to work and then after completing work, they both move away. John Kuterbach said that the two cases were different because the jackup rigs don't come back to the same location. Bill Barron said that jackup rigs do come back to the same locations and gave the example of the jackup rig operated by Furie in Lower Cook Inlet that came back to drill in the same location. Bill added that a difference between rigs on the North Slope and jackup rigs is that the general public is limited in their accessibility to jackup rigs. Bill continued, saying that the Workgroup should work their way through on land-drilling rigs first, instead of being sidelined on fixed offshore facilities and jackup rigs issues. Wally Evans said that Hillcorp is mobilizing sources that move from platform to platform and would have the same issues with the 24-month rule as the onshore rigs on the North Slope. Bill Barrons said that the goal statement should have the word 'onshore' replaced with the word 'transportable'. Nikki Martin said that she wanted to add a concern voiced to her from Cook Inlet operators Furie and Buccaneer about the Minor General Permit Program. These operators had concerns trying to determine what sources should be included under Minor General Permits on their jackup rigs.

July 9, 2013

Nikki said these operators also were unclear about modeling requirements. Bill Barron said that the jackup rigs mentioned by Nikki could also be classified as transportable-type rigs. Brad Thomas said he agreed with Bill and that the Workgroup is addressing drill rigs which are largely non-road engines. Brad said that if everybody agrees that that the drill rigs mentioned are non-road engines because they move, around, we can translate the solutions from onshore rigs' issues to the offshore. John Kuterbach said that not all drill rigs are non-road engines. Wally Evans and Bill Britt said that Hillcorp has a turbine-driven rig that is, or will be transportable, but it is not yet mobilized. John Kuterbach said that could not see a reason for inserting the word 'transportable' in the goal statement. Gordon Brower said that a drill rig is designed to be temporary until production at a well starts up. John Kuterbach said that in the case of permanent drill rigs, they are permitted as stationary sources and reiterated his statement for not including the word 'transportable' in the goal statement.

Discussion about Other Wording in the Goal Statement

Alice Edwards asked about any other changes to the goal statement wording. Bill Barron mentioned the word 'streamlined' and said that 'improved' might be a better word. Mike Munger said that 'clarify' might be a better word and Gordon Brower added that 'predictable' might make the goal statement better. Brad Thomas suggested that 'develop informed recommendations to' and then 'the regulatory process for drill rigs' rather than have permitting. Brad and Bill Barron decided to add 'air' to Brad's phrase, 'the regulatory process for drill rigs' to avoid opening the statement up to the interpretation that all regulatory processes might be involved. There was general agreement that 'the air regulatory process for drill rigs' was an acceptable wording change to the goal statement. Bill Barron and Brad Thomas discussed the word 'streamlined', Bill saying that the goal was not to cut time off the process, as the word 'streamline' implies. John Kuterbach said that replacing 'streamline' with 'improve' would cover every possible configuration. Gordon Brower said again that 'predictable' would make a better goal statement, but Brad Thomas disagreed with him, saying that the meaning of predictable was too broad and would not necessarily imply that good outcomes were to be expected. Brad agreed with John about using the word 'improve'. Mike Munger and Alice Edwards discussed the wording changes in progress and stated that the goal statement was now: **The goal of the Workgroup is to develop informed recommendations to improve the air regulatory process for drill rigs with a particular focus on both operational flexibility and compliance with the air quality standards.** Mike Munger pointed out that to use the word 'improve' implied that the current regulatory process was substandard. Gordon Brower said that Mike raised a good question and said that it went back to some of the questions about what other states were doing. Bill Barron said that Gordon was right, but Bill thought the word 'improve' encompassed the intent of the Workgroup. Wally Evans pointed out that change was a normal process and the word 'improve' is more about changing with the times, like the changing NAAQS and other conditions. There was general agreement from the Workgroup members that 'improve' worked in the goal statement. Alice Edwards asked for other thoughts, particularly for the ending portion of the goal statement and asked about Gordon Brower's point on predictability. Alice said that a focus on operational predictability, operational flexibility, or compliance could be added.

