Shell Offshore Inc.
3601 C Street, Suite 1334
Anchorage, AK 99503

April 12, 2007

Daniel L. Meyer
Office of Air, Waste and Toxics
U.S. EPA, Region 10
1200 Sixth Avenue, OAQ-107
Seattle, WA 98101

Re: Shell Kulluk and Frontier Discoverer – Request for Technical Updates to the Permits

Dear Mr. Meyer:

Shell is in the final stages of contracting its secondary fleet for its 2007 Beaufort Sea drilling program. With this, there are some changes in the fleet and emission units, which are shown on the attachments as permit Table 2 for both drilling vessels. Shell asks that EPA incorporate these updates in the final permits. These are changes in detail and these should have no fundamental effect on the permit conditions.

In review of the permits, Shell also asks for the following specific changes to the permits:

1) Kulluk permit: remove the requirement for a stack test on the Tor Viking harbor generator (C2) as its use is anticipated to be small, with only 0.58 tpy anticipated NOx emissions. Proper operation of the SCR system will be shown by the C1 source group testing. If the testing requirement is not removed, change the C2 stack testing conditions to "generator" testing conditions (8.2 (ii) from "propulsion" conditions (8.2 (i).

2) Discoverer permit: remove requirement for propulsion engine stack testing (A2) as its NO_x emissions are estimated to be less than 1.0 tpy. The propulsion engines are only used to maneuver the vessel 25 miles to and from its drill site. At 7 knots, its average speed, this equates to less than 4 hours of use each way, and less than 8 hours total per drill site. This is considerably less than the 44 hours of use estimated in the December 29, 2006 application (Appendix B, page B-5).

3) Kulluk permit: change the B2 stack testing conditions on VI to "generator" testing conditions (8.2 (ii) from "propulsion" conditions (8.2 (i).

Please feel free to contact me (907-770-3700), Gene Pavia (907-339-5482) or Rodger Steen (303-988-2960) regarding these updates.

Sincerely yours,

Shell Offshore Inc.

Susan Childs
Regulatory Coordinator, Alaska

Enclosures:

cc: *Susan Childs, Shell*
Keith Craik, Shell
Bill Walker, ADEC, DAQ
Gene Pavia, AES RTS
Rodger Steen, Air Sciences Inc.

ATTACHMENT

Updated source unit lists (Table 2)
Kulluk and Discoverer Permits

Table 2 – Kulluk Support Vessels					
Unit ID	**Source Group[1]**	**Unit Description**	**Make/Model**	**Rating**	
√ladimir Ignatjuk (icebreaker)					
VI-1	B1	Main Propulsion Engine		5,800	hp
VI-2	B1	Main Propulsion Engine		5,800	hp
VI-2	B1	Main Propulsion Engine		5,800	hp
VI-4	B1	Main Propulsion Engine		5,800	hp
VI-5	B2	Generator Engine		1,431	hp
VI-6	B2	Generator Engine		1,431	hp
VI-7	B3	Heat Boiler		2.4	MMBtu/hr
VI-8	B3	Hot Water Heater		0.54	MMBtu/hr
VI-9	K	Incinerator		66	lb/hr
⌈or Viking II (icebreaker)					
TV-1	C1	Main Prop. Engine / Generator	MaK 8M32	5,046	hp
TV-2	C1	Main Prop. Engine / Generator	MaK 8M32	5,046	hp
TV-3	C1	Main Prop. Engine / Generator	MaK 6M32	3,784	hp
TV-4	C1	Main Prop. Engine / Generator	MaK 6M32	3,784	hp
TV-5	C2	Harbor Generator	Caterpillar 3412	1,168	hp
TV-6	C2	Harbor Generator	Caterpillar 3412	1,168	hp
TV-7	C3	Heat Boiler		1.37	MMBtu/hr
⌠im Kilabuk (resupply vessel)					
JK-1	D	Main Propulsion Engine	EMD / V20 645	3,600	hp
JK-2	D	Main Propulsion Engine	EMD / V20 645	3,600	hp

[1] The Source Group for which an emissions unit is identified is used for the purpose of determining NO_X emissions pursuant to Condition 7.

