**IN THE CIRCUIT COURT OF**
**MARION COUNTY**

| | |
|---|---|
| **PEO PEO MOX MOX CHIEF-HEADMAN OF THE WALLA WALLA TRIBE CARL SAMPSON, AND PETER GOODMAN,**<br><br>Petitioners,<br><br>v.<br><br>**DEPARTMENT OF TRANSPORTATION,**<br><br>Respondents, | **Department of Transportation Permit # _____**<br><br>**Case No. _____**<br><br>**AFFIDAVIT OF PEO PEO MOX MOX CHIEF-HEADMAN OF THE WALLA WALLA TRIBE CARL SAMPSON** |

I, Peo Peo Mox Mox Chief-Headman of the Walla Walla Tribe Carl Sampson, being duly sworn, affirm

1. My given name is Carl D. Sampson, and I am known as Peo Peo Mox Mox, Chief-Headman of the Walla Walla Tribe, or as Chief Yellowbird.
2. I am 80 years old and have lived in my homeland on the foothills of the Blue Mountains for most of my life; with my wife Arleta, raising our 5 children and many grandchildren , great-grandchildren and now great-great-grandchildren.
3. My Tribal enrollment number is x-155.
4. I have held various elected and appointed commission positions for my Tribe, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) including

    - CTUIR General Council Chairman for 5 years

Exhibit 1, Page 1

- CTUIR Board of Trustees member 10 years, as Vice-Chairman & Secretary
- Yellowhawk Health & Welfare Commission
- Cultural Resources Commission,
- Planning Commission,
- Housing Commission,
- Nuclear Waste Commission,
- WILDHORSE Gaming Commission,
- Healing Lodge Commission (founding member),
- Columbia Inter-tribal Fish Commission (founding member),
- State of Oregon Commission on Indian Services,
- The Northwest Area Indian Health Board.

5. The CTUIR is the leading employer in Umatilla County.
6. My people stood me up as a 'headman', a chief of our Walla Walla People under my Traditional Indian name of Peo Peo Mox Mox; Yellowbird. This hereditary headman is our elder who was at the Treaty negotiations at the Walla Walla Treaty Council and who signed the 1855 Treaty.
7. Our family has always gathered traditional first foods of roots, huckleberries, medicines, fish, deer and elk.
8. First foods are the traditional foods – water, salmon, deer, elk, cous, and huckleberry – that have sustained my people since time immemorial.
9. In a Tribal creation belief, the Creator asked the foods 'who will take care of the Indian people?' Salmon was the first to promise, then the other fish lined up behind salmon. Next was deer, then elk, then the roots, cous and the biscuit root, then the huckleberry. Always first and last is sacred water.

10. The First Food serving ritual in our longhouse is based on this order and reminds people of the promise the foods made and the people's reciprocal responsibility to respectfully use and take care of the foods.
11. The CTUIR has made a deep commitment to the sustainable protection of these first foods by charging their Department of Natural Resources to first and foremost manage the land to ensure the long-term viability of these foods for the people of the CTUIR tribes.
12. My parents and grandparents taught me how and where to fish, hunt and gather these foods, on the lands where we reserved such rights in the treaty of 1855.
13. I continue to do so to this day.
14. I taught my children, and now that they are grown, I am helping to teach their children and grandchildren how to hunt, fish and gather first foods on these lands.
15. Much of what we're doing today is to preserve this information and knowledge for the future, so that as we train the next generation of leaders, we're confident that they have this knowledge.
16. Tribes are restoring and strengthening their tribes, at the same time they are contributing to the welfare of their communities. We're not taking. We're reclaiming our status as people, a culture, as a nation.
17. The megaloads are passing directly through the heart of these lands where we traditionally hunt, fish and gather for these foods. *See attached map showing the historic range of the CTUIR tribes.*
18. We drive these roads to access our traditional places to hunt, fish, and gather, many of which are along the roads and in the wild lands immediately adjacent to them.

19. Our family has always gathered for traditional root feasts, huckleberry feasts, traditional ceremonies and taken a leadership role in the people of the, CTUIR and specifically our Walla Walla Tribes known in our native tongue as Waluulapam.
20. I am concerned for my people and homelands within the ceded boundary of our beloved Umatilla Indian Reservation.
21. I am concerned for my own ability to hunt and fish and gather in these lands during the last few years of my life.
22. However, as Chief an Headman of my tribe, my true responsibility lies with my protection of these lands for the children of my family and of my tribe born seven generations from now.
23. The 1855 Treaty reserved rights to fish, hunt, and gather traditional foods and medicines throughout the ceded lands.
24. The Tribes and our people still protect and exercise those rights within the 6.4 million acres of ceded land in what is now northeastern Oregon and southeastern Washington.
25. It is important to understand that the U.S. Government and the Treaty did not "give" the Tribal people those rights to fish, hunt, gather foods and medicines.
26. They are rights that we have had and exercised since time immemorial.
27. In the Treaty, our ancestors RESERVED those rights to ensure that the Tribe's future generations would be able to maintain and exercise our traditions and customs.
28. Because of those reserved treaty rights in the 6.4 million acres, the Tribes maintain a keen interest and involvement in the activities that occur in that area (www.ctuir.org).
29. In today's ever-changing world and more than 500 years after contact with our people of Nixyaawii; we ask ourselves how can we balance our traditional ways of life, our connection to the land, water, and air that sustains us?

30. The full First Food ceremonial meal cannot be realized within the boundaries of the Umatilla Indian reservation. The reservation is too small and does not provide the diversity of habitats necessary to acquire all First Foods.
31. Recognizing this limitation, the Treaty of 1855 preserved a large aboriginal use area of, "usual and accustomed" fishing stations, and rights to hunt and gather roots and berries so that tribal members could harvest and fulfill the First Foods order.
32. I understand that the law that allows ODOT to issue these variance permits requires them to determine that passage of the loads will "serve the public interest," but ODOT has not addressed our concerns about the impact of these loads on the first foods in our ceded territory.
33. And now here we are; in the middle of winter, with no formal notification, no Tribal consultation, no information to our Tribal members at our monthly council meetings let alone our elected officials of the Board of Trustees or General Council that not one, but three Monster "Megaloads" are coming onto our ceded boundary lands.
34. How can this be? How can the trust of government to government relations that have been built over decades, be simply ignored.
35. Help me to understand. Help me explain to my people, my children and grandchildren who love the land, mountains and waterways that we have a sacred connection to since time immemorial.
36. Help me understand why we the people of this land have not had voice on such an important matter.

37. By allowing a variance permit of such magnitude on our ceded lands, ODOT has allowed interruption into our ceremonial, culturally, socially and spiritually significant homelands without regard to the importance to our people.
38. The simple passage of these loads alone is an affront to the traditional values and ecological integrity of the lands I have been stood up by my people to protect.
39. We have a strong Tribal culture that will suffer irreparable damage if the Megaload is not stopped.
**40.** Passage of these loads has already tarnished the sacred integrity of these lands. Even if no accidents occur, machines bound for such wide spread environmental destruction desecrate the sacred integrity of the land. Healing ceremonies will need to be performed to begin to repair the damage, but no healing ceremony will completely resolve it. They will only make it something we can live with long into the future.
41. We are not protestors, we are Protectors.
42. We are protecting the ecological and cultural integrity of the lands on which our first foods thrive today.
43. I stand in solidarity with my people, the Waluulapam, my children and grandchildren to uphold the Creator's Law: Tamanwit.
44. This is not a campaign, protest, or liberal outlash, this is about everyone in our homeland and those children yet unborn who deserve clean air to breathe and water to drink, and who deserve to know our first foods and our way of life as we did as children.
45. This is in honor of those who protected it before us.

46. This is to acknowledge and respect the beauty of our sacred lands that give life to all the foods we gather, roots and berries, fish, deer and elk that sustains us and the traditional medicines that keep us strong.

47. We must stand up for the seven generations to come. Protecting our mother earth for the future generations. My obligation to my people, as Headman, is to protect the water, the air, the foods, and the animals for the next seven generations. My duty is only to these that I borrow from in my lifetime to insure they have them for their great grandchildren.

48. I will continue to protect our Treaty Rights of 1855.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Chief Yellowbird Carl Sampson

Chief Yellowbird Carl Sampson

February 4th 2014

Acknowledgment: Declaration of Peo Peo Mox Mox Chief- Headmen of the Walla Walla Tribe Carl Sampson

STATE OF Oregon, COUNTY OF Umatilla

This instrument was acknowledged before me this 4th day of February 20 14

by Carl Sampson .

My commission expires: October 5, 2015

(Seal)

OFFICIAL SEAL
JAMES LEWIS RICHTER
NOTARY PUBLIC - OREGON
COMMISSION NO. 462429
MY COMMISSION EXPIRES OCTOBER 05, 2015

(Notary Public)

**IN THE CIRCUIT COURT OF THE STATE OF OREGON**

**FOR THE COUNTY OF MARION**

| | |
|---|---|
| PEO PEO MOX MOX, HEADMAN-CHIEF OF THE WALLA WALLA TRIBE CARL D. SAMPSON AND PETER GOODMAN,<br><br>Petitioners,<br><br>and<br><br>DEPARTMENT OF TRANSPORTATION,<br><br>Respondent. | Case No.<br><br>DECLARATION OF PETER GOODMAN |

I, Peter Goodman, affirm

1. I am a director and founding member of Act on Climate. I have the authority to represent the organization in this appeal.
2. I base this affidavit on my own personal knowledge.
3. I make this affidavit to demonstrate that I and Act on Climate have standing to bring this suit because I and Act on Climate's members are adversely affected or aggrieved by the decision of the Department of Transportation In the Matter of the permits # STP241311 and STP241345, allowing the transportation of a substantially oversized load on highways 395 and 26 through the State of Oregon.
4. I personally have spent 17 years of my life working as a volunteer to reduce the greenhouse gas emissions that cause climate change. In 1997 I used the Clean Air Act to successfully challenge the permit granted Guardian Glass by the EPA and negotiated strict emission standards and thereby set a precedent for all new glass plants in the country. More recently, I helped raise public awareness of the climate change implications of exporting coal through

helped raise public awareness of the climate change implications of exporting coal through Oregon founding a group called Albany Against Coal Trains. My work has been primarily centered on educating the public, and attempting to influence key political decisions related to climate change.

5. Founding, and directing Act on Climate is the primary way in which I accomplish this goal.

6. Act on Climate is a non-profit, public interest organization registered in the State of Oregon.

7. The mission of Act on Climate is as follows:

> Act on Climate exists to address the need to take individual and collective action on personal, local, regional, state, national, and international levels to reduce the human contribution to the global climate crisis, to help others understand that we must take significant and quick action now and to facilitate that action, as best we can, through every available means in our power.
>
> Act on Climate exists to slow the extraction of all forms of fossil fuels, challenge the private interests and governments that aid and support this extraction, and advocate for rapid conversion to clean energy sources and major reductions in energy use. We also call on governments to exercise their common law duty to protect the global commons, particularly humanity's air, water and climate from further destruction by fossil fuel extraction methods and carbon emissions from the use of fossil fuels.

8. Act on Climate represents people who are concerned about the effects of climate change on the global economy, cultures and ecosystems.

9. The United States Supreme Court has recognized the impact of climate change, citing a National Research Council Report projecting "a number of environmental changes that have already inflicted significant harms, including 'the global retreat of mountain glaciers, reduction in snow-cover extent, the earlier spring melting of rivers and lakes, [and] the accelerated rate of rise of sea levels during the 20th century relative to the past few thousand years….'" *Massachusetts v. EPA,* 547 U.S. 497 (2007).

10. Additionally since the Oregon legislature passed House Bill 3543 in 2007 the State has recognized that "Global warming poses a serious threat to the economic well-being, public health, natural resources and environment of Oregon." ORS 468A.200(3). It has been state policy to reduce Oregon's contribution to climate change ever since. ORS 468A.205(1).

11. In November of 2013 a team of the world's leading climate scientists filed an amicus brief in *Alec L.v. Gina McCarthy*, USCA Case #13-5192, Document #1465822, Filed 11/12/2013. Among them was James Hansen, former director of the NASA Goddard Institute for Space Studies (GISS) and an Adjunct Professor of Earth Sciences at Columbia University's Earth Institute. In it they stated the fundamental problem with global warming:

> Global warming due to emissions of greenhouse gases, mainly $CO_2$ from fossil fuel consumption, is 0.8°C in the last 100 years, with most of this warming in the last 35 years. Due to physical climate system inertia, a comparable amount is "in the pipeline," ensuring further warming even without further change in the atmospheric concentration of $CO_2$ and other greenhouse gases.
>
> Already-observed impacts of this warming include rising sea levels, increased atmospheric moisture resulting in more intense precipitation events, higher temperatures causing more frequent and intense heat waves, droughts, and wildfires, loss of sea ice, ice sheet mass and glaciers, expansion of the subtropics, acidification of the oceans, shifting distributions of plant and animal species, and an increasing rate of species extinctions.
>
> Maintaining a climate that resembles the Holocene epoch, the world with a relatively stable climate system under which civilization developed, requires rapid reduction of fossil fuel $CO_2$ emissions and massive reforestation. Atmospheric $CO_2$ concentrations passed the level that Amici Scientists consider a safe initial target in, approximately, 1988. Global mean temperature is now close to and may exceed the prior Holocene peak, and unabated fossil fuel emissions continue to drive the Earth increasingly out of energy balance. Unless action is undertaken without further delay, the continuing increase of atmospheric $CO_2$ will drive Earth's climate system toward and past points of no return, with disastrous consequences for young people and future generations.

> Effective action remains possible, but delay in undertaking sharp reductions in emissions will undermine any realistic chance of preserving a habitable climate system, which is needed by future generations no less than by prior generations.

12. The effects of climate change are a result of many small decisions by people throughout the world. However, occasionally one decision can have a greater than average impact. Act on Climate exists to identify those key decisions, and to assure that when they are made, the public interest in avoiding climate change is adequately represented.

13. Act on Climate does this by:

    - keeping track of the major decisions and actions;
    - informing members about upcoming decisions, and disseminating information about what they mean, and how the public can participate in a meaningful, legally relevant way;
    - submitting comments that raise the public interest issues in legally relevant ways; and
    - when necessary, protesting or litigating decisions that appear to harm the public interests we protect, and appear to be erroneous.

14. Volunteers donate their time, and members make donations to Act on Climate because the organization has an excellent track record of protecting these interests.