July 9, 2013

Both Bill Barron and Brad Thomas agreed that ‘predictability’ could be added to the goal statement. Alice added that predictability is a desirable feature. The goal statement was then changed to: **The goal of the Workgroup is to develop informed recommendations to improve the air regulatory process for drill rigs with a particular focus on predictability, operational flexibility, and compliance with the air quality standards.**

4) Approach for Exploring Issues and Solutions – How Shall We Proceed?

Discussion about Strategic Items to be Considered in Addition to the Goal Statement

Alice Edwards said she wanted to consider Nikki Martin’s comment that we should add a statement that outlines some of the areas the Workgroup wanted to explore onto the goal statement and she asked the members how this statement should be framed. Mike Munger asked if Alice’s suggestion was that they should add to the goal statement by trying to put more specificity in the goal outline? When Alice answered his question in the affirmative, Mike said that he did not think it was a good idea because the goal statement was broadly written and encompassed a broad range of issues and any attempt to narrow the goal statement would be too limiting. Brad Thomas said that he agreed with Mike and thought the goal statement should stand, but the group should go forward and identify strategic items, then list the tactics under each strategic item. Nikki Martin said that she agreed that the Workgroup should not limit what they were looking at, but she thought it would be productive if the Workgroup could lay out some kind of roadmap. Bill Barron said he agreed with the group about leaving the goal statement alone, but that they could include a section for strategic topics. Mike Munger and Bill Barron discussed having strategic topics, each with a plan. Bill suggested that the group try and get the strategic topics listed. Alice and Tom Turner decided to use the whiteboard to list the strategic topics mentioned by the Workgroup. To start the list of strategic topics, Alice began listing issues. First, she mentioned the definition issue about what is happening in Alaska, what other states are doing; the regulatory approaches that exist for drill rigs in Alaska and in other places. Second, Alice mentioned that there is a modeling issue that the group needed to explore. Third, Alice mentioned a question of how compliance is demonstrated. Bill Barron added that the idea of bundling temporary sources with permanent sources should be included, specifically that the heaters and boilers are in a different category than the non-road engines.

Discussion about the Public Process as a Strategic Topic

John Kuterbach mentioned the public input, which he said the Workgroup had not talked about yet. John also listed mechanical or control equipment solutions that could contribute to improvement. Brad Thomas asked what kinds of control equipment that John was thinking about. Brad wanted to know about Select Catalytic Reduction (SCR), specifically, and John said he was just trying to get categories of topics that the Workgroup ought to discuss and that he didn’t have anything specific in mind. Bill Barron and Alice Edwards discussed the issue of compliance with requirements. Alice said that the modeling/ monitoring question that had been raised was one of the many issues that ultimately determine

July 9, 2013

whether there is compliance or not. Alice concluded by saying that certain control equipment or how we draw the boundaries of the pads might alleviate some of the compliance modeling concerns. Mike Munger asked John Kuterbach to elaborate on the public component. John said that the reason he suggested that it was a topic for discussion is that if we were to move to approaches that other states might take; for example, if we decided that we didn't need to regulate drill rigs through the program, that all we needed was a registration program we would be losing the opportunity for public review and comment out of our permitting program. John said the Workgroup needed to address that change. Gordon Brower agreed with John, saying he often worried where the North Slope Borough's input would be refocused. Gordon cited an example where, for forty years, anything that went on in Pt. Thomson required a public hearing. He said they are now re-adapting to a new permitting climate and streamlining and optimizing how they best work in these types of changes. Alejandra Castaño said that in other states, when they develop a general permit that is a more streamlined version of a permitting system they currently have, the general permit itself does go through a public comment process, and we could look at that. Alice Edwards said that that is how ADECs current general permit works. Bill Barron said that the general permits might work well, because at issue is a piece of equipment moving around, so it wouldn't be site-specific, and that would fit into the preferred model. Alice Edwards said that the minor general permits were developed with a model of a particular scenario to demonstrate compliance and operators that fit within that scenario can use the minor general permit. She said the minor general permit just doesn't fit for every operation.