Table 2 – Kulluk Support Vessels					
Unit ID	**Source Group[1]**	**Unit Description**	**Make/Model**	**Rating**	
JK-3	D	Generator	Caterpillar / D3406	292	hp
JK-4	D	Generator	Caterpillar / D3406	292	hp
JK-5	D	HPP Engine	Caterpillar / D343	300	hp
JK-6	D	Bow Thruster Engine	Caterpillar / D343	300	hp
Nanuq (Main Oil Spill Response Vehicle)					
N-1	E	Propulsion Engine		2,710	hp
N-2	E	Propulsion Engine		2,710	hp
N-3	E	Electric generator engine		1,285	hp
N-4	E	Electric generator engine		1,285	hp
N-5	E	Emergency electric generator engine		1,285	hp
N-6	E	Boiler		75	MMBtu/hr
N-7	K	Incinerator	ASC / CP100	125	lb/hr
Kvichak No. 1 34-foot Oil Spill Response Work Boat					
OSRK1-1	E	Engine		300	hp
OSRK1-2	E	Engine		300	hp
OSRK1-3	E	Electrical generator engine		12	hp
Kvichak No. 2 34-foot Oil Spill Response Work Boat					
OSRK2-1	E	Engine		300	hp
OSRK2-2	E	Engine		300	hp
OSRK3-2	E	Electrical generator engine		12	hp
Affinity/Perseverance (Arctic tanker & oil spill response vessel)					
AP-1	E	Propulsion Engine	MAN B&W / 7S60MC	15,820	kW
AP-2	E	Electrical Generator Engine P	MAN B&W / 7L23	1120	kW
AP-3	E	Electrical Generator Engine C	MAN B&W / 7L23	1120	kW
AP-4	E	Electrical Generator Engine S	MAN B&W / 7L23	1120	kW
AP-5	E	Emergency Generator Engine	Cummins / NT855	295	kW

Table 2 – Kulluk Support Vessels					
Unit ID	**Source Group[1]**	**Unit Description**	**Make/Model**	**Rating**	
AP-6	E	Framo Power Pack	Cummins / KTA19	477	kW
AP-7	E	Framo Power Pack	Cummins / KTA19	477	kW
AP-8	E	Framo Power Pack	Cummins / KTA19	477	kW
AP-9	E	Auxiliary boiler	KangRim / MB07S01	85	MMBtu/hr
AP-10	K	Incinerator	TeamTec / OG 400	580	kW

Table 2 – Discoverer Support Vessels					
Unit ID	**Source Group[1]**	**Unit Description**	**Make/Model**	**Rating**	
Kapitan Dranitsyn (icebreaker)					
KD-1	B1	Main Propulsion Engine	Wärtsilä / 9ZL	4,140	hp
KD-2	B1	Main Propulsion Engine	Wärtsilä / 9ZL	4,140	hp
KD-3	B1	Main Propulsion Engine	Wärtsilä / 9ZL	4,140	hp
KD-4	B1	Main Propulsion Engine	Wärtsilä / 9ZL	4,140	hp
KD-5	B1	Main Propulsion Engine	Wärtsilä / 9ZL	4,140	hp
KD-6	B1	Main Propulsion Engine	Wärtsilä / 9ZL	4,140	hp
KD-7	B2	Auxiliary Engine		1,050	hp
KD-8	B2	Auxiliary Engine		1,050	hp
KD-9	B2	Auxiliary Engine		1,050	hp
KD-10	B2	Auxiliary Engine		1,050	hp
KD-11	B2	Auxiliary Engine		1,050	hp
KD-12	B3	Compressor Engine		1,380	hp
KD-13	B3	Compressor Engine		1,380	hp
KD-14	B3	Emergency Generator Engine		438	hp
KD-15	B4	Heat Boiler		18	MMBtu/hr
KD-16	B4	Heat Boiler		18	MMBtu/hr
KD-17	K	Incinerator		70	kg/hr
Fennica/Nordica (icebreaker)					
FN-1	C1	Main Propulsion Engine	Wärtsilä / 16V32	7,884	hp
FN-2	C1	Main Propulsion Engine	Wärtsilä / 16V32	7,884	hp

[1] The Source Group for which an emissions unit is identified is used for the purpose of determining NO_X emissions pursuant to Condition 7.