15. Act on Climate is supported by numerous small and a few large donations from community members who wish to see this mission carried out.

16. If Act on Climate were unable to protect the public interests it has named by challenging erroneous decisions, members would have little reason to continue to volunteer for, and contribute money.

17. More importantly, if Act on Climate were unable to represent the public interest in these matters, we believe that interests that the legislature specifically wanted addressed – whether the decision serves the public interest - would go unconsidered.

18. Act on Climate believes that the decision made by the Department of Transportation in permit # STP241311 and STP241345 was erroneously decided in that there is apparently no determination of the public interest. Letting this case, and others like it proceed without challenge will allow for major decisions to be made without consideration of the public interests in avoiding climate change that Act on Climate is bound to protect.
19. If Act on Climate is unable to challenge this decision, then its primary purpose for existence will be thwarted.
20. Therefore I and my organization, Act on Climate, have a deep personal relationship to and interest in this decision. If the decision is made contrary to our interests, we will be adversely affected or aggrieved by the action.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

DATED this 8th day of January, 2014.

Peter Goodman

Peter Goodman

**IN THE CIRCUIT COURT OF**
**MARION COUNTY**

| | |
|---|---|
| **PEO PEO MOX MOX CHIEF-HEADMAN OF THE WALLA WALLA TRIBE CARL SAMPSON, AND PETER GOODMAN,**<br><br>Petitioners,<br><br>v.<br><br>**DEPARTMENT OF TRANSPORTATION,**<br><br>Respondents, | **Department of Transportation Permit # _____**<br><br>**Case No. _____**<br><br>**DECLARATION OF Patricia Weber** |

I, Patricia Weber, affirm

1. I have personal knowledge of the following information through my own research and deduction.
2. According to my research it appears that the loads are carrying water processing equipment and are bound for the Alberta Tar Sands where they will facilitate steam assisted gravity drainage (SAGD), also known as "in –situ" recovery of bitumen.
3. Recourse Conservation Company International (RCCI) of Bellevue Washington sells water purification equipment to developers of tar sands SAGD facilities. *GE Water & Process Technologies: Treatment of Heavy Oil Produced Water Using Evaporation and Zero Discharge Technologies; Hoover's Report: Resources Conservation Co. International Profile.*

Exhibit 3, page 1

4. RCCI has in within the past year contracted Omega Morgan to transport two other pieces of water purification equipment to the tar sands for use in Athabasca Oil Corporation's Hangingstone SAGD facility. *Alberta Oil Sands Industry Quarterly Update, Fall 2012; Edmonton Journal:" Oilsands Megaloads in Legal Battle", August 10, 2013.*

5. The previous two pieces of water processing equipment transported to the Hangingstone in-situ facility were similar in size and weight to the Omega Morgan megaloads that were permitted by ODOT. *United States District Court in the District of Idaho Case #3:13-CV-348-BLW.*

6. The proposed route for the megaloads permitted by ODOT involve crossing into Canada at the Port of Sweetgrass (MT), which is the border crossing that is geographically closest to the Alberta Tar Sands. *Missoulian: Montana Considers Permit for 450-ton Megaload, December 4, 2013; Google Maps: Directions Port of Northern Montana at Shelby to Fort MacMurray Alberta.*

7. The water processing equipment is being provided pre-assembled to the fullest extent possible and pre-fitted prior to shipment, thereby reducing fieldwork and maximizing project certainty. *GE Water & Process Technologies: Op Cit.*

8. It is the pre-assembled nature of the product that requires its transport as a megaload.

9. The pre-assembly and reduction of field work at the equipment's destination helps reduce costs. *Oilprice.com Oil and Energy News, "Have the Canadian Tar Sands Had Their Day", April 2, 2013.*

10. There are claims that it is an economic necessity that the equipment to be shipped in the form of a megaload, rather than as a series of smaller components that could be transported on legal-size and legal-weight trucks and then assembled on-site at the tar sands. *Business*

*Insider: "Canada Doesn't Have Enough Workers To Tap The Oil Sands, And The Shortage Is Getting Worse", January 23, 2012.*

11. Permitting these megaloads of tar sands processing equipment to be transported to their destination and put into use will allow further development of the Alberta Tar Sands.

12. The Alberta Tar Sands, if fully developed, will emit significant quantities of greenhouse gases to the atmosphere, with the potential to cause up to 0.4 degrees C of global warming. *Scientific American: "How Much Will Tar Sands Oil Add to Global Warming?", January 23, 2013.*

13. Tar sands oil emits approximately 14% more green house gases than average crude oil used in the US. *Id.*

14. As such, it is one of the dirtiest sources of fuel known on the planet. *Id.*

15. The additional mining of tar sands oil that would occur as the result of this megaload shipment will result in more greenhouse gasses than if the in-situ facility did not get constructed, exacerbating an already dangerous threat to the stability of the Earth's climate.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

DATED this 29 day of January, 2014.

Patricia J Weber

Patricia Weber

OREGON DEPARTMENT OF TRANSPORTATION 050278 MORGA14020627556
JOINT STATE/COUNTY PERMIT

CARRY THIS PERMIT IN THE CAB OF THE POWER UNIT AT ALL TIMES

| Permit No: STP241311 | Issue Date | Issue Time | Effective Date | Date of Expiration | Total Fee |
|---|---|---|---|---|---|
| Location: SALEM | 02/06/2014 | 1004A | 02/06/2014 | 02/15/2014 | CHARGED |

Permittee: (Name and Address)
MORGAN MACHINERY MOVING
23810 NW HUFFMAN ST
HILLSBORO OR 97124

Commodity
CONDENSOR

Carrier File #: 050278 USDOT: 0512885

| Load Length | Width | Height | Overall Length | Rear Overhang | Front Overhang |
|---|---|---|---|---|---|
| 96'00" | 22'02" | 19'00" | SEE PROVISIONS | LEGAL | LEGAL |

| Legal Weight Table | Extended Weight Table | Heavy Haul Weight Table X | Gross Weight | Axle |
|---|---|---|---|---|
| | | | 958,000 | 31 |

Description of Vehicles: SEE SPECIAL PROVISIONS FOR DESCRIPTION

| Year | Make | Vin | License | State | Unit No. |
|---|---|---|---|---|---|
| 1977 | PACI | 777118988 | YAHB034 | OR | 510 |

From: PORT OF UMATILLA
To: OR/ID BORDER AT OR201 SPUR (HOMEDALE)
Via:
********** SEE SPECIAL PROVISIONS FOR ROUTE **********

Pilot Vehicles:
2 Lane None ( ) Front (2) Rear (3)
4 Lane None ( ) Front (2) Rear (3) Rider ( )

ESAL Rate: 7.36
Oregon Miles:

Special Provisions

This permit is not valid without the following required attachments:
82A, H, TCP

OVERALL LENGTH OF COMBINATION, INCLUDING PUSH TRUCKS, IS 425'00".

DESCRIPTION OF VEHICLES: 4-J2-J2-D4-D4-D4 + 3 AXLE PUSH TRUCK + 4 AXLE PUSH TRUCK + 4 AXLE PUSH TRUCK WITH 172' TRAILER INCLUSIVE OF DOLLIES.

ROUTE FROM PORT OF UMATILLA TO OR/ID BORDER AT OR201 SPUR (HOMEDALE) VIA:
US730; US395;
USE LEFT LANE UNDER VMS AT MP 0.24;
I-84, GO UP AND OVER ECHO RD EXIT 193;
GO UP AND OVER LORENZEN RD EXIT 198;
GO UP AND OVER BARNHART RD EXIT 202;
GO UP AND OVER US30 EXIT 207;
TAKE EXIT 209 TO US395; US26; US20/US26; CLARK BLVD; OR201; OR201 SPUR.

OREGON DEPARTMENT OF TRANSPORTATION
JOINT STATE/COUNTY PERMIT

CARRY THIS PERMIT IN THE CAB OF THE POWER UNIT AT ALL TIMES



PERMIT DOES NOT AUTHORIZE USE OF US ARMY CORPS OF ENGINEER ROADS.
.
CARRIER ALLOWED TO TRAVEL BETWEEN 8PM AND 6AM ONLY, WITH A MAXIMUM OF 8 CONSECUTIVE HOURS TOTAL PER NIGHT. CARRIER SHOULD USE THEIR BEST JUDGMENT TO BEST MINIMIZE DELAY TO THE TRAVELING PUBLIC. EXCEPTIONS:
DAYTIME MOVEMENT AUTHORIZED ON US395 BETWEEN MP20 AND MT VERNON, US26, US20/US26, COUNTY ROADS, OR201, AND OR201 SPUR.
DAYTIME MOVEMENT IS NOT AUTHORIZED IN MT VERNON, JOHN DAY, OR VALE.
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.
THE FOLLOWING WEIGHTS ALLOWED PER BRIDGE LOG 14-006.

| AXLES | SPACINGS | WEIGHTS (LBS) |
|---|---|---|
| 1-2 | 10'06" | 18,233 |
| 2-3 | 8'00" | 15,000 |
| 3-4 | 5'10" | 44,767 |
| 4-5 | 30'09" | |
| 5-6 | 5'00" | 89,500 |
| 6-7 | 14'00" | |
| 7-8 | 5'00" | 89,500 |
| 8-9 | 24'00" | |
| 9-10 | 5'00" | 89,500 |
| 10-11 | 14'00" | |
| 11-12 | 5'00" | 89,500 |
| 12-13 | 95'11" | |
| 13-14 | 5'00" | 89,500 |
| 14-15 | 14'00" | |
| 15-16 | 5'00" | 89,500 |
| 16-17 | 24'00" | |
| 17-18 | 5'00" | 89,500 |
| 18-19 | 14'00" | |
| 19-20 | 5'00" | 89,500 |
| 20-21 | 13'10" | 16,000 |
| 21-22 | 17'01" | 32.000 |
| 22-23 | 5'02" | |
| 23-24 | 16'02" | 16,000 |
| 24-25 | 17'02" | 42,000 |
| 25-26 | 4'06" | |
| 26-27 | 4'06" | |
| 27-28 | 15'08" | 16,000 |
| 28-29 | 17'02" | 42,000 |
| 29-30 | 4'06" | |
| 30-31 | 4'06" | |

AXLES 5-20 ARE 8 TIRE, 18' WIDE AXLES.

CARRIER IS RESPONSIBLE TO CHECK THE WEATHER FORECAST AND ROAD CONDITIONS AND PLAN FOR PROPERLY PARKING IN APPROVED PULLOUTS WHERE EXTENDED PARKING IS ALLOWED.

CARRIER IS AWARE THAT ODOT WILL NOT BE ABLE TO PROVIDE WINTER SNOW REMOVAL OR OPERATIONS BEYOND THE STANDARD LEVEL OF SERVICE.

CARRIER TO PROVIDE A $20,000 SURETY BOND OR A CHECK DEPOSIT IN LIEU OF BOND AND SHALL BE SUBMITTED TO THE DISTRICT 12 ODOT OFFICE, 1327 SE 3RD ST, PENDLETON, OR 97801.

CARRIER TO PROVIDE A CERTIFICATE OF SELF-INSURANCE OR LIABILITY AND PROPERTY DAMAGE INSURANCE POLICY OR POLICIES PROVIDING THE COVERAGE AGAINST ANY CLAIM, DEMAND, SUIT OR ACTION FOR PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH RESULTING FROM ANY ACTIVITIES OF APPLICANT, ITS OFFICERS, EMPLOYEES, AGENTS OR CONTRACTORS IN CONNECTION WITH THIS PERMIT OR OPERATIONS BEING CONDUCTED AS AUTHORIZED BY THE PERMIT. THE SAID CERTIFICATE OF SELF-INSURANC OR POLICY OR POLICIES, IN ADDITION, SHALL INCLUDE AS NAMED INSURED THE STATE OF OREGON, THE COMMISSION, THE DEPARTMENT, AND MEMBERS THEREOF, ITS OFFICERS, AGENTS AND EMPLOYEES, EXCEPT AS TO CLAIMS AGAINST APPLICANT, FOR PERSONAL INJURY TO ANY MEMBERS OF THE COMMISSION, THE DEPARTMENT, OR ITS OFFICERS, AGENTS, AND EMPLOYEES, OR DAMAGE TO ANY OF ITS OR THEIR PROPERTY. THE SAID SELF-INSURANCE CERTIFICATE OR POLICY SHALL PROVIDE PROOF OF COVERAGE OF A COMBINED SINGLE UNIT OF $500,000. THE SAID INSURANCE POLICY OR POLICIES SHALL BE IN AN INSURANCE COMPANY DULY AUTHORIZED AND LICENSED TO DO BUSINESS IN THE STATE OF OREGON. A COPY OF THE CERTIFICATE OF SELF-INSURANCE OR POLICY OR POLICIES, OR A CERTIFICATE EVIDENCING THE SAME, SHALL BE SUBMITTED TO THE DISTRICT 12 ODOT OFFICE, 1327 S.E. 3RD ST., PENDLETON, OR 97801.

CARRIER TO PROVIDE A DIRECT LINE OF COMMUNICATION TO ODOT IN CASE OF AN EMERGENCY.

CARRIER SHALL CONTACT ODOT DISPATCH AT 541-383-0121 DAILY BEFORE MOVING AND WHEN DONE FOR THE DAY, GIVING A 24-HOUR LOOK AHEAD SCHEDULE / PLAN / ROUTE (I.E. HIGHWAY NAME, MP XX-XX, EXPECTED TRAFFIC DELAY TIME, EXPECTED START AND ENDING TIME OF OPERATION).

CARRIER SHALL UPDATE ODOT DISPATCH IMMEDIATELY UPON ANY EMERGENCIES OR CHANGES TO THEIR PLANS.

CARRIER SHALL HAVE COMMUNICATIONS WITH ALL CREW MEMBERS, ONSITE ODOT PERSONNEL, AND CONTRACTORS DURING THE MOVING OPERATION.

CARRIER SHALL CARRY A SATELLITE PHONE AT ALL TIMES THAT IS CAPABLE OF CALLING OUT IN CASE OF AN EMERGENCY.

CARRIER IS RESPONSIBLE FOR FUNDING AND WILL ALLOW 1-2 ODOT EMPLOYEES TO MONITOR AND TRAVEL WITH THE LOAD AND COMMUNICATE BETWEEN ODOT CREWS, THE CARRIER, AND ODOT DISPATCH.

CARRIER TO PROVIDE AN EMERGENCY CONTACT LIST OF OMEGA-MORGAN PERSONNEL.

CARRIER TO COORDINATE WITH EMS SERVICES THAT COULD POTENTIALLY BE AFFECTED ALONG THE ROUTE.

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CARRIER TO PROVIDE EMS EQUIPMENT AND PROFESSIONALS THAT ACCOMPANY THE MOVING OPERATION TO ENSURE A QUICK RESPONSE TO EMERGENCY CALLS FOR THE PUBLIC AND OPERATION.

CARRIER TO PROVIDE UPDATED LOCATION INFORMATION TO LOCAL EMS DISPATCH CENTERS ALONG THE ROUTE.

CARRIER TO REQUEST ASSISTANCE FROM LOCAL LAW ENFORCEMENT IN CASE OF EMERGENCIES.

CARRIER MUST RESOLVE ANY ISSUES WITH ANY OVERHEAD OR HORIZONTAL HAZARDS BEFORE MOVING.

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TRAFFIC CONTROL

PERMIT IS NOT VALID WITHOUT COMPLETED TRAFFIC CONTROL PLAN THAT FOLLOWS OREGON TRAFFIC SAFETY STANDARDS SUCH AS THE OREGON TEMPORARY TRAFFIC CONTROL HANDBOOK (OTTCH), ODOT STANDARD DRAWINGS, AND MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE PLAN SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN OREGON.

CARRIER TO PROVIDE ADVANCE WARNING WITH AT LEAST 2 PORTABLE VARIABLE MESSAGE SIGNS (VMS) IN LOGICAL LOCATIONS AND ON EACH SIDE OF THE EXPECTED ROUTE OR HIGHWAY CORRIDOR. VARIABLE MESSAGES SHALL BE DISPLAYED ACCORDING TO THE OREGON PORTABLE CHANGEABLE MESSAGE SIGN HANDBOOK, OR APPROVED BY ODOT.

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PILOT CAR REQUIREMENTS

FULL CLOSURE FOR 2-LANE HIGHWAYS - USE SUBMITTED TRAFFIC CONTROL PLAN.

- HORIZONTAL CLEARANCES FOR TRAFFIC TO PASS SHALL NOT BE LESS THAN 10' AND BE IN CONTROLLED WORK ZONES.
- CARRIER SHALL VERIFY CONDITION AND LOCATION OF ALL PULLOUTS AND PROVIDE ODOT WITH A LIST OF EXPECTED LOCATIONS BY HIGHWAY AND MILE POINT.
- CARRIER SHALL IDENTIFY AN ADEQUATE AMOUNT OF PULLOUTS TO ACCOMMODATE MOBILITY OF THE PUBLIC CONSISTENT WITH OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION:
  - 00220.02 PUBLIC SAFETY AND MOBILITY - PROVIDE FOR THE SAFETY AND

CARRY THIS PERMIT IN THE CAB OF THE POWER UNIT AT ALL TIMES



MOBILITY OF THE PUBLIC AND: DO NOT STOP OR HOLD VEHICLES ON THE TRAVELED WAY, AT INTERSECTIONS, OR OTHER CONNECTING ROADWAYS WITHIN THE PROJECT LIMITS FOR MORE THAN 20 MINUTES.

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MULTI-LANE HIGHWAYS - USE SUBMITTED TRAFFIC CONTROL PLAN; OR 2 FRONT AND 2 REAR PILOTS WITH 1 ADDITIONAL SIGN TRUCK WITH ADVANCED "SLOW MOVING VEHICLE AHEAD" SIGN.
FREEWAYS - USE SUBMITTED TRAFFIC CONTROL PLAN; OR 2 FRONT AND 2 REAR PILOTS WITH 1 ADDITIONAL SIGN TRUCK WITH ADVANCED "SLOW MOVING VEHICLE AHEAD" SIGN.

CARRIER TO PROVIDE COMMUNICATION BETWEEN CARRIER AND FLAGGING OPERATIONS.

CARRIER MUST IDENTIFY AND USE EXTENDED PARKING PULLOUTS TO STAGE THE LOAD DURING DAYTIME RESTRICTED MOVING HOURS. ALL EQUIPMENT ASSOCIATED WITH THE MOVE MUST BE PARKED OUTSIDE OF THE AASHTO ROADSIDE DESIGN GUIDE APPROPRIATE CLEAR ZONE OR PROPERLY MARKED AS SPECIFIED IN OREGON TRAFFIC SAFETY STANDARDS REFERENCED ABOVE.

.
PERMIT IS NOT VALID WITHOUT A NARRATIVE EXPLAINING THEIR GENERAL PLAN AND EMERGENCY / MECHANICAL BREAKDOWN RESPONSE AND BACK-UP PLAN. THE PLAN AND OPERATION SHOULD INCLUDE TIRE CHANGING EQUIPMENT, SERVICE VEHICLE, MECHANIC, BACK-UP TRUCK, AND FORKLKFT.

BRIDGE LOAD RATING APPROVAL PER JOE CHARBONNEAU.
DISTRICT 12 APPROVAL PER MARILYN HOLT.
DISTRICT 14 APPROVAL PER PAUL WOODWORTH.

FRONT PILOT VEHICLE MUST BE EQUIPPED WITH A HEIGHT POLE ON ALL STATE AND INTERSTATE HIGHWAYS.

CARRIER IS AWARE AND IS RESPONSIBLE TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

STATE FEE AT $8.00, MILES TO BE DECLARED.

Authority: MALHEUR COUNTY Fee: 0.00 AUTHORIZED BY: W. ALLISON

MALHEUR COUNTY Special Provisions

ADDITIONAL MALHEUR COUNTY APPROVAL PER J. WISE.

CARRIER TO CONTACT WES ALLISON AT 208-739-1895 AND JEFF WISE AT 208-739-8761 AT LEAST 24 HOURS PRIOR TO ARRIVAL AT CLARK BLVD.

CARRY THIS PERMIT IN THE CAB OF THE POWER UNIT AT ALL TIMES



This permit is not valid before issue date and issue time or the effective date, whichever is later. Issue time reflects Pacific Time Zone.

OREGON TAX AND REGISTRATION: Permittee is required to meet all Oregon tax and registration requirements unless exempted by statute or rule. For more information, call (503) 378-6699.

WEATHER RESTRICTIONS: Movement of loads or vehicles exceeding 8 feet 06 inches in width is strictly prohibited:

* When road surfaces are hazardous due to ice, snow, or frost; OR,
* When visibility is less than 500 feet due to snow, mist, rain, dust, smoke, or other atmospheric conditions; OR,
* When wind conditions exist which cause excessive swaying or weaving, or tip-over of the towed unit, or are such that the towed unit cannot maintain its lane of travel; OR,
* Whenever the Department of Transportation places signs indicating travel is hazardous.

Drivers are responsible at all times to recognize these conditions when they are moving loads or combinations of vehicles exceeding 8 feet 06 inches in width. Drivers making the wrong choice and continuing to operate when these hazardous conditions exist are subject to citation and the responsible Motor Carrier is subject to civil monetary complaint on a first offense and in the instance of repeated violations is subject to additional sanctions including cancellation of permit and/or denial of future permit requests.

CHAIN UP AREAS: Chain up locations are not intended to serve as staging areas for over dimension vehicles. Parking in chain-up areas is strictly prohibited. In order to avoid being caught unaware of existing or approaching weather conditions ALWAYS check for available highway and weather information before beginning a trip.

HIGHWAY AND WEATHER INFORMATION: Prior to travel, go to www.tripcheck.com or call the toll-free Oregon road report at 511 or (800)977-6368 for current travel and weather information throughout Oregon. If calling from out of state, call (503) 588-2941. NOTICE: Highway closures or delays may occur unexpectedly due to unforeseen circumstances (accidents, weather-related incidents such as slides, etc.)

How was your customer service? E-mail the Over-Dimension Permit Manager at christy.a.jordan@odot.state.or.us or call 503-378-6192.

Picked Up By:
Contact: CHRIS Phone: 206-730-4394
Preparer: HUTTO, CHARLES SALEM1 Title: OD PROGRAM COORD.

OREGON DEPARTMENT OF TRANSPORTATION 050278 MORGA14020627554
JOINT STATE/COUNTY PERMIT

CARRY THIS PERMIT IN THE CAB OF THE POWER UNIT AT ALL TIMES

| Permit No: STP241345 | Issue Date | Issue Time | Effective Date | Date of Expiration | Total Fee |
|---|---|---|---|---|---|
| Location: SALEM | 02/06/2014 | 1003A | 02/06/2014 | 02/15/2014 | CHARGED |

Permittee: (Name and Address)
MORGAN MACHINERY MOVING
23810 NW HUFFMAN ST
HILLSBORO OR 97124

Commodity
CONDENSOR

Carrier File #: 050278 USDOT: 0512885

| Load Length | Width | Height | Overall Length | Rear Overhang | Front Overhang |
|---|---|---|---|---|---|
| 96'00" | 22'02" | 19'00" | SEE PROVISIONS | LEGAL | LEGAL |

| Legal Weight Table | Extended Weight Table | Heavy Haul Weight Table X | Gross Weight | Axle |
|---|---|---|---|---|
| | | | 943,000 | 30 |

Description of Vehicles: SEE SPECIAL PROVISIONS FOR DESCRIPTION

| Year | Make | Vin | License | State | Unit No. |
|---|---|---|---|---|---|
| 1963 | PACI | T6488234 | YAHB036 | OR | 7018 |

From: PORT OF UMATILLA
To: OR/ID BORDER AT OR201 SPUR (HOMEDALE)
Via:
********** SEE SPECIAL PROVISIONS FOR ROUTE **********

Pilot Vehicles:
2 Lane None ( ) Front (2) Rear (3)
4 Lane None ( ) Front (2) Rear (3) Rider ( )

ESAL Rate: 7.36
Oregon Miles:

Special Provisions

This permit is not valid without the following required attachments:
82A, H, TCP

OVERALL LENGTH OF COMBINATION, INCLUDING PUSH TRUCKS, IS 425'00".

DESCRIPTION OF VEHICLES: 3-J2-J2-D4-D4-D4 + 3 AXLE PUSH TRUCK + 4 AXLE PUSH TRUCK + 4 AXLE PUSH TRUCK WITH 172' TRAILER INCLUSIVE OF DOLLIES.

ROUTE FROM PORT OF UMATILLA TO OR/ID BORDER AT OR201 SPUR (HOMEDALE) VIA:
US730; US395;
USE LEFT LANE UNDER VMS AT MP 0.24;
I-84, GO UP AND OVER ECHO RD EXIT 193;
GO UP AND OVER LORENZEN RD EXIT 198;
GO UP AND OVER BARNHART RD EXIT 202;
GO UP AND OVER US30 EXIT 207;
TAKE EXIT 209 TO US395; US26; US20/US26; CLARK BLVD; OR201; OR201 SPUR.

OREGON DEPARTMENT OF TRANSPORTATION
JOINT STATE/COUNTY PERMIT

CARRY THIS PERMIT IN THE CAB OF THE POWER UNIT AT ALL TIMES



PERMIT DOES NOT AUTHORIZE USE OF US ARMY CORPS OF ENGINEER ROADS.
.
CARRIER ALLOWED TO TRAVEL BETWEEN 8PM AND 6AM ONLY, WITH A MAXIMUM OF 8 CONSECUTIVE HOURS TOTAL PER NIGHT. CARRIER SHOULD USE THEIR BEST JUDGMENT TO BEST MINIMIZE DELAY TO THE TRAVELING PUBLIC. EXCEPTIONS:
DAYTIME MOVEMENT AUTHORIZED ON US395 BETWEEN MP20 AND MT VERNON, US26, US20/US26, COUNTY ROADS, OR201, AND OR201 SPUR.
DAYTIME MOVEMENT IS NOT AUTHORIZED IN MT VERNON, JOHN DAY, OR VALE.
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THE FOLLOWING WEIGHTS ALLOWED PER BRIDGE LOG 14-006.

| AXLES | SPACINGS | WEIGHTS (LBS) |
|---|---|---|
| 1-2 | 16'00" | 18,233 |
| 2-3 | 5'05" | 44,767 |
| 3-4 | 32'10" | |
| 4-5 | 5'00" | 89,500 |
| 5-6 | 14'00" | |
| 6-7 | 5'00" | 89,500 |
| 7-8 | 24'00" | |
| 8-9 | 5'00" | 89,500 |
| 9-10 | 14'00" | |
| 10-11 | 5'00" | 89,500 |
| 11-12 | 95'11" | |
| 12-13 | 5'00" | 89,500 |
| 13-14 | 14'00" | |
| 14-15 | 5'00" | 89,500 |
| 15-16 | 24'00" | |
| 16-17 | 5'00" | 89,500 |
| 17-18 | 14'00" | |
| 18-19 | 5'00" | 89,500 |
| 19-20 | 13'10" | 16,000 |
| 20-21 | 17'01" | 32.000 |
| 21-22 | 5'02" | |
| 22-23 | 16'02" | 16,000 |
| 23-24 | 17'02" | 42,000 |
| 24-25 | 4'06" | |
| 25-26 | 4'06" | |
| 26-27 | 15'08" | 16,000 |
| 27-28 | 17'02" | 42,000 |
| 28-29 | 4'06" | |
| 29-30 | 4'06" | |

CARRY THIS PERMIT IN THE CAB OF THE POWER UNIT AT ALL TIMES



AXLES 5-20 ARE 8 TIRE, 18' WIDE AXLES.

CARRIER IS RESPONSIBLE TO CHECK THE WEATHER FORECAST AND ROAD CONDITIONS AND PLAN FOR PROPERLY PARKING IN APPROVED PULLOUTS WHERE EXTENDED PARKING IS ALLOWED.

CARRIER IS AWARE THAT ODOT WILL NOT BE ABLE TO PROVIDE WINTER SNOW REMOVAL OR OPERATIONS BEYOND THE STANDARD LEVEL OF SERVICE.

CARRIER TO PROVIDE A $20,000 SURETY BOND OR A CHECK DEPOSIT IN LIEU OF BOND AND SHALL BE SUBMITTED TO THE DISTRICT 12 ODOT OFFICE, 1327 SE 3RD ST, PENDLETON, OR 97801.

.

CARRIER TO PROVIDE A CERTIFICATE OF SELF-INSURANCE OR LIABILITY AND PROPERTY DAMAGE INSURANCE POLICY OR POLICIES PROVIDING THE COVERAGE AGAINST ANY CLAIM, DEMAND, SUIT OR ACTION FOR PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH RESULTING FROM ANY ACTIVITIES OF APPLICANT, ITS OFFICERS, EMPLOYEES, AGENTS OR CONTRACTORS IN CONNECTION WITH THIS PERMIT OR OPERATIONS BEING CONDUCTED AS AUTHORIZED BY THE PERMIT. THE SAID CERTIFICATE OF SELF-INSURANC OR POLICY OR POLICIES, IN ADDITION, SHALL INCLUDE AS NAMED INSURED THE STATE OF OREGON, THE COMMISSION, THE DEPARTMENT, AND MEMBERS THEREOF, ITS OFFICERS, AGENTS AND EMPLOYEES, EXCEPT AS TO CLAIMS AGAINST APPLICANT, FOR PERSONAL INJURY TO ANY MEMBERS OF THE COMMISSION, THE DEPARTMENT, OR ITS OFFICERS, AGENTS, AND EMPLOYEES, OR DAMAGE TO ANY OF ITS OR THEIR PROPERTY. THE SAID SELF-INSURANCE CERTIFICATE OR POLICY SHALL PROVIDE PROOF OF COVERAGE OF A COMBINED SINGLE UNIT OF $500,000. THE SAID INSURANCE POLICY OR POLICIES SHALL BE IN AN INSURANCE COMPANY DULY AUTHORIZED AND LICENSED TO DO BUSINESS IN THE STATE OF OREGON. A COPY OF THE CERTIFICATE OF SELF-INSURANCE OR POLICY OR POLICIES, OR A CERTIFICATE EVIDENCING THE SAME, SHALL BE SUBMITTED TO THE DISTRICT 12 ODOT OFFICE, 1327 S.E. 3RD ST., PENDLETON, OR 97801.

CARRIER TO PROVIDE A DIRECT LINE OF COMMUNICATION TO ODOT IN CASE OF AN EMERGENCY.

CARRIER SHALL CONTACT ODOT DISPATCH AT 541-383-0121 DAILY BEFORE MOVING AND WHEN DONE FOR THE DAY, GIVING A 24-HOUR LOOK AHEAD SCHEDULE / PLAN / ROUTE (I.E. HIGHWAY NAME, MP XX-XX, EXPECTED TRAFFIC DELAY TIME, EXPECTED START AND ENDING TIME OF OPERATION).

CARRIER SHALL UPDATE ODOT DISPATCH IMMEDIATELY UPON ANY EMERGENCIES OR CHANGES TO THEIR PLANS.

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CARRIER SHALL HAVE COMMUNICATIONS WITH ALL CREW MEMBERS, ONSITE ODOT PERSONNEL, AND CONTRACTORS DURING THE MOVING OPERATION.

CARRIER SHALL CARRY A SATELLITE PHONE AT ALL TIMES THAT IS CAPABLE OF CALLING OUT IN CASE OF AN EMERGENCY.

CARRIER IS RESPONSIBLE FOR FUNDING AND WILL ALLOW 1-2 ODOT EMPLOYEES TO MONITOR AND TRAVEL WITH THE LOAD AND COMMUNICATE BETWEEN ODOT CREWS, THE CARRIER, AND ODOT DISPATCH.

CARRIER TO PROVIDE AN EMERGENCY CONTACT LIST OF OMEGA-MORGAN PERSONNEL.

CARRIER TO COORDINATE WITH EMS SERVICES THAT COULD POTENTIALLY BE AFFECTED ALONG THE ROUTE.

CARRIER TO PROVIDE EMS EQUIPMENT AND PROFESSIONALS THAT ACCOMPANY THE MOVING OPERATION TO ENSURE A QUICK RESPONSE TO EMERGENCY CALLS FOR THE PUBLIC AND OPERATION.

CARRIER TO PROVIDE UPDATED LOCATION INFORMATION TO LOCAL EMS DISPATCH CENTERS ALONG THE ROUTE.

CARRIER TO REQUEST ASSISTANCE FROM LOCAL LAW ENFORCEMENT IN CASE OF EMERGENCIES.

CARRIER MUST RESOLVE ANY ISSUES WITH ANY OVERHEAD OR HORIZONTAL HAZARDS BEFORE MOVING.

TRAFFIC CONTROL
PERMIT IS NOT VALID WITHOUT COMPLETED TRAFFIC CONTROL PLAN THAT FOLLOWS OREGON TRAFFIC SAFETY STANDARDS SUCH AS THE OREGON TEMPORARY TRAFFIC CONTROL HANDBOOK (OTTCH), ODOT STANDARD DRAWINGS, AND MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE PLAN SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN OREGON.

CARRIER TO PROVIDE ADVANCE WARNING WITH AT LEAST 2 PORTABLE VARIABLE MESSAGE SIGNS (VMS) IN LOGICAL LOCATIONS AND ON EACH SIDE OF THE EXPECTED ROUTE OR HIGHWAY CORRIDOR. VARIABLE MESSAGES SHALL BE DISPLAYED ACCORDING TO THE OREGON PORTABLE CHANGEABLE MESSAGE SIGN HANDBOOK, OR APPROVED BY ODOT.

PILOT CAR REQUIREMENTS
FULL CLOSURE FOR 2-LANE HIGHWAYS - USE SUBMITTED TRAFFIC CONTROL PLAN.
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STATE FEE AT $8.00, MILES TO BE DECLARED.

Authority: MALHEUR COUNTY Fee: 0.00 AUTHORIZED BY: W. ALLISON

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CHAIN UP AREAS: Chain up locations are not intended to serve as staging areas for over dimension vehicles. Parking in chain-up areas is strictly prohibited. In order to avoid being caught unaware of existing or approaching weather conditions ALWAYS check for available highway and weather information before beginning a trip.

HIGHWAY AND WEATHER INFORMATION: Prior to travel, go to www.tripcheck.com or call the toll-free Oregon road report at 511 or (800)977-6368 for current travel and weather information throughout Oregon. If calling from out of state, call (503) 588-2941. NOTICE: Highway closures or delays may occur unexpectedly due to unforeseen circumstances (accidents, weather-related incidents such as slides, etc.)

How was your customer service? E-mail the Over-Dimension Permit Manager at christy.a.jordan@odot.state.or.us or call 503-378-6192.

Picked Up By:
Contact: CHRIS Phone: 206-730-4394
Preparer: HUTTO, CHARLES SALEM1 Title: OD PROGRAM COORD.

Pam Hardy <pamhardy.law@gmail.com>

# Omega Morgan move

**DALPONTE Gregg L** <Gregg.L.DALPONTE@odot.state.or.us> Tue, Jan 7, 2014 at 10:54 AM
To: Pam Hardy <pamhardy.law@gmail.com>
Cc: Kathy Sampson <Ulla1855@gmail.com>, Peter Goodman <pgoodmankayak@hotmail.com>, "40fordbob@gmail.com" <40fordbob@gmail.com>, "godowatufti27@gmail.com" <godowatufti27@gmail.com>

Pam, over dimension permits are administratively issued using specific legal authority given to the Department in ORS Chapter 818. There is no associated quasi-judicial or legislative action in which party status is an issue. There is no requirement for a public hearing. For these reasons, I respectfully deny your request.

I would be happy to informally review any additional detailed comments that your clients desire to submit as I would do for any member of the public who wanted to convey their personal opinions regarding the ongoing work of the Department.

Regards,

Gregg Dal Ponte

Gregg Dal Ponte, Administrator
Motor Carrier Transportation Division
Oregon Department of Transportation
503-378-6351 office
503-409-0554 cell

Sent with Good (www.good.com)

-----Original Message-----
**From:** Pam Hardy [pamhardy.law@gmail.com]
**Sent:** Monday, January 06, 2014 04:39 PM Pacific Standard Time
**To:** DALPONTE Gregg L
**Cc:** Kathy Sampson; Peter Goodman; 40fordbob@gmail.com; godowatufti27@gmail.com
**Subject:** Re: Omega Morgan move

Hi Gregg,

Thank you so much for sending the previous documents. They are very helpful. I am representing a handful of clients who are interested in opening up a more formal dialogue with ODOT regarding the permitting of these loads. Attached is a formal request for party status.

Also, my clients would like an opportunity to submit more detailed comments about why they believe these permits are not in the public interest. Can you provide us some kind of notice, and a formal opportunity to comment on the next permit before it becomes effective? Perhaps you could issue a draft permit before the final one comes out so we can submit real comments.

Many Thanks
~ Pam Hardy

Exhibit 6, page 1

On Fri, Dec 6, 2013 at 2:16 PM, DALPONTE Gregg L <Gregg.L.DALPONTE@odot.state.or.us> wrote:

> Pam, I found a fourth document that might also be of interest and I included it for you. This email message is now over 6 MB and I am not sure it will make it to you through your email server. Could you let me know that you did receive it?
>
> Thanks,
>
> Gregg

**Gregg Dal Ponte** | **Administrator, ODOT Motor Carrier Transportation Division**

**|3930 Fairview Industrial Dr SE | Salem, OR 97302 | ☎: 503-378-6351 | 🖷: 503-373-1940 |**

Oregon Department of Transportation News Release

Eastern Oregon – Region 5

Morrow, Umatilla, Wallowa, Union, Baker, Grant, Harney, and Malheur Counties

Dec. 21, 2013

For more information: Tom Strandberg - (541) 963-1330, or Sally Ridenour – (503) 986-3359

# TRAFFIC ADVISORY

## Second of three oversized loads to begin travel through Eastern Oregon starting Dec. 22

***Expect overnight traffic delays on U.S.395, U.S.26, U.S.20 and OR201 as the oversize load heads southeast from Umatilla towards Homedale, Idaho.***

Motorists should expect delays of up to twenty minutes beginning Sunday night (Dec. 22, weather permitting) as an oversized transport carrying water purification equipment and parts makes its way from the Port of Umatilla, heading south east through Umatilla, Grant, Baker and Malheur counties in eastern Oregon to the Idaho border near Homedale, ID. The load will travel on segments of Interstate 84, U.S.395, U.S.26, U.S.20 and OR201, taking over a week to complete its journey through the state. A Google map link showing the route is posted at http://tinyurl.com/oregon-largeload-map**.**

The transport is expected to travel between 8 p.m. and 6 a.m. with occasional daytime travel on rural highways under special conditions outlined in the permit. Movement of the oversized freight will result in slow traffic and delays of up to twenty minutes, typically traveling less than 60 miles per travel period. Because the transport will take up both lanes while on two-lane highways, pilot cars in front and behind the load will inform the movers when to pull over to let waiting vehicles pass. It will not travelling over the Christmas holiday (Dec. 24 or 25).

The total transport vehicle and cargo will be 380-feet long, 23-feet wide and 19-feet tall, with the cargo itself being just 96-feet long. Because of the overall height of the load it cannot travel on Interstate 84, except for a short section between Stanfield and Pendleton where it will be routed around overpasses via freeway on and off ramps. Several pilot vehicles will accompany the oversized freight. The freight contains no hazardous materials, fuels or liquids.

This is the second of three such units approved to travel along eastern Oregon highways over the next several weeks. The first unit left the Port of Umatilla in early December and is expected to cross over into Idaho this weekend.

**Below is the travel route through eastern Oregon:**

· From the junction with Devore Rd and U.S.730 near Umatilla to I-84 Exit 188 near Stanfield via U.S.395 southbound.

· From I-84 Exit 188 near Stanfield to I-84 Exit 209 at Pendleton via I-84 eastbound. This includes multiple “up and over” locations (carrier to take the exit, proceed through traffic control device at the top of the intersection, and re-enter the freeway), including Echo Road Exit 193, Lorenzen Road Exit 198, Barnhart Road Exit 202, and U.S.30 Exit 207.

· From I-84 Exit 209 in Pendleton to the junction with U.S. 26 in Mt Vernon via U.S.395 southbound, going through Pilot Rock, Ukiah, and Long Creek.

· From Mt. Vernon and John Day via U.S.26/U.S. 395 eastbound.

· From John Day to Vale via U.S.26 eastbound, going through Prairie City, Unity, Ironside, and Jamieson.

· From Vale to Clark Blvd (approximately 1 mile west of the junction with OR201) via U.S.20/U.S.26 eastbound.

· From the junction with U.S.20/U.S.26 to the junction with OR201 (approximately 1 mile west of Nyssa) via Clark Blvd southbound.

· From Clark Blvd near Nyssa to the junction with OR201 Spur via OR201 southbound, going through Adrian.

· From the junction with OR201 to the Idaho state line near Homedale, ID, via OR201 Spur eastbound.

Additional information is listed on the ODOT Region 5 website at www.tinyurl.com/odot-region5 .

**##ODOT##**

PAMELA HARDY
**Attorney at Law**
1629 NW Fresno Ave
Bend, OR 97701
(541) 914-9698
pam@pamhardy.com

January 10, 2014

Gregg Dal Ponte
Motor Carrier Division Administrator
Oregon Department of Transportation
Gregg.L.DalPonte@odot.state.or.us

**Re: Request that the effective date of the next mega load permit be 60 days from issuance to provide opportunity for judicial review**

Dear Mr. Dal Ponte,

I am writing today on behalf of two clients, Mr. Peter Goodman, and Peo Peo Mox Mox Chief-Headman of the Walla Walla Tribe Carl Sampson.

We understand that there is likely to be a request for another megaload permit requiring a variance passing from the Port of Umatilla south on highway 395, and east on highway 26. According to our reading of the law, issuance of such a permit requires a "determination" that granting the permit "serves the public interest." ORS 818.200(1). Such a determination is not merely an informal conclusion that the public interests won't be harmed very much. Rather, to show that something "serves the public interest" there must be a showing that the benefits to the public outweigh the harms.

In this case, it appears to us that the harms outweigh the benefits. Highway 395 is a narrow, two-lane backroad that passes through some of the most important first food lands of the Confederated Tribes of the Umatilla Indian Reservation. The first foods are the water, salmon, deer, elk, and roots and berries collected by the tribes for sustenance and cultural and ceremonial purposes. Their right to collect and protect the land and ecological systems on which these first foods depend are recognized in the Umatilla Treaty of 1855. My client, Peo Peo Mox Mox, Carl Sampson is an enrolled member of that tribe, an elder, a headman, a great-great grandfather who is teaching the next generations to hunt and fish the lands through which this load passes, and the direct descendant of the Walla Walla cheif who signed the 1855 Treaty. Allowing the mega loads to pass through this territory is an affront to the sacred qualities of this land in the same way that the money changers on the steps of the temple were

an affront the vision Jesus was trying to share with his people.[1] Because of the size, and potential damage to the land, as well as because of the sheer inappropriateness of bringing a load bound for the Alberta Tar Sands through such sacred territory Peo Peo Mox Mox strongly objects to the movement of the loads.

Similarly, Mr. Peter Goodman is a director and representative of Act on Climate, an Oregon non-profit established to reverse climate change. The organization does this by educating the public, and participating in key political decision that have the possibility of having an inordinate impact on the future of climate change. This is such a decision. The loads on these trucks are headed to the Alberta Tar Sands. If the Tar Sands are fully developed, estimates suggest that the climate could warm almost half a degree as a result of these petroleum products alone. *See attached,* David Biello, "How Much Will Tar Sands Oil Add to Global Warming?" Scientific American, January 23, 2013. At the same time, climate scientists from around the world are warning of the dire consequences of continuing to add carbon to the atmosphere. In November of 2013 eleven of the most highly respected climate scientists from around the world submitted an amici brief in federal climate change legislation succinctly explaining the latest science including:

> World health experts have concluded with "very high confidence" that climate change already contributes to the global burden of disease and premature death with altered distribution of some infectious disease vectors. Id. at 13. Subtropical climate belts have expanded, contributing to more intense droughts, summer heat waves, and devastating wildfires. Exhibit 1 at 5. Further, "[m]ega-heatwaves, such as those in Europe in 2003, the Moscow area in 2010, Texas and Oklahoma in 2011, Greenland in 2012, and Australia in 2013 have become more widespread with the increase demonstrably linked to global warming.

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[1] Jesus is stated to have visited the Temple in Jerusalem, Herod's Temple, where the courtyard is described as being filled with livestock and the tables of the money changers, who changed the standard Greek and Roman money for Jewish and Tyrian money.[1] Jerusalem was packed with Jews who had come for Passover, perhaps numbering 300,000 to 400,000 pilgrims.[5][6]

> "And Jesus went into the temple of God, and cast out all them that sold and bought in the temple, and overthrew the tables of the moneychangers, and the seats of them that sold doves, And said unto them, It is written, My house shall be called the house of prayer; but ye have made it a den of thieves." —Matthew 21:12–13.

The tale is often told as a parable to help explain that there are certain holy places where certain forms of exploitive commercial activity should be restricted.

*See http://en.wikipedia.org/wiki/Cleansing_of_the_Temple*

*See attached*, Brief of Scientists Amicus Group as Amici Curiae in Support of Plaintiffs-Appellants Seeking Reversal, *Alec L v. Gina McCarthy*, United States District Court of Appeals for the District of Columbia, Case No. 13-5192, November 11, 2013.

The Oregon State Legislature has recognized that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources and environment of Oregon." ORS 468A.200(3), and had declared that "it is the policy of this state to reduce greenhouse gas emissions." ORS 468A.205(1).

When the legislature gave ODOT the authority to issue variance permits, they provided only a single constraint: ODOT had to determine that the action would "serve the public interest." ODOT has not made such a determination.

While my clients here recognize the denial of a permit for a single load of machinery bound for the Alberta Tar Sands will not stop climate change entirely, facilitation of such efforts is not in the public interest. There is no need to make it easier for those who stand to reap only a private benefit from additional climate impact. This is not a political decision any more because Oregon has taken a firm stand on this policy already. To allow the permit is contrary to Oregon's larger climate policy of taking a leadership role in acting to reverse climate change.

These citizens, and many more who have submitted comments to you, despite not having a formal opportunity to comment, request that you either:

- Provide a formal public process that allows citizens with real concerns to raise these issues in light of the real proposed permit; ***or***

- Issue the permit with an effective date 60 days from the date of issuance to allow for judicial review to determine whether such a public process is required under law. Sixty days is the statute of limitations for filing a petition for judicial review in a matter such as this.

The State of Oregon has long had a liberal policy of encouraging citizen involvement in matters of public concern. We hope that tradition will be continued in this matter.

Please place these comments in any record you may be preparing for this matter, and place me on any notice lists having to do with variance permits.

Sincerely,

Pam Hardy

SCIENTIFIC AMERICAN™

Permanent Address: **http://www.scientificamerican.com/article.cfm?id=tar-sands-and-keystone-xl-pipeline-impact-on-global-warming**

# How Much Will Tar Sands Oil Add to Global Warming?

To constrain climate change, such unconventional oil use needs to be stopped, according to scientists

By David Biello | Wednesday, January 23, 2013 | 31 comments

James Hansen has been publicly speaking about climate change since 1988. The NASA climatologist testified to Congress that year and he's been testifying ever since to crowds large and small, most recently to a small gathering of religious leaders outside the White House last week. The grandfatherly scientist has the long face of a man used to seeing bad news in the numbers and speaks with the thick, even cadence of the northern Midwest, where he grew up, a trait that also helps ensure that his sometimes convoluted science gets across.

This cautious man has also been arrested multiple times.

His acts of civil disobedience started in 2009, and he was first arrested in 2011 for protesting the development of Canada's tar sands and, especially, the Keystone XL pipeline proposal that would serve to open the spigot for such oil even wider. "To avoid passing tipping points, such as initiation of the collapse of the West Antarctic Ice Sheet, we need to limit the climate forcing severely. It's still possible to do that, if we phase down carbon emissions rapidly, but that means moving expeditiously to clean energies of the future," he explains. "Moving to tar sands, one of the dirtiest, most carbon-intensive fuels on the planet, is a step in exactly the opposite direction, indicating either that governments don't understand the situation or that they just don't give a damn."

He adds: "People who care should draw the line."

Hansen is not alone in caring. In addition to a groundswell of opposition to the 2,700-kilometer-long Keystone pipeline, 17 of his fellow climate scientists joined him in signing a letter urging Pres. Barack Obama to reject the project last week. Simply put, building the pipeline—and enabling more tar sands production—runs "counter to both national and planetary interests," the researchers wrote. "The year of review that you asked for on the project made it clear exactly how pressing the climate issue really is." Obama seemed to agree in his second inaugural address this week, noting "we will respond to the threat of climate change, knowing that the failure to do so would betray our children and future generations."

At the same time, the U.S. imports nearly nine million barrels of oil per day and burns nearly a billion metric tons of coal annually. China's coal burning is even

Pin it

**TAR SANDS:** At least 170 billion barrels of oil could be extracted from Alberta's oil sands deposits with today's technology.
*Image: © David Biello*


larger and continues to grow by leaps and bounds. Partially as a result, global emissions of greenhouse gases continue to grow by leaps and bounds too—and China is one alternative customer eager for the oil from Canada's tar sands. Neither developed nor developing nations will break the fossil-fuel addiction overnight, and there are still more than a billion people who would benefit from more fossil-fuel burning to help lift them out of energy poverty. The question lurking behind the fight in North America over Keystone, the tar sands and climate change generally is: How much of the planet's remaining fossil fuels can we burn?

**The trillion-tonne question**

To begin to estimate how much fossil fuels can be burned, one has to begin with a guess about how sensitive the global climate really is to additional carbon dioxide. If you think the climate is vulnerable to even small changes in concentrations of greenhouse gases—as Hansen and others do—then we have already gone too far. Global concentrations of greenhouse gases in the atmosphere have reached 394 parts per million, up from 280 ppm before the Industrial Revolution and the highest levels seen in at least 800,000 years. Hansen's math suggests 350 ppm would be a safer level, given that with less than a degree Celsius of warming from present greenhouse gas concentrations, the world is already losing ice at an alarming rate, among other faster-than-expected climate changes.

International governments have determined that 450 ppm is a number more to their liking, which, it is argued, will keep the globe's average temperatures from warming more than 2 degrees C. Regardless, the world is presently on track to achieve concentrations well above that number. Scientists since chemist Svante Arrhenius of Sweden in 1896 have noted that reaching concentrations of roughly 560 ppm would likely result in a world with average temperatures roughly 3 degrees C warmer—and subsequent estimates continue to bear his laborious, hand-written calculations out. Of course, rolling back greenhouse gas concentrations to Hansen's preferred 350 ppm—or any other number for that matter—is a profoundly unnatural idea. Stasis is not often found in the natural world.

Concentrations of greenhouse gases in the atmosphere may not be the best metric for combating climate change anyway. "What matters is our total emission rate," notes climate modeler Ken Caldeira of the Carnegie Institution for Science Department of Global Ecology at Stanford University, another signee of the anti-Keystone letter. "From the perspective of the climate system, a $CO_2$ molecule is a $CO_2$ molecule and it doesn't matter if it came from coal versus natural gas."

Physicist Myles Allen of the University of Oxford in England and colleagues estimated that the world could afford to put one trillion metric tons of carbon into the atmosphere by 2050 to have any chance of restraining global warming below 2 degrees C. To date, fossil fuel burning, deforestation and other actions have put nearly 570 billion metric tons of carbon in the atmosphere—and Allen estimates the trillionth metric ton of carbon will be emitted around the summer of 2041 at present rates. "Tons of carbon is fundamental," adds Hansen, who has argued that burning all available fossil fuels would result in global warming of more than 10 degrees C. "It does not matter much how fast you burn it."

Alberta's oil sands represent a significant tonnage of carbon. With today's technology there are roughly 170 billion barrels of oil to be recovered in the tar sands, and an additional 1.63 trillion barrels worth underground if every last bit of bitumen could be separated from sand. "The amount of $CO_2$ locked up in Alberta tar sands is enormous," notes mechanical engineer John Abraham of the University of Saint Thomas in Minnesota, another signer of the Keystone protest letter from scientists. "If we burn all the tar sand oil, the

temperature rise, just from burning that tar sand, will be half of what we've already seen"—an estimated additional nearly 0.4 degree C from Alberta alone.

As it stands, the oil sands industry has greenhouse gas emissions greater than New Zealand and Kenya—combined. If all the bitumen in those sands could be burned, another 240 billion metric tons of carbon would be added to the atmosphere and, even if just the oil sands recoverable with today's technology get burned, 22 billion metric tons of carbon would reach the sky. And reserves usually expand over time as technology develops, otherwise the world would have run out of recoverable oil long ago.

The greenhouse gas emissions of mining and upgrading tar sands is roughly 79 kilograms per barrel of oil presently, whereas melting out the bitumen in place requires burning a lot of natural gas—boosting emissions to more than 116 kilograms per barrel, according to oil industry consultants IHS Cambridge Energy Research Associates. All told, producing and processing tar sands oil results in roughly 14 percent more greenhouse gas emissions than the average oil used in the U.S. And greenhouse gas emissions per barrel have stopped improving and started increasing slightly, thanks to increasing development of greenhouse gas–intensive melting-in-place projects. "Emissions have doubled since 1990 and will double again by 2020," says Jennifer Grant, director of oil sands research at environmental group Pembina Institute in Canada.

Just one mine expansion, Shell's Jackpine mine, currently under consideration for the Albian mega-mine site, would increase greenhouse gas emissions by 1.18 million metric tons per year. "If Keystone is approved then we're locking in a several more decades of dependence on fossil fuels," says climate modeler Daniel Harvey of the University of Toronto. "That means higher CO2 emissions, higher concentrations [in the atmosphere] and greater warming that our children and grandchildren have to deal with."

And then there's all the carbon that has to come out of the bitumen to turn it into a usable crude oil.

**Hidden carbon**

In the U.S. State Department's review of the potential environmental impacts of the Keystone project, consultants EnSys Energy suggested that building the pipeline would not have "any significant impact" on greenhouse gas emissions, largely because Canada's tar sands would likely be developed anyway. But the Keystone pipeline represents the ability to carry away an additional 830,000 barrels per day—and the Albertan tar sands are already bumping up against constraints in the ability to move their product. That has led some to begin shipping the oil by train, truck and barge—further increasing the greenhouse gas emissions—and there is a proposal to build a new rail line, capable of carrying five million barrels of oil per year from Fort McMurray to Alaska's Valdez oil terminal.

Then there's the carbon hidden in the bitumen itself. Either near oil sands mines in the mini-refineries known as upgraders or farther south after the bitumen has reached Midwestern or Gulf Coast refineries, its long, tarry hydrocarbon chains are cracked into the shorter, lighter hydrocarbons used as gasoline, diesel and jet fuel. The residue of this process is a nearly pure black carbon known as petroleum (pet) coke that, if it builds up, has to be blasted loose, as if mining for coal in industrial equipment. The coke is, in fact, a kind of coal and is often burned in the dirtiest fossil fuel's stead. Canadian tar sands upgraders produce roughly 10 million metric tons of the stuff annually, whereas U.S. refineries pump out more than 61 million metric tons per year.

Pet coke is possibly the dirtiest fossil fuel available, emitting at least 30 percent more CO2 per ton than an equivalent amount of the lowest quality mined coals. According to multiple reports from independent analysts, the production (and eventual burning) of such petroleum coke is not included in industry estimates of tar sands greenhouse gas emissions because it is a co-product. Even without it, the Congressional Research Service estimates that tar sands oil results in at least 14 percent more greenhouse gas emissions than do more conventional crude oils.

Although tar sands may be among the least climate-friendly oil produced at present—edging out alternatives such as fracking for oil trapped in shale deposits in North Dakota and flaring the gas—the industry has made attempts to reduce greenhouse gas pollution, unlike other oil-producing regions. For example, there are alternatives to cracking bitumen and making pet coke, albeit more expensive

ones, such as adding hydrogen to the cracked bitumen, a process that leaves little carbon behind, employed by Shell, among others.

More recently, Shell has begun adding carbon-capture-and-storage (CCS) technology to capture the emissions from a few of its own upgraders, a project known as Quest. The program, when completed in 2015, will aim to capture and store one million metric tons of $CO_2$ per year, or a little more than a third of the $CO_2$ emissions of Shell's operation at that site. And tar sands producers do face a price on carbon—$15 per metric ton by Alberta provincial regulation—for any emissions above a goal of reducing by 12 percent the total amount of greenhouse gas emitted per total number of barrels produced.

The funds collected—some $312 million to date—are then used to invest in clean technology, but more than 75 percent of the projects are focused on reducing emissions from oil sands, unconventional oils and other fossil fuels. And to drive more companies to implement CCS in the oil sands would require a carbon price of $100 per metric ton or more. "We don't have a price on carbon in the province that is compelling companies to pursue CCS," Pembina's Grant argues.

In fact, Alberta's carbon price may be little more than political cover. "It gives us some ammunition when people attack us for our carbon footprint, if nothing else," former Alberta Energy Minister Ron Liepert told *Scientific American* in September 2011. Adds Beverly Yee, assistant deputy minister at Alberta's Environment and Sustainable Resource Development agency, more recently, "Greenhouse gases? We don't see that as a regional issue." From the individual driver in the U.S. to oil sands workers and on up to the highest echelons of government in North America, everyone dodges responsibility.

**Price of carbon**

A true price on carbon, one that incorporates all the damages that could be inflicted by catastrophic climate change, is exactly what Hansen believes is needed to ensure that more fossil fuels, like the tar sands, stay buried. In his preferred scheme, a price on carbon that slowly ratcheted up would be collected either where the fossil fuel comes out of the ground or enters a given country, such as at a port. But instead of that tax filling government coffers, the collected revenue should be rebated in full to all legal residents in equal amounts—an approach he calls fee and dividend. "Not one penny to reducing the national debt or off-setting some other tax," the government scientist argues. "Those are euphemisms for giving the money to government, allowing them to spend more."

Such a carbon tax would make fossil fuels more expensive than alternatives, whether renewable resources such as wind and sun or low-carbon nuclear power. As a result, these latter technologies might begin to displace things like coal-burning power plants or halt major investments in oil infrastructure like the Keystone XL pipeline.

As it stands, producing 1.8 million barrels per day of tar sands oil resulted in the emissions of some 47.1 million metric tons of $CO_2$-equivalent in 2011, up nearly 2 percent from the year before and still growing, according to the Canadian Association of Petroleum Producers. In the same year coal-fired power plants in the U.S. emitted more than two billion metric tons of $CO_2$-equivalent. "If you think that using other petroleum sources is much better [than tar sands], then you're delusional," says chemical engineer Murray Gray, scientific director of the Center for Oil Sands Innovation at the University of Alberta.

In other words, tar sands are just a part of the fossil-fuel addiction—but still an important part. Projects either approved or under construction would expand tar sands production to over five million barrels per day by 2030. "Any expansion of an energy system that relies on the atmosphere to be its waste dump is bad news, whereas expansion of safe, affordable and environmentally acceptable energy technologies is good news," Carnegie's Caldeira says.

There's a lot of bad news these days then, from fracking shale for gas and oil in the U.S. to new coal mines in China. Oxford's Allen calculates that the world needs to begin reducing emissions by roughly 2.5 percent per year, starting now, in order to hit the trillion metric ton target by 2050. Instead emissions hit a new record this past year, increasing 3 percent to 34.7 billion metric tons of $CO_2$ and other greenhouse gases.

Stopping even more bad news is why Hansen expects to be arrested again, whether at a protest against mountaintop removal mining for coal in West Virginia or a sit-in outside the White House to convince the Obama administration to say no to Keystone XL and any expansion of the tar sands industry. The Obama administration has already approved the southern half of the pipeline proposal—and if the northern link is approved, a decision expected after March of this year, environmental group Oil Change International estimates that tar sands refined on the Gulf Coast would produce 16.6 million metric tons of $CO_2$ annually just from the petroleum coke, which would be enough to fuel five coal-fired power plants for a year. All told, the increased tar sands production as a result of opening Keystone would be equal to opening six new coal-fired power plants, according to Pembina Institute calculations.

Even as increased oil production in the U.S. diminishes the demand for tar sands-derived fuel domestically, if Keystone reaches the Gulf Coast, that oil will still be refined and exported. At the same time, Obama pledged to respond to climate change and argued for U.S. leadership in the transition to "sustainable energy sources" during his second inaugural address; approving Keystone might lead in the opposite direction.

For the tar sands "the climate forcing per unit energy is higher than most fossil fuels," argues Hansen, who believes he is fighting for the global climate his five grandchildren will endure—or enjoy. After all, none of his grandchildren have lived through a month with colder than average daily temperatures. There has not been one in the U.S. since February 1985, before even Hansen started testifying on global warming. As he says: "Going after tar sands—incredibly dirty, destroying the local environment for a very carbon-intensive fuel—is the sign of a terribly crazed addict."

Exhibit 8, page 8



Exhibit 8, page 9

**ORAL ARGUMENT NOT YET SCHEDULED**

**No. 13-5192**

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**IN THE UNITED STATES COURT OF APPEALS**

**FOR THE DISTRICT OF COLUMBIA CIRCUIT**

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ALEC L., *et al*.,

*Plaintiffs – Appellants*,

v.

GINA McCARTHY, *et al*.,

*Defendants – Appellees*,

THE NATIONAL ASSOCIATION OF MANUFACTURERS, *et al*.,

*Intervenors for Defendants – Appellees*

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**On Appeal from the United States District Court for the District of Columbia (No. 11-cv-02235 (RLW))**

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# BRIEF OF SCIENTISTS AMICUS GROUP AS *AMICI CURIAE* IN SUPPORT OF PLAINTIFFS-APPELLANTS SEEKING REVERSAL

DANIEL M. GALPERN
Law Offices of Charles M. Tebbutt, P.C.
941 Lawrence Street
Eugene, OR 97401-2815
541-344-3505

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## CERTIFICATE OF INTERESTED PARTIES, RULINGS, AND RELATED CASES

**A. Parties and *Amici*.** Except for the following, all parties, intervenors, and *amici* appearing before the district court and in this Court are listed in the Brief for Plaintiffs-Appellants. James Hansen, David Beerling, Paul J. Hearty, Ove Hoegh-Guldberg, Pushker Kharecha, Valérie Masson-Delmotte, Camille Parmesan, Eelco Rohling, Makiko Sato, Pete Smith, and Lise Van Susteren are *amici curiae* in this appeal (referred to hereinafter as "Amici Scientists.").

**B. Rulings under Review.** The rulings under review are the District Court's May 31, 2012 order granting Defendants and Defendant-Intervenors' Motions to Dismiss (A085) (and incorporated memorandum opinion (A074-84)); and May 22, 2013 order denying Plaintiffs' Motion for Reconsideration (A097) (and incorporated memorandum opinion (A086-96)), in *Alec L., et al. v. Jackson, et al.*, No. 1:11-cv-02235-RLW (Hon. Robert L. Wilkins).

**C. Related Cases.** Amici Scientists are unaware of any related cases.

Dated:
November 12, 2013

Respectfully submitted,

*/s/ Daniel M. Galpern*
Daniel M. Galpern
*Counsel for Amici Curiae*

## CORPORATE DISCLOSURE STATEMENT

*Amici curiae* Scientists, James Hansen, David Beerling, Paul J. Hearty, Ove Hoegh-Guldberg, Pushker Kharecha, Valérie Masson-Delmotte, Camille Parmesan, Eelco J. Rohling, Makiko Sato, Pete Smith and Lise Van Susteren are individuals and co-authors of Exhibit 1 to this Amicus Brief. They are not publicly held corporations, they issue no stock, they have no parent companies, and no publicly held company owns any stock in them. *Amici Scientists* have the purpose here only to assist the Court's consideration of the nature of the climate crisis, including the burden being imposed on present and future generations, and to describe a prescription for a plan of action that, if pursued, could be adequate to preserve essential features of the climate system under which civilization developed.

## TABLE OF CONTENTS

# TABLE OF AUTHORITIES[1]

## CASES



## OTHER AUTHORITIES



[1] Authorities upon which we chiefly rely are marked with asterisks.

## GLOSSARY

| | |
|---|---|
| °C | Degrees centigrade |
| *Amici Scientists* | James Hansen, David Beerling, Paul J. Hearty, Ove Hoegh- Guldberg, Pushker Kharecha, Valérie Masson-Delmotte, Camille Parmesan, Eelco Rohling, Makiko Sato, Pete Smith, and Lise Van Susteren |
| $CO_2$ | Carbon dioxide |
| EPA | Environmental Protection Agency |
| GISS | Goddard Institute for Space Studies |
| Holocene | a geological epoch which began approximately 12,000 years ago |
| IPCC | Intergovernmental Panel on Climate Change |
| ppm | parts per million by volume |

## INTEREST AND IDENTITY OF *AMICI SCIENTISTS*[2]

*Amici Scientists* appear here in their individual capacity and not as representatives of any institution with which they are affiliated. The information and opinions in this brief are not necessarily those of any institution with which *Amici Scientists* are affiliated or those of any party to the present litigation. This brief is offered as an aid to the Court's deliberations over whether the relief sought by Appellants in their appeal is needed to preserve a climate system that is conducive to the survival and wellbeing of today's young people and their progeny.

Amicus James Hansen is the former director of the NASA Goddard Institute for Space Studies (GISS) and is an Adjunct Professor of Earth Sciences at Columbia University's Earth Institute. His research, since the mid-1970s, has focused on studies of the Earth's climate, using ongoing climate observations, Earth's climate history, and computer simulations of the global climate system. Dr. Hansen's testimony to Congress in the 1980s helped raise awareness of the global

[2] All parties have consented in writing to the filing of this brief. No counsel for a party authored this brief in whole or in part, and no counsel, party, or other person made a monetary contribution intended to fund the preparation or submission of this brief. Pursuant to D.C. Circuit Rule 29(d), *amici curiae* certify that no other brief of which they are aware of addresses the science behind the relief sought in this case. *Amici curiae* are aware that there will be other *amicus curiae* briefs supporting Appellants, but to their knowledge none of them overlap with the arguments presented herewith. *Amici curiae* only submit information to the Court in their area of expertise and certify that filing a joint brief is not practicable and that it is necessary to submit separate briefs.

warming issue. In recent years, he has drawn attention to the danger of passing climate tipping points, producing irreversible impacts that would yield a different planet from the one on which civilization developed. As part of that work, Dr. Hansen has outlined steps that are needed to stabilize climate, with a cleaner atmosphere and ocean. Dr. Hansen was elected to the National Academy of Sciences in 1995.

Amicus Professor David Beerling is a palaeobiologist in the Department of Animal and Plant Sciences, University of Sheffield, UK. His research, which is rooted in experiments and models -- and the emergence of fossil plants as biosensors recording the chemical composition of the ancient atmosphere – illuminates the causal relationships between terrestrial plant life and the global environment, and helps inform our understanding of human-made global change issues. He has authored over 200 scientific papers, holds a Royal Society Wolfson Research Merit Award, serves on several international scientific committees, and has organized Royal Society meetings (1997, 2006, 2010) on plant and ecosystem responses to past, present and future global environmental change.

Amicus Paul J. Hearty is Research Associate Professor at the University of North Carolina at Wilmington. His Ph.D. education was in glacial and Quaternary geology at the Institute of Arctic and Alpine Research and Geology Department at the University of Colorado at Boulder. He has over 100 peer-reviewed

publications. In the past 3 decades, Hearty's research has focused on the geologic record of sea-level changes, including confirmation that past warmer-than-present interglacial periods experienced substantial melting of polar ice sheets and subsequent sea-level rise. His current NSF (US) research examines the dynamic behavior of sea level and ice sheets during the mid to late Pliocene (3.3-2.9 million years ago), the last geologic interval when atmospheric $CO_2$ was at or above 400 ppmv -- a level surpassed in May 2013.

Amicus Ove Hoegh-Guldberg is Professor of Marine Studies and Director of the Global Change Institute, at the University of Queensland in Brisbane, Australia. His published works include over 200 refereed publications and book chapters, including the first major evidence of the serious threat that climate change poses for coral reefs and other coastal ecosystems. He is currently a member of the Australian Climate Scientists and the Royal Society (London) Marine Advisory Network, and recently served on the on the Board of Editing Reviewers at Science Magazine. He is currently serving as a Coordinating Lead Author of Chapter 30 (The Oceans) in the Fifth assessment report of the Intergovernmental Panel on Climate Change, due to be released in 2014.

Amicus Pushker Kharecha is a climate scientist with NASA GISS and the Columbia University Earth Institute whose main focus is conducting scientific research that can help to inform sound environmental policies. His research

interests are broad and generally relate to the human dimensions of the carbon cycle, such as the impacts of past, present, and future land use and fossil fuel use on climate, as well as mitigation of anthropogenic climate change via changes in these activities. Dr. Kharecha has served as a co-lead author for a major UNEP publication and has authored multiple high-impact peer-reviewed scientific papers.

Amicus Valérie Masson-Delmotte is a senior climate scientist and head of the "climate dynamics and archives" research group of Laboratoire des Sciences du Climat, Gif-sur-Yvette, France, related to French National Research Center, Atomic Energy Agency, University of Versailles-St Quentin and Institut Pierre Simon Laplace. She has co-authored 150 peer-reviewed publications on climate variability and climate change throughout different time scales, and has contributed to several outreach books for children and for the general public. She has received several prizes for collaborative research, including the Irène Joliot-Curie "French female scientist of 2013" award from the Ministery of Research and the Academy of Sciences. She was a lead author of Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report (AR4) (2007) and a coordinating lead author of IPCC AR5 (released September 2013), for the IPCC Working Group I paleoclimate chapters.

Amicus scientist Dr. Camille Parmesan is a Professor in Integrative Biology at the University of Texas at Austin (USA) and holds the National Aquarium Chair

in the Public Understanding of Oceans and Human Health in the Marine Institute, Plymouth University (UK). Professor Parmesan's research focuses on the current impacts of climate change on wildlife. Her documentation of the global extent and pervasiveness of the effects of anthropogenic climate change on biodiversity have received multiple international awards, including several from Reuters ISI for being very highly cited in the scientific literature. Parmesan is a Fellow of the Ecological Society of America and is a co-recipient of the Nobel Peace Prize awarded to IPCC in 2007.

Amicus Eelco J. Rohling is Professor (Ocean and Climate Change) at the Research School of Earth Sciences, at The Australian National University. His research concerns past ocean and climate changes, present-day and past states of circulation and property distribution, changes in deep-sea ventilation with impacts on nutrient distributions and the carbon cycle, ecological responses to ocean change, and integration of palaeoclimate research with archaeological records. He has been an international corresponding Fellow of the Royal Netherlands Academy of Arts and Science, a Japan Society for Promotion of Science Senior Invited Researcher, a UK Royal Society Wolfson Research Merit Award winner, and an Australian Laureate Fellow (started 1 March 2013). Eelco has been vice-chairman (2003-2004) and chairman (2005-2008) of the 26-nation International Marine Global Changes Study programme (IMAGES), vice-president of

Palaeoclimatology at the Climates section of the European Geosciences Union (2000-2006), associate editor with *Climate of the Past*, *Geology*, *Paleoceanography*, and *Quaternary Science Reviews*, and editor of both *Paleoceanography* (2006-2009) and *Reviews of Geophysics* (2010-today).

Amicus Makiko Sato is a research scientist at the Earth Institute, Columbia University with over 50 publications in the field of planetary energy balance and climate change. She holds her B.S. and Ph.D. in Physics, and worked at NASA Goddard Institute for Space Studies from 1978 through 2013. Her academic interests include analysis of global change data, especially atmospheric temperature, and analysis of computational results of climate modeling due to different climate forcings -- including that by well-mixed long-lived greenhouse gases ($CO_2$, $CH_4$, $O_3$, and $N_2O$) and atmospheric aerosols.

Amicus Pete Smith is the Royal Society-Wolfson Professor of Soils and Global Change at the Institute of Biological and Environmental Sciences at the University of Aberdeen (Scotland, UK), Science Director of the Scottish Climate Change Centre of Expertise (ClimateXChange) and Director of Food Systems for the Scottish Food Security Alliance-Crops. Since 1996, he has served as Convening Lead Author, Lead Author and Author for the Intergovernmental Panel on Climate Change (IPCC), including as the Convening Lead Author of the Agricultural Mitigation chapter of the IPCC Fourth Assessment Report and the

Agriculture and Forestry Mitigation chapter of the IPCC Fifth Assessment. He has coordinated and participated in many national and international projects on soils, agriculture, food security, greenhouse gases, climate change, mitigation and impacts, and ecosystem modelling and is a Fellow of the Society of Biology, a Rothamsted Research Fellow, a Research Fellow of the Royal Society (London; 2008-2013), and a Fellow of the Royal Society of Edinburgh.

Amicus Lise Van Susteren is a board certified general and forensic psychiatrist practicing in Washington DC. Van Susteren serves on the advisory board of the Center for Health and the Global Environment at Harvard School of Public Health and is a member of the Board of Directors of the National Wildlife Federation and the Chesapeake Climate Action Network. Van Susteren is the founder and CEO of "Lucky Planet Foods," a company dedicated to providing low-carbon, plant-based, healthy foods for sustainable living. In 2011, Van Susteren co-founded "Interfaith Moral Action on Climate," a multi-faith coalition dedicated to organizing people of religion and spirituality to speak out against climate change.

## SUMMARY OF ARGUMENT

Global warming due to emissions of greenhouse gases, mainly $CO_2$ from fossil fuel consumption, is 0.8°C in the last 100 years, with most of this warming in the last 35 years. Due to physical climate system inertia, a comparable amount is "in the pipeline," ensuring further warming even without further change in the atmospheric concentration of $CO_2$ and other greenhouse gases.

Already-observed impacts of this warming include rising sea levels, increased atmospheric moisture resulting in more intense precipitation events, higher temperatures causing more frequent and intense heat waves, droughts, and wildfires, loss of sea ice, ice sheet mass and glaciers, expansion of the subtropics, acidification of the oceans, shifting distributions of plant and animal species, and an increasing rate of species extinctions.

Maintaining a climate that resembles the Holocene epoch, the world with a relatively stable climate system under which civilization developed, requires rapid reduction of fossil fuel $CO_2$ emissions and massive reforestation. Atmospheric $CO_2$ concentrations passed the level that Amici Scientists consider a safe initial target in, approximately, 1988. Global mean temperature is now close to and may exceed the prior Holocene peak, and unabated fossil fuel emissions continue to drive the Earth increasingly out of energy balance. Unless action is undertaken without further delay, the continuing increase of atmospheric $CO_2$ will drive Earth's

climate system toward and past points of no return, with disastrous consequences for young people and future generations. Effective action remains possible, but delay in undertaking sharp reductions in emissions will undermine any realistic chance of preserving a habitable climate system, which is needed by future generations no less than by prior generations.

Appellants in this case (hereinafter, "Alec L.") sought a preliminary injunction to ensure that Respondents (hereinafter, "McCarthy") submit to the Court a plan to ensure that the United States commences effective action before it is too late, including efforts to reduce $CO_2$ emissions by at least 6% annually. That prescription remains consistent with the scientific understanding of what minimally must be done by the United States and other nations to restore planetary energy balance on the century time scale. The inadequacy of the US response – even when accounting, generously, for both present law and stated policy goals – renders action by this Court essential to preserve a viable planet for young people and future generations.

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## ARGUMENT

### I. GREENHOUSE GASES HAVE ALREADY REACHED THE DANGEROUS LEVEL AND, WITHOUT EFFECTIVE ACTION, WILL PRODUCE CATASTROPHIC AND IRRETRIEVABLE LOSSES.

At an earlier stage of these proceedings, the United States argued that climate change presents "the possibility of some remote future injury." Def. Opp'n to Pl. Motion for Prelim. Inj. at 9. That assertion evinced a fundamental misunderstanding of the nature of the threat we face, both as to current impacts and the likelihood of future harm.

Paleoclimate research establishes that for most of the Holocene period – the period of the most recent 10,000 years – Earth's climate, though highly variable on a regional basis, has been characterized by reasonably constant mean global temperatures. *See* summary of research in James Hansen et al., in *Climate Change and Intergenerational Justice: Rapid Reduction of Carbon Emissions Required to Protect Young People, Future Generations and Nature,* Public Library of Science ONE (forthcoming, Dec. 2013) (Attached hereto as Exhibit 1) at 25 ("[H]umanity and nature, the modern world as we know it, is adapted to the Holocene climate that has existed more than 10,000 years.").[3] This constancy enabled the Greenland

[3] *See also*, J. Hansen, M. Sato, G. Russell, and P. Kharecha, Climate sensitivity, sea level, and atmospheric carbon dioxide. *Phil. Trans. R. Soc. A*, 371, 20120294, doi:10.1098/rsta.2012.0294. (2011), *available at* http://rsta.royalsocietypublishing.org/content/371/2001/20120294.

and Antarctic ice sheets to remain in near mass balance, sea levels to be relatively stable, species to flourish, and civilization to develop.

Largely due to the burning of fossil fuels, the atmospheric $CO_2$ concentration has climbed sharply in recent decades – from 316ppm in 1959 to 395ppm in 2013.[4] In that period, US $CO_2$ emissions nearly doubled, from 2.83 to 5.43 billion metric tons.[5] The $CO_2$ concentration is now at a level not seen on Earth for at least 3 million years. Exhibit 1 at 6. The $CO_2$ increment functions as an added blanket on the planet, reducing the amount of heat that would otherwise be radiated to space and throwing the planet into energy imbalance. In response, Earth has warmed by approximately 0.8°C over the last century, possibly breaching the prior Holocene peak. Exhibit 1 at 34. Due to Earth's thermal inertia, a similar or greater amount of additional 2.0°C warming is "in the pipeline" before Earth reaches energy balance at the present level of atmospheric $CO_2$ concentration. *Id.* 6-8.

[4] Mauna Loa $CO_2$ annual mean data downloaded Oct. 20, 2013 from http://www.esrl.noaa.gov/gmd/ccgg/trends/#mlo_full.

[5] T.A. Boden, G. Marland, and R.J. Andres. 2013. Global, Regional, and National Fossil-Fuel $CO_2$ Emissions Carbon Dioxide Information Analysis Center (CDIAC), with emissions of carbon reported through 2010. Data downloaded on Oct. 20, 2013 from http://cdiac.ornl.gov/CO2_Emission/timeseries/national. This amicus brief reports the data in units of $CO_2$, utilizing the CDIAC's carbon-to-$CO_2$ conversion factor of 3.667.

Avoidance of climate tipping points and subsequent points of no return, Exhibit 1 at 23-26,[6] requires effective action to return the atmospheric $CO_2$ concentration to, at most, approximately 350 ppm by the end of the century. Exhibit *1* at 7-8, 16-18, 30. This would allow additional heat radiation to escape to space so as to restore the planet's energy balance without additional prolonged global warming. *Id. at 8*. Such action could stabilize Earth's climate system and mitigate human suffering, but further delay may doom this prospect.

The already apparent impact of warming to date, and the likely future impacts of climate change, are addressed in turn.

(a) Present Impacts

While, as noted, global warming to date measures 0.8°C above the 1880-1920 period,[7] it has already led to a 40 percent reduction and an accelerating downward trend in summer Arctic sea ice cover, and an even faster decline in its thickness. Exhibit *1* at 5. Continental ice sheets of Greenland and Antarctica have begun to shed ice at a rate of several hundred cubic kilometers per year. *Id*. In the

[6] Hansen, et al define "the tipping level [as] the global climate forcing that, if long maintained, gives rise to a specific consequence [and] the point of no return [as] a climate state beyond which the consequence is inevitable, even if climate forcings are reduced." Hansen, J., et al., *Target Atmospheric $CO_2$: Where Should Humanity Aim?*, The Open Atmospheric Science Journal, p. 225 (2008), *available at* http://www.columbia.edu/~jeh1/2008/TargetCO2_20080407.pdf.

[7] The 1880-1920 period is the base period Amici Scientists use for preindustrial time. Exhibit 1 at 5.

past decade, sea level increased about 3cm—a rate of about one foot per century, and nearly twice as fast as the rate of increase during the preceding century.[8] This rise has resulted in losses of coastal wetland areas and greater levels of damage from coastal flooding.[9] For example, in the United States, increased sea level and regional land subsidence have led to the loss of 1900 square miles of coastal wetland in Louisiana, which in turn exacerbates the area's vulnerability to storm surges like Hurricane Katrina.[10] Mountain glaciers, the source of fresh water to major world rivers during dry seasons, are receding rapidly all around the world. Exhibit 1 at 5. In 1850, Glacier National Park in Montana had 150 glaciers measuring larger than twenty-five acres—today, it has just twenty-five.[11]

Tropospheric water vapor and heavy precipitation events have increased. Droughts are more common, especially in the tropics and subtropics. Exhibit 1 at 5. Coral reef ecosystems are being impacted by a combination of ocean warming

[8] Decl. of James Hansen, PhD., filed in *Central Valley Chrysler-Jeep, Inc. et al. v. Catherine E. Witherspoon*, 1:04-cv-06663-REC-LJO, 12 (May 5, 2006).

[9] Intergovernmental Panel on Climate Change, 2007: Impacts, Adaptation, and Vulnerability, Table 4.1 (hereinafter "IPCC Working Group II").

[10] U.S. Global Change Research Program, 2009: *Global Climate Change Impacts in the United States*, (T. Karl, J.M. Melillo, T.C. Peterson eds., Cambridge Univ. Press, 2009).

[11] United States Geological Survey, Retreat of Glaciers in Glacier National Park, *available at* http://nrmsc.usgs.gov/research/glacier_retreat.htm (last visited November 12, 2013).

and acidification from rising atmospheric $CO_2$, resulting in a 0.5-2% per year decline in geographic extent. Exhibit 1 at 5.[12] World health experts have concluded with "very high confidence" that climate change already contributes to the global burden of disease and premature death with altered distribution of some infectious disease vectors. *Id*. at 13. Subtropical climate belts have expanded, contributing to more intense droughts, summer heat waves, and devastating wildfires. Exhibit 1 at 5. Further, "[m]ega-heatwaves, such as those in Europe in 2003, the Moscow area in 2010, Texas and Oklahoma in 2011, Greenland in 2012, and Australia in 2013 have become more widespread with the increase demonstrably linked to global warming." *Id*. (internal citations omitted). The probability of such heat events has increased "by several times because of global warming, and the probability will increase even further if global warming continues to increase." Exhibit 1 at 49 (internal citations omitted).[13]

(b) Future effects

Based on measurements of observed climate change, computer simulations of the climate system's responses to additional $CO_2$ emissions, as well as information from the paleoclimate record, Amici Scientists have concluded that a

[12] Due to the oceans' update of excess CO2, "ocean pH is already outside its range of the past several million years." Exhibit 1 at 12 (internal citations omitted).

[13] *See* also J. Hansen, M. Sato, R. Ruedy, *The New Climate Dice: Public Perception of Climate Change* (August 2012) at http://www.giss.nasa.gov/research/briefs/hansen_17/ (visited Oct. 19, 2013).

continued high rate of burning of fossil fuels over several decades would render multi-meter sea level rise practically certain, and that "if most of the fossil fuels are burned" the sea-level rise could be on the order of tens of meters, with a consequential "loss of hundreds of historical coastal cities worldwide [and] hundreds of millions of global warming refugees from highly-populated low-lying areas." Exhibit 1 at 10. Global demographics would be thrown into chaos.

Amici Scientists note, as well, that acidification stemming from ocean uptake of a portion of increased atmospheric $CO_2$ is expected to increasingly disrupt coral reef ecosystem health, with potentially devastating impacts to certain nations and communities. Exhibit 1 at 12-13.

With respect to public health, Amici Scientists warn of receding mountain glaciers "with effects on seasonal freshwater availability of major rivers," Exhibit 1 at 5, illustrating that present atmospheric $CO_2$ levels are already a threat to future fresh water security, and that increasing concentrations of $CO_2$ and associated increased global temperatures will deepen impacts on human health, with children being especially vulnerable. Exhibit 1 at 13. Climate threats to health move through various pathways, including by placing additional stress on the availability of food, clean air, and clean water. *Id.* Summarizing the work of the Intergovernmental Panel on Climate Change, Amici Scientists warn of climate change impacts including "increased malnutrition and consequent disorders,

including those related to child growth and development," "increased death, disease and injuries from heat waves, floods, storms, fires and droughts," and "increased cardio-respiratory morbidity and mortality associated with ground-level ozone." *Id*. at 13.

As noted *supra*, climate zones are already shifting at rates that exceed natural rates of change; this trend will continue as long as the planet is out of energy balance, a conclusion "based on comparison of the observed trend with inter-decadal variability in climate simulations."[14] Amici Scientists note that "as the shift of climate zones becomes comparable to the range of some species, the less mobile species will be driven to extinction." Exhibit 1 at 11. Again summarizing the work of the Intergovernmental Panel on Climate Change, Amici Scientists note that for global warming of 1.6°C or more, relative to pre-industrial levels, 9-31 percent of species are anticipated to be driven to extinction, while with global warming of 2.9°C, an estimated 21-52 percent of species will be driven to extinction.[15]

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[14] J. Hansen, M. Sato, R. Ruedy, et al., *Dangerous human-made interference with climate: a GISS modelE study*, Atmos. Chem. & Phys., **7**, 2287-2312 (2007), *available at* http://pubs.giss.nasa.gov/docs/2007/2007_Hansen_etal_1.pdf.

[15] Amici Scientists note that "Mass extinctions occurred several times in Earth's history [117-118], often in conjunction with rapid climate change. New species evolved over millions of years, but those time scales are almost beyond human comprehension. If we drive many species to extinction we will leave a more desolate, monotonous planet for our children, grandchildren, and more generations

(footnote continued)

## II. ACTION TO PHASE OUT $CO_2$ EMISSIONS IS URGENTLY REQUIRED, WHILE DELAY VIRTUALLY ENSURES CALAMITY.

The 2007 consensus statement by the IPCC, summarizing research through 2005, indicated that human-induced warming of Earth of approximately 2°C constituted dangerous climate change. From that, however, no conclusion logically could be drawn as to the danger inherent in lower levels of global warming.

Research by Amici Scientists and others to assess this question has been spurred on by the realization, as described *supra*, that large climate impacts have commenced already, even though Earth's lagged temperature response to the recent climb in atmospheric $CO_2$ is "only" 0.8°C above preindustrial levels. Amici Scientists estimate that current global temperature already exceeds Holocene mean temperature by at least 0.25°C, Exhibit 1 at 5, and there is strong evidence that the current temperature already exceeds the prior warmest Holocene levels reached in the early Holocene.[16] Empirical research showing an ongoing and accelerating mass loss of the Greenland and West Antarctic ice sheets, which began within the

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than we can imagine. We will also undermine ecosystem functions (e.g., pollination which is critical for food production) and ecosystem resilience (when losing keystone species in food chains), as well as reduce functional diversity (critical for the ability of ecosystems to respond to shocks and stress) and genetic diversity that plays an important role for development of new medicines, materials, and sources of energy." Exhibit 1 at 12.

[16] Miller, G.H., Lehman, S.J., Refsnider, K.A., Southon, J.R., Zhong, Y., *Unprecedented recent summer warmth in Arctic Canada*, Geophys. Res. Lett., doi:10.1002/2013GL057188 (2013), *available at* http://onlinelibrary.wiley.com/doi/10.1002/2013GL057188/abstract.

last few decades, provides confirming evidence that today's global temperature has reached a level higher than prior Holocene temperatures. *Id*.

Accordingly, the best available current science establishes that today's atmospheric $CO_2$ level is already into the "dangerous zone." *Id*. at 16. Because the recently-observed climate effects with respect to the ice sheets are still relatively small compared to total ice sheet mass, these feedbacks may not be a major factor if maximum global warming overshoot of ~1°C occurs only briefly and then recedes. *Id*. at 10-12.

Action therefore must be undertaken to restore the atmosphere's level of $CO_2$ concentration to 350ppm at most, so as to avert avoidable additional warming that may drive the climate system past tipping points that assure transition to "a very different planet," *Id*. at 3, and keep the period of overshoot to a minimum. *Id*. at 30. In particular, Amici Scientists determine that the present path of "continued extraction of all fossil fuels, including development of unconventional fossil fuels such as tar sands, tar shale, [and] hydrofracking," if continued for another 20 years, likely would lead to irreversible warming of the ocean and other climate impacts. *Id.* at 30.

The underlying reason why delay in emissions reductions practically forecloses the opportunity to protect and restore the climate system is that, as illustrated in Fig. 1, below, a substantial share of any additional infusion of $CO_2$ lasts in the

atmosphere for centuries (and while there, continuously acts to further heat the planet). Accordingly, Earth's temperature response to the "radiative forcing" effect of the higher atmospheric $CO_2$ concentration is a function not only of recent emissions, but the persisting share of prior emissions.

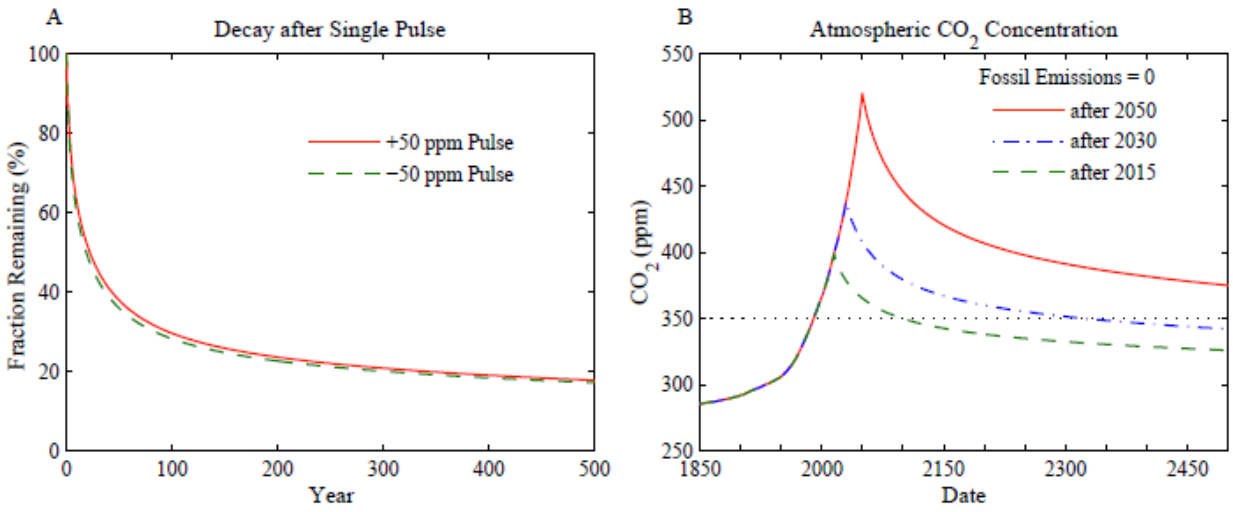


**Figure 1.** (a) Decay of instantaneous (pulse) injection and extraction of atmospheric $CO_2$, (b) $CO_2$ amount if fossil fuel emissions are suddenly terminated at the end of 2015, 2030, 2050. Exhibit 1 at 16.

As a consequence of the long-lived nature of $CO_2$ and the fact that human-derived emissions have already caused a substantial overshoot of the long-term safe atmospheric concentration level, any substantial delay in undertaking effective action – even if such action included a sharp cut-off of emissions – would render it impossible to return the atmospheric $CO_2$ concentration to 350ppm within this century. Thus, as illustrated in Fig. 1B, above, if emissions of $CO_2$ are allowed per business as usual for even two decades longer the concentration of $CO_2$ in the

atmosphere will not return until the year 2300 to the nominally safe level of 350ppm even if all such emissions were abruptly ceased in the year 2030. *Id.* at 17.[17] In contrast, complete cessation in 2015 would return to the atmospheric $CO_2$ concentration to 350ppm by the end of the century. *Id.* at 16 .

An abrupt cessation of all $CO_2$ emissions, whether in 2015 or 2030, is unrealistic, in part because industry, other business, and consumers alike need time to retool and reinvest in emission-free options to fossil fuels. Accordingly, Amici Scientists have proposed a glide path to secure an atmosphere whose $CO_2$ concentration is no higher than 350ppm. Their plan requires fossil fuel $CO_2$ emissions reductions of 6 percent annually, coupled with programs to limit and reverse land use emissions (i.e., massive reforestation). Exhibit 1 at 18, 35-36. These actions could achieve the goal of restoring the atmosphere to approximately 350ppm within this century if the plan were commenced without delay, and then adhered to. However, consistent with the abrupt phase out scenarios discussed in the prior paragraph *supra*, if the 6 percent annual emission reductions are delayed until 2030, then the global temperature will remain more than 1$^{o}$C higher than preindustrial levels for nearly 300 years. *Id*. at 22.

[17] Were the emission cessation only to commence after 40 years, Amici Scientists estimate that the atmosphere would not return to 350ppm $CO_2$ for nearly 1000 years. *Id*. at 17.

Considered in another way, the required rate of emissions reduction would have been about 3.5% per year if reductions had started in 2005, while the required rate of reduction, if commenced in 2020, will be approximately 15% per year. *Id.* at 17. Accordingly, the dominant factor is the date at which fossil fuel emissions phase-out begins.[18]

## III. THE DISTRICT COURT MISAPPREHENDED THE NATURE OF THE CLIMATE CRISIS

In its conclusion to its memorandum opinion, the lower court observed that "[t]hroughout history, the federal courts have served a role both essential and consequential in our form of government by resolving disputes that individual citizens and their elected representatives could not resolve without intervention." *Alec L. v. Jackson*, 863 F. Supp. 2d 11, 17 (D.D.C. 2012). But the court declined to take action to adopt what it deemed to be the "sweeping court-imposed remedy" urged by Alec L. *Id*. To do so, according to the court, would implicate "the

[18] Amici Scientists further stress that the rate of annual emissions reductions must be sufficiently deep and, at minimum, maintained until phase out. With respect to both of these requirements, the present U.S. Climate Action Plan appears inadequate on its face. *See* U.S. Department of State, 2014 Climate Change Report, Ch. 1 at 3 ("Given implementation of programs and measures in place as of September 2012 and current economic projections, total gross U.S. GHG emissions are projected to be 4.6 percent lower than 2005 levels in 2020. Between 2005 and 2011 total gross U.S. GHG emissions have declined significantly due a combination of factors, including the economic downturn and fuel switching from coal to natural gas (U.S. EPA 2013). Emissions are projected to rise gradually between 2011 and 2020. Emissions are projected to remain below the 2005 level through 2030. . . ."). Available at www.state.gov/e/oes/climate/ccreport2014/.

fundamental nature of our government and our constitutional system." *Id.* Instead, the court urged the parties to keep talking to each other "to seek (and perhaps even seize) as much common ground as courage, goodwill and wisdom might allow to be discovered." *Id*.

However, with respect, the time for mere talk has passed, and the window of opportunity for effective action is closing fast. As Amici Scientists observe, "[W]e have a planetary climate crisis that requires urgent change to our energy and carbon pathway to avoid dangerous consequences for young people and other life on Earth." Exhibit 1 at 32-33.

Because the United States has admitted that business as usual poses a dire threat to humanity,[19] the question of whether the United States must act to avert

[19] *See, e.g.,* EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act; Final Rule, 74 Fed. Reg. 66496, 66535 (Dec. 15, 2009) ("Looking across all of the sectors discussed above, the evidence provides compelling support for finding that greenhouse gas air pollution endangers the public welfare of both current and future generations [and that] the risk and the severity of adverse impacts on public welfare are expected to increase over time."); Statement of Secretary of State John Kerry on Statement of September 27, 2013 ("What one country does impacts the livelihoods of people elsewhere – and what we all do to address climate change now will largely determine the kind of planet we leave for our children and grandchildren.") available at http://www.state.gov/secretary/remarks/2013/09/214833.htm.; Executive Office of the President, *The President's Climate Action Plan*, 4 (declaring climate change to be "one of our greatest challenges of our time"), 6 (citing President Obama that a failure to respond "would betray our children and future generations) available at www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf.

dangerous climate change is not at issue in this matter. What is at issue is the adequacy of U.S. action to meet the threat.

In order to *fully* evaluate that adequacy, Amici Scientists acknowledge that the Court would need to measure the course of U.S. action against some specific standard. In Exhibit 1, Amici Scientists attempted to establish such a scientifically defensible standard. Specifically, Amici Scientists address and answer the question of what is minimally required to restore the relatively moderate climate that has enabled civilization to develop. Toward that end, as discussed above, Amici Scientists advocate a glide path of annual fossil fuel emissions reductions of at least six percent that could restore atmospheric carbon dioxide concentrations to return to no more than 350ppm by the end of the century. If commenced without delay, and coupled with reasonable land use improvements and phase down of other potent greenhouse gases and precursors, Amici Scientists believe it feasible that humanity could still avoid climate tipping points that could trigger uncontrollable consequences.

District courts retain equitable authority to "fashion a less expansive remedy" than that urged in an original complaint, as the lower court itself observed. *Alec L. v. Jackson* 863 F. Supp. 2d at 13, n.5. Accordingly, even if the lower court were precluded from ordering the full panoply of remedies in Alec L.'s prayer for relief, it nonetheless could have ordered the United States to

demonstrate whether and how *its* own climate action plan, if fully pursued, would reduce fossil fuel emissions, *inter alia*, sufficiently and quickly enough that, in conjunction with similar action by other nations, would preserve the central features of the Holocene climate system for our children and future generations.

Amici Scientists file this brief in the expectation that a deeper understanding of the risks of unabated emissions and the closing opportunity for meaningful action will assist the Court of Appeals in evaluating the question whether the lower court at least should have required the United States to report to it as to the long-term adequacy of its climate action plan.

## CONCLUSION

Systematic reductions in $CO_2$ emissions, for the reasons provided by Amici Scientists in the work cited throughout this Amicus Brief, must be undertaken in conjunction with land use improvements so as to return the concentration of $CO_2$ in the atmosphere to a level no higher than 350ppm by the end of the century, if not sooner. Appellants in this matter seek an Order by the Court remanding the matter to the lower court in order to require Respondents to submit a "Climate Recovery Plan" whose key features, if followed, would slow fossil fuel emissions at a rate leading to stabilization of Earth's energy balance as required to preserve a habitable climate system. This Brief has established that such action is urgently required. In particular, the failure to commence $CO_2$ emissions reductions without further

delay, and to undertake other measures consistent with the prescription developed by Amici Scientists, would consign our children and their progeny to a very different planet, one far less conducive to their survival. At minimum here, Amici Scientists urge this Court to remand with instructions for the United States to demonstrate that its plan of action would avert dangerous climate change and preserve a viable climate system. Such remand order by this Court may be the best, the last, and, at this late stage, the only real chance to preserve a habitable planet for young people and future generations.

Respectfully submitted this 12th day of November, 2013.

/s/ Daniel M. Galpern
Daniel M. Galpern
Law Offices of Charles M. Tebbutt, P.C.
941 Lawrence St
Eugene, OR 97401-2815
galpern.tebbuttlaw@gmail.com
541-344-3505
541-344-3516
*Counsel for Amici Curiae Scientists*