Discussion about Other Strategic Topics

Bill Barron asked if there were any other topics for discussion. Gordon Brower asked about the issue of moving the rigs offsite for twenty-four months. John Kuterbach said this topic was discussed at the beginning of the meeting, but that it does raise a good question about how to protect air quality from being permanently degraded when there are continuous drilling operations going on. Tom Turner raised the point that one comment raised for discussion was owner versus operations or Lessor versus Lessee. Alice Edwards asked if the issue raised by Tom was one that should be listed as a strategic topic. Bill Barron said that he thought the issue should be listed as a strategic topic. Brad Thomas wondered if it was a strategically good idea to develop a picture of how rigs are actually deployed, so everyone could have a sense of how often rigs go to a site and how often a site is left unoccupied by a rig. Brad thought it would be helpful to present a historical record of how rigs have been deployed in different fields, particularly since John Kuterbach raised the issue of potential problems that may be created when rigs are clustered in one location. John asked if the description Brad proposed about describing how rigs are operated was the way that industry would be operating going forward and Brad said his description would be more of a historical picture of drill rigs' operations. John said that he didn't think that would be a strategic topic and Brad said it would be more for general information. Mike Munger said he would appreciate having that kind of information. Bill Barron added that presenting information about different kinds of drill rigs; rotary rigs, coil-tubing rigs, and workover rigs, to give examples, would show that there are distinct differences in drill rigs which may have a bearing on the modeling/ monitoring

July 9, 2013

and increment discussion. Alice Edwards, Bill Barron, and Nikki Martin discussed the merits of presenting background information on drill rigs and other equipment. Bill said that this kind of background information would be particularly useful for the public when they were looking at the website or for transcription purposes. Alice Edwards asked if there were other strategic topics to consider and Bill Barron said that in the operation of a drill rig, it would be important to note that there are procedural differences during the drilling operation. Alice then said that she was thinking back to the public input and the concept of areas near communities. She said that in some cases ambient air might not be that close to populations, but it is still ambient air. Alice continued, saying, that the issue of proximity where people are living and recreating, should be considered. Brad Thomas said maybe that could be captured under the heading ambient air boundaries, because protecting ambient air quality standards is done at the boundary, which should address the issue. Alice said that she was thinking in the context of public perception. She went on to explain that when development takes place close to where people live, they are more concerned about it. Alice said that this is true of Cook Inlet, just as it is on the North Slope. Alice said that if we build a system that maintains the ambient air quality standards, that we are doing our job, but we also have to be able to ensure that the public feels like they understand that. Bill Barron asked if what Alice was describing was a subset of public input. Gordon Brower asked if the drilling operation would have gone through a public process. He said that it was just a component of an exploration plan or a plan of development. Brad Thomas said that in most cases, the drilling operations were more routine drilling in a developed field. Bill Barron said that it would still be in the plan of development which has gone through a public process.

Discussion about Funding for a New Regulatory Scheme

John Kuterbach said that he had a strategic topic that he hesitated to bring up, but it was about the funding source for implementing any results the Workgroup comes to. The current funding source for the Division is based on fees. Brad Thomas asked whether the regulations had a time and materials category to use for billing. John said that the statutes allowed fees to be charged for permitting work, but if we come up with a different regulatory scheme on how we are going to regulate these sources, the funding has to be there for us to be able to discharge our responsibilities under that other regulatory scheme. Brad asked if there was no statutory authority to allow for a change and John said that if there were permits to allow him to charge fees, there would be a funding source, but if there were some other regulatory scheme that doesn't fall under the same statute, then probably not. Brad Thomas asked if this was a strategic topic and Nikki Martin said it was probably one for later. Gordon Brower said that none of the fees in the North Slope Borough go toward cost recovery or enforcement. He said he had always advocated for more flexibility, but that other fees go into the general fund. Mike Munger said that if we go into another regulatory process, would it not be up to the Department of Law to determine the funding sources. John Kuterbach said that ultimately we would have to involve the Department of Law to find a solution, but it was valuable for the Workgroup to consider how their recommendations would be funded. Brad Thomas said that it was an appropriate strategic topic, but one that would be considered in the end. Alice Edwards said that she thought that if the Workgroup

July 9, 2013

develops something that ADEC doesn't have the revenue to implement; it would be something for the Workgroup to consider. Brad Thomas said under the bullet about 'How to Determine Compliance', we should put the ambient air boundary, because that is relevant. Brad said we should be clear about what is the ambient air boundary, because it is different in different parts of the state. John Kuterbach said he had one other item for a strategic topic. He said that the final solution of the Workgroup may need to be approved by the EPA if it changes our State Implementation Plan (SIP). It also has to be legally defensible. John said that it may be a criterion on the solution rather than a strategic topic for discussion. Alice Edwards agreed with John, saying that ADEC has guardrails. Alice said that modeling may have certain requirements under the Clean Air Act and we may end up trying to work through certain interpretations on various issues, trying to determine what we can and can't control. Aside from maintaining compliance with the standards, which is important to us for many reasons, including public health, if we do change our SIP, we may need to get that approved. Alice said at that point that the Workgroup should take a ten-minute break. The meeting went off the record at 15:40.

The Workgroup Meeting Resumed at 15:53.

Alice Edwards began the meeting with a request to resume the conversation about the strategic topics. She asked if the group wanted to consider all of the strategic topics or prioritize them. Brad Thomas said that at some point the Workgroup would have to consider permitting or registration; the regulatory vehicle. He asked if that was a strategic plan or if that was a conclusion. Alice said that the Workgroup might come up with more than one option. Gordon Brower said his opinion was that the problems and issues with the current permitting climate should be identified first and then it should be decided if ADEC is permitting a mobile source or a stationary source. Alice Edwards asked if the Workgroup could gather further information in order to get to the point of deciding if the permitting process should be changed.

5) Set Focus for Next Meeting and Steps/ Actions Needed Prior to Meeting

Discussion about Topics to be Presented in the Next Workgroup Meeting

John Kuterbach said that that for now, the best next step would be to look at the strategic topics for the next Workgroup meeting. Brad Thomas and Nikki Martin both agreed. Alice Edwards said that Mike Munger was at a disadvantage, because, since he was participating in the meeting telephonically, he could not view the list on the white board. Mike asked if the Workgroup could go through the list again. Alice said that they had the definitions written down, definitions being for mobile sources, stationary sources, owner versus operator, as examples of definitions. Also, a topic would be what other states are doing from a regulatory approach or non-regulatory approach. There is a topic about how to determine compliance with the NAAQS or increments. There was a topic on modeling, monitoring, and the ambient air boundary issues. There was a topic on the combination of stationary and mobile sources as a combination in drill rig permits. There was a topic on public input and community issues; if we change our process, how does that change people's opportunity to provide input, and how might we consider

July 9, 2013

that. We had a topic about what is the current equipment and how does it operate. Regarding the equipment issue, we should also consider what kinds of controls, modifications, operational practices or best management practices, and physical control practices. We should also put engine Tiers in that category. We had the owner versus operator topic; with contract employees on the pads and how that integrates into the permits that exist for the lessees. And John (Kuterbach) raised the issue that if we do something radically different than the way the program is implemented now, we should see if there is a funding mechanism set up in state statute to implement that. Brad Thomas asked Bill Barron if the 'Definitions' bullet point was captured by the other bullet points. Bill said for the topic being discussed at a given time, it is important for everyone to understand the definitions being used. Alice Edwards reminded the Workgroup that the binders that were distributed in the June 26th meeting contained definitions used for regulatory purposes. Bill said that for terms like 'stationary source', there is a reference in the Alaska Administrative Codes (AAC) that references an Alaska Statute (AS) and then the Code of Federal Regulations (CFR) and then back to the AAC, so it is something we should readdress almost every time. Alice Edwards suggested that the Workgroup put the definitions in as an ongoing educational effort.

Discussion about Contacting Other States for Information for the Next Workgroup Meeting

Brad Thomas said that on the strategic topics list, if the 'Definitions' topic were put aside, the next topics would be 'The Other States' Regulatory Approaches' and then 'How to Determine Compliance with the NAAQS'. Brad said that those would be good starting points. Alice Edwards said that the Workgroup should decide what they can each contribute to the conversation. She said that four weeks may not be enough time to pull it together. Brad Thomas said to develop the other states' regulatory approaches, we could just dedicate someone to start calling state agencies and asked if Tom Turner would do that. Tom said that it might be useful to do a third-party contract and have a contractor actually come back and say this is how drill rigs are regulated across the states, in addition to information that staff can pull in or industry knows about. Tom said he would have someone start making phone calls when we get back. John Kuterbach said that we can contact our other agencies, EPA, and some organizations, The Western States Air Resources Council (WESTAR) and The National Association of Clean Air Agencies (NACAA) and the National Association of Regional Councils (NARC) and see if any of those organizations have compiled this sort of information; that would be a good starting place. John said that we can make individual contacts with not all fifty states, but at least several of the states where there is oil and gas drilling and it has been addressed in some way. So, contact Wyoming, Colorado, New Mexico, and North Dakota. Brad Thomas said that it was important who was contacted. He suggested talking to different people so there would be more information on the table. John said that it was important, when contacting other states, is to get a good understanding of what they do as far as air quality regulations are concerned. He gave the example that if there is a requirement that the drill rigs run highline power, that would have an effect on air quality, but it would not be an Air Quality regulation, instead it might be some other community regulation. John mentioned that California has air quality control districts and also might have county requirements which limit what they can do. He

July 9, 2013

said that the industry contacts may be most useful for getting a good idea about the equipment inventory. Alice Edwards asked what kinds of equipment are operated in other oil- and gas-producing states. John asked, to expound on Alice's question, what is a typical drill rig? How big is it and does it operate close to other operations? This is information that we can use to understand the regulatory scheme of another state in the context of what they are regulating. Bill Barron said that implies that we also need to have the same information for the drilling equipment that we currently have so we can make sure we can compare and contrast. Alice Edwards said that when we compare and contrast, we have particular issues that may not exist in other states. She gave as an example the situation where drill rigs on the North Slope are operating on major sources and said that in the Lower 48 states, the drill rigs may be more dispersed. She said that a lot of our major issues stem from the fact that we have them combined with these other major sources. Gordon Brower said it may be important to identify drill rig settings because it may lead to a permitting structure we want to have. Brad Thomas said the Workgroup could identify the states to contact. A brief discussion ensued about whether to include states with gas-only drill rigs and the Workgroup decided to include them. Alice Edwards continued listing states to contact. She said North Dakota, New York, Ohio, Pennsylvania, Texas and Brad Thomas continued with the lists, saying Wyoming, California, and Colorado. The Workgroup continued to list the states to contact, adding Oklahoma, Louisiana, New Mexico, and Montana to the list. Alice asked if the Workgroup needed to review the type of regulatory information we would be seeking from other states. She said that useful information to gather would be the types of equipment and development areas; as John Kuterbach mentioned. Bill Barron said that Baker-Hughes has an informative web application that shows current rigs that are actively drilling in different states and the areas of interest are Pennsylvania, West Virginia, Louisiana, Texas, Oklahoma, Kansas, Colorado, Wyoming, and North Dakota. That would be probably ninety percent of all the rigs currently operating in the Lower 48. The Workgroup members said that the list Bill mentioned added West Virginia and Kansas to the list, but did not list Montana. Alice Edwards reviewed with the Workgroup that the information to be solicited from the other states is the regulatory framework that they use, the types of equipment that the use, and how the developments are laid out in comparison to our own. She asked for additional information needed and Brad Thomas added that other regulations that impact air emissions would be informative. A brief discussion ensued between Alice, Nikki Martin and John Kuterbach about the differences between air quality regulations and other agencies and regulatory frameworks whose requirements would affect air emissions. John Kuterbach added that it would be important to know, not necessarily ambient boundaries, but how close the drill rigs operate to property boundaries.

Discussion about Public/ Private Property and Boundaries Information for the Next Workgroup Meeting

Brad Thomas said that if there was a map of fields being drilled for oil and gas in other states, then the ambient boundaries could be known. Nikki Martin said that it would be necessary to understand land ownership in the area to make that determination. Bill Barron and Alice Edwards said that if the drilling was on private land, then it was not necessarily publically available, but Bill pointed out that if the

July 9, 2013

private property was adjacent to a public road, the public would be available. A member of the audience said that on the North Slope, on private land, public access is limited. Another discussion took place among members of the Workgroup about how big drill pads are on the North Slope and Randy Kanady said that ConocoPhillips' Alpine pads are about ten acres and said he would bring a slide showing the relative sizes of the pads on the North Slope to the next Workgroup meeting. Tom Damiana asked if owners of private land were restricted from using their land while drilling was ongoing and John Kuterbach said that the landowner would not be considered general public on his own land. Alice Edwards summarized, saying the information needed is if other states have addressed boundary-related issues or ambient air issues. Brad Thomas asked Bill Barron if the Baker-Hughes application gave the gross number of rigs operating on a state or field level. Bill said that the app on his smart phone did not have that information, but a full-sized computer might have that information. Alice Edwards said that we should have information about modeling issues and Gordon Brower asked for a sample air quality permit from each state. Alice said that might take more time to prepare than we have for the next meeting, but we could get it for a later meeting. Brad Thomas asked if we could bring a sample air permit from ADEC to the next meeting, complete with equipment inventory and Alice said it could be done. Brad said for their presentation, they would bring rig counts by field, including rig inventories, Tier levels of engines, and types of rigs. Bill Barron said it would be interesting to see the densities of rigs per square mile. Nikki Martin asked if this would be the appropriate time to present an illustration of how often the drill rig is on the pad and how often it moves. Randy Kanady said that would be a rig schedule and he could get it for the next meeting.

Discussion about Demonstrating Compliance with NAAQS as Topic for the Next Workgroup Meeting

Brad Thomas said that in the next meeting, there would be a list of fact-based information that would not require debate or a lot of dialogue, so that there would be time to discuss how to demonstrate compliance with the air quality standards. Alice Edwards recapped Brad's request, saying at the next meeting the Workgroup could go through the collected information on other state programs and figure out whether there is any way we want to explore further or discuss ideas that might transfer to our state and then take some time to set up set up for the next meeting. Brad repeated his request; saying that determining compliance with the air quality standards is fundamental to everything else and he thought that the sooner that discussion took place, the better. Nikki Martin said that the next meeting was probably quite full and that maybe the Workgroup could frame the compliance discussion and get into it more in the subsequent meeting. Brad demurred, saying that if the Workgroup was going to complete their work by December, 2013, that time was too short to wait on the discussion of how to comply with the NAAQS until September. Bill Barron said that the next meeting was robust, but possibly the Workgroup could start to get into the compliance issue. Brad Thomas asked if there was anything to be prepared in advance for this topic. Bill asked for clarification on the topic; he wanted to know if the question was really around compliance with NAAQS and modeling or monitoring or was it a subset of establishing stationary equipment on mobile equipment and Brad said no, it was not. John Kuterbach said that even mobile equipment had to comply with NAAQS. Gordon Brower said that an earlier

July 9, 2013

question he had was whether a mobile NAAQS can affect a stationary NAAQS. John replied that there were not separate categories for mobile and stationary NAAQS; what was measured in the air was all there was. Gordon asked about the increment and John said that everything after the baseline date either increases or decreases the increment available. When sources are shut down, the increment increases and when sources start up, the increment decreases and this applies to mobile as well as stationary NAAQS. John said that the real question is how the NAAQS levels are checked and how they are regulated. Mobile sources can be regulated by having requirements of how they can be used and what fuel they can use and how often they have to be inspected. Gordon asked about the 24-month interval and John said that was the increment. John said the only reason we have the 24-month increment is to give people an exemption from increment. He said if a source is going to degrade air quality and it stays more or less permanent then it is counted against the increment. So that is the only reason we have the 24-month wait time, it is to give an exemption. Alice Edwards told Brad Thomas that ADEC has specific federal guidelines that must be used for modeling and when monitoring is used in lieu of modeling. She asked if it would be helpful to have a technical background for the next meeting. Brad said he did not need a technical background overview, but Bill Barron said that would be helpful to him. Brad said he thought perhaps the compliance topic might be better addressed in the meeting after the next meeting. Alice said that there is more than one way to address the issue and if we came up with a specific approach, she could get the right people working on it. John Kuterbach said that some of the work could be done outside of the scheduled Workgroup meetings. Alice said that some of the topic is so nuanced and technical, that if the technical people worked it out among themselves they may come up with creative options faster than if they were discussed only in the Workgroup meetings.

6) Establish Date for Next Meeting

Alice Edwards said that a month out is the 5th of August. She wanted to know if we could pull information together in that amount of time. She said she would be gone the week of August 12th and half of the week of August 19th. Bill Barron said he would be gone the week of August 12th. Nikki Martin said she wanted to mention that she will no longer be part of the Workgroup because she was moving out of state but Alejandra Castaño will be filling in as the alternate. Alice Edwards said that a month would be challenging, but they could consider August 8. Several people agreed with that date and Alice said that the Workgroup could consider going six weeks out to the 22nd or 23rd, which would be the other alternative she could see. Tom Turner said that six weeks would give more opportunity to get more correct information. Brad Thomas said he was okay with the Workgroup meeting the week of August 19th. A brief discussion ensued between the Workgroup members about which day in the week of August 19th would be preferable and Bill Barron said they shouldn't schedule the next meeting later than the 22nd and there was general agreement with that date.

Discussion about Action Items for the Next Workgroup Meeting

July 9, 2013

Alice Edwards said that for the August 22nd meeting, we can pull together as much information as possible from the other states. The Workgroup should also come to the meeting with ideas on how to set up the modeling or determine compliance with the NAAQS piece as well. She wanted to know if they preferred hearing the information from the other states in a state-by-state format or try to orchestrate it more in advance. Brad Thomas said he preferred the state-by-state format and that he would make a presentation of what goes on in Alaska. John Kuterbach suggested setting up a web meeting on the 22nd so the telephone participants could see what information was presented. Jim Shine said he would check on the availability of a room with teleconferencing availability. Tom Turner said if the information was available earlier than the day of the 22nd, it could be uploaded to the website, which has been useful. Alice reminded everyone that if they had any edits to the meeting summary of June 26th, they should send them to Tom Turner and copy them to Jim Shine. Jeanne Swartz said it would be much easier if edits could be sent directly to her and cc Tom Turner and Jim Shine. The meeting adjourned at 16:50.

Action Items Generated From July 9 Meeting:

- **ADEC staff will research how drill rigs are permitted in the states of California, Wyoming, North Dakota, Montana, New Mexico, Oklahoma, Texas, Kansas, Colorado, West Virginia, Louisiana, Pennsylvania, New York, and Ohio and bring this information to a future Workgroup meeting. This information will include how many rigs operate in a localized area, if there are registration programs, instead of regulation, if there are community policies affecting emissions, if there are modeling or monitoring programs and any other general information about how other states address drill rigs as emission sources**
- **AOGA will present information on the size of North Slope drill pads, the equipment sizes and controls used on the North Slope**
- **Workgroup members will prepare to frame discussion about compliance with NAAQS for meeting subsequent to the August 22nd meeting**
- **Edits to the meeting summary from June 26th should be emailed to Jeanne Swartz at ADEC, with Tom Turner and Jim Shine copied on the correspondence.**
- **Jim Shine will locate a room in the Atwood Building with web-meeting capability**
- **AOGC/ASIA will show an illustration with a modeling contour map shown superimposed on a photograph of a drill site where a monitoring station has been set up, as in Slide 12 of the AOGC/ASIA presentation.**
- **Further information from AOGC-ASIA and/ or ADEC will present information about site-specificity of permits, particularly as regard to information/records on equipment needed to satisfy the permit when the equipment is out of control of the Permittee.**
- **AOGC/ASIA will add a footnote to Slide 13 of their presentation with a footnote describing how the 3-year averages of 1-hour NO₂ are calculated**
- **ADEC will arrange for transcriptionist for the meeting**

Meeting Notes Summary – Workgroup for Global Air Permit Policy Development for Temporary Oil and Gas Drill Rigs

July 9, 2013

- **ADEC will invite a representative from BOEM to attend the meetings**
- **ADEC will provide a representative permit for drill rigs**
- **ADEC will provide an agenda for the August 22nd meeting to the Workgroup members and interested parties and also post it to the website**
- **Establish Date for Next Meeting**

Respectfully submitted,

Jeanne Swartz ADEC/AQ