Table 2 – Discoverer Support Vessels					
Unit ID	**Source Group[1]**	**Unit Description**	**Make/Model**	**Rating**	
FN-3	C1	Main Propulsion Engine	Wärtsilä / 12V32	5,913	hp
FN-4	C1	Main Propulsion Engine	Wärtsilä / 12V32	5,913	hp
FN-5	C2	Auxiliary Engine		710	hp
FN-6	C2	Emergency Generator Engine		300	hp
FN-7	C3	Heat Boiler		4.44	MMBtu/hr
FN-8	C3	Heat Boiler		4.44	MMBtu/hr
FN-9	K	Incinerator		70	kg/hr
im Kilabuk (resupply vessel)					
JK-1	D	Main Propulsion Engine	EMD / V20 645	3,600	hp
JK-2	D	Main Propulsion Engine	EMD / V20 645	3,600	hp
JK-3	D	Electric Generator Engine	Caterpillar / D3406	292	hp
JK-4	D	Electric Generator Engine	Caterpillar / D3406	292	hp
JK-5	D	HPP Engine	Caterpillar / D343	300	hp
JK-6	D	Bow Thruster Engine	Caterpillar / D343	300	hp
oint Barrow Tug (Main Oil Spill Response Vehicle)					
PBT-1	E	Main Propulsion Engine	Caterpillar 3512	1,050	hp
PBT-2	E	Main Propulsion Engine	Caterpillar 3512	1,050	hp
PBT-3	E	Electrical Generator Engine	Caterpillar 3304	150	hp
PBT-4	E	Electrical Generator Engine	Caterpillar 3304	150	hp
vichak 47-foot Oil Spill Response Work Boat					
SR47K-1	E	Propulsion Engine	Lugger	700	hp
SR47K-2	E	Propulsion Engine	Lugger	700	hp
SR47K-3	E	Electrical generator Engine		9	kW
Kvichak No. 3 34-foot Oil Spill Response Work Boat					
OSRK3-1	E	Propulsion Engine		300	hp

Table 2 – Discoverer Support Vessels					
Unit ID	**Source Group[1]**	**Unit Description**	**Make/Model**	**Rating**	
OSRK3-2	E	Propulsion Engine		300	hp
OSRK3-3	E	Electrical Generator Engine		12	hp
Qvichak No. 4 34-foot Oil Spill Response Work Boat					
OSRK4-1	E	Propulsion Engine		300	hp
OSRK4-2	E	Propulsion Engine		300	hp
OSRK4-3	E	Electrical Generator Engine		12	hp
Qvichak No. 5 34-foot Oil Spill Response Work Boat					
OSRK5-1	E	Propulsion Engine		300	hp
OSRK5-2	E	Propulsion Engine		300	hp
OSRK5-3	E	Electrical Generator Engine		12	hp
Qvichak No. 6 34-foot Oil Spill Response Work Boat					
OSRK6-1	E	Propulsion Engine		300	hp
OSRK6-2	E	Propulsion Engine		300	hp
OSRK6-3	E	Electrical Generator Engine		12	hp
Arctic Endeavor Barge (positioned by the Point Barrow Tug)					
AEB-1	E	Crane Engine		350	hp
AEB-2	E	Light Plant Engine		30	hp
AEB-3	E	Electrical Generator Engine		126	hp
AEB-4	E	Electrical Generator Engine		126	hp
AEB-5	E	HPP Engine		145	kW
AEB-6	E	HPP Engine		145	kW
AEB-7	E	HPP Engine		80	kW
AEB-7	E	HPP Engine		80	kW
AEB-8	E	Anchor Engine	John Deere	50	hp
Affinity/Perseverance (Arctic tanker & oil spill response vessel)					
AP-1	E	Propulsion Engine	MAN B&W / 7S60MC	15,820	kW
AP-2	E	Electrical Generator Engine P	MAN B&W / 7L23	1120	kW

Table 2 – Discoverer Support Vessels					
Unit ID	**Source Group[1]**	**Unit Description**	**Make/Model**	**Rating**	
AP-3	E	Electrical Generator Engine C	MAN B&W / 7L23	1120	kW
AP-4	E	Electrical Generator Engine S	MAN B&W / 7L23	1120	kW
AP-5	E	Emergency Generator Engine	Cummins / NT855	295	kW
AP-6	E	Framo Power Pack	Cummins / KTA19	477	kW
AP-7	E	Framo Power Pack	Cummins / KTA19	477	kW
AP-8	E	Framo Power Pack	Cummins / KTA19	477	kW
AP-9	E	Auxiliary boiler	KangRim / MB07S01	85	MMBtu/hr
AP-10	K	Incinerator	TeamTec / OG 400	580	